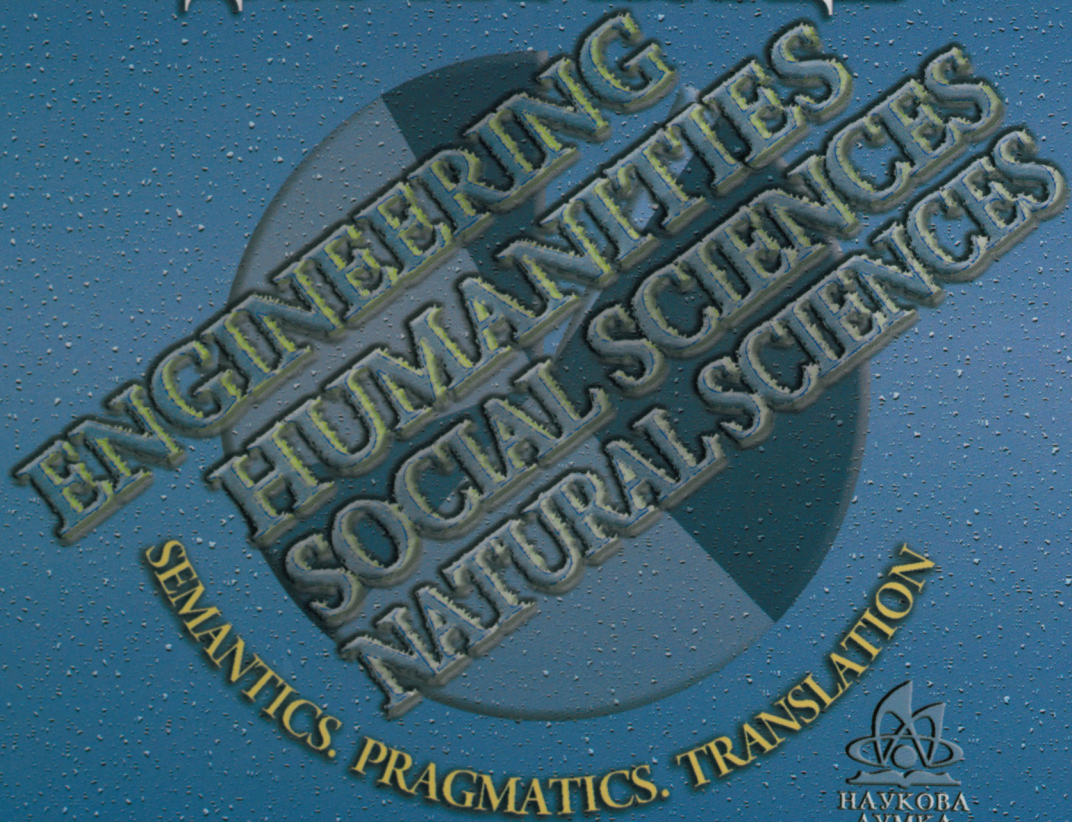


Olga Ilchenko

THE LANGUAGE OF SCIENCE

АНГЛІЙСЬКА
ДЛЯ НАУКОВЦІВ



ПІДРУЧНИК

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НАЦІОНАЛЬНА АКАДЕМІЯ НАУК УКРАЇНИ
ЦЕНТР НАУКОВИХ ДОСЛІДЖЕНЬ ТА ВИКЛАДАННЯ
ІНОЗЕМНИХ МОВ

О.М. Їльченко

АНГЛІЙСЬКА
ДЛЯ НАУКОВЦІВ

СЕМАНТИКА. ПРАГМАТИКА. ПЕРЕКЛАД

П і д р у ч н и к

Видання друге, доопрацьоване

КИЇВ
НАУКОВА ДУМКА
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Затверджено Міністерством освіти і науки України як підручник для студентів вищих навчальних закладів (лист № 1.4/18-Г-2139 від 17.10.2008 р.)

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Підручник відповідає навчальній програмі для складання кандидатського іспиту з англійської мови, затвердженої Міністерством освіти і науки України. У ньому враховано багаторічний досвід роботи, накопичений у Центрі наукових досліджень та викладання іноземних мов НАН України у сфері професійної комунікації, а також результати останніх досліджень у царині лінгвістики та лінгвопедагогіки. Підручник допомагає системно засвоїти сучасну лексику й граматику англійської мови науки, відпрацювати базові навички письма, перекладу та анування, опанувати основи професійного спілкування англійською мовою з урахуванням її культурної специфіки. Матеріал викладено цікаво, із залученням новітніх даних, використано багато наочних таблиць та схем. Він допоможе подальшому вдосконаленню фахової комунікативної компетенції вітчизняних спеціалістів у контексті поєднання міжнародної співпраці.

Для науковців усіх спеціальностей, студентів вищих навчальних закладів та закладів післядипломної освіти, а також учнів старших класів загальноосвітніх шкіл. Підручник стане у нагоді тим, хто готується до складання тестів з англійської мови, у тому числі міжнародних.

Based on the latest linguistics and educational studies, and created primarily for PhD students taking a qualifying examination in English, this coherent, comprehensive, one-stop, up-to-date, highly readable – with lots of visuals – resource offers novel approaches toward English for Specific Purposes teaching in Ukraine. It embraces several decades of teaching and research experience gained at the Research and Educational Center for Foreign Languages, National Academy of Sciences of Ukraine. The textbook is aimed at working out reading comprehension, writing, translation and communication skills from the perspective of Anglo-American scientific discourse culture specificity.

The book should be of interest to PhD candidates, under- and graduate students getting ready to pass the English language qualifying exam in Ukraine and/or English proficiency international standardized tests, high school students, English and science educators, researchers and professional academics, those in the field of international cooperation.

To all the people I love

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Від автора

Ця книга — одна із перших в Україні, присвячених сучасній англійській мові науки. Працю призначено передусім для аспірантів та здобувачів, котрі готуються до складання кандидатського іспиту з англійської мови. Характерною особливістю Програми підготовки до кандидатського іспиту з англійської мови, запропонованої Міністерством освіти і науки та ВАК України (1993), є перегляд окремих положень і змісту курсу англійської мови з тим, аби він відповідав сучасним вимогам до науковців, які повинні мати високий рівень теоретичних знань, а також навички читання, письмового перекладу, анотування, співбесіди іноземною мовою з питань наукових досліджень та фаху. Орієнтиром рівня володіння англійською мовою є стандартизовані міжнародні тести, елементи яких включено до структури кандидатського іспиту. Дана книга має допомогти у підготовці до складання цього іспиту на рівні зазначених вимог.

Утім, це видання може зацікавити і ширшу аудиторію — студентів та викладачів вищих навчальних закладів усіх спеціальностей, тих, хто поглиблено вивчає англійську мову, завдяки пізнавальному характеру та системному викладу матеріалу, широкому залученню графічної форми викладу, використанню актуальних матеріалів загальнонаукового характеру. Авторка намагалася уникнути вузькоспеціальних термінів, а натомість зосередити увагу на елементах загальнонаукової мови. Усі розділи присвячено актуальним тенденціям розвитку сучасної науки. Вони містять велику кількість неологізмів, які часто-густо використовуються у англійськомовному науковому обігу, але ще не зареєстровані у словниках.

У розділах 1—8 наведено тексти для читання з примітками та вправами на розуміння прочитаного, опанування лексики, оригінально викладений граматичний матеріал (із зазначенням відмінностей американського та британського варіантів англійської мови), який подано за функціональним принципом, матеріали для розвитку навичок усного мовлення, реферування та перекладу. У дев'ятому розділі наводяться довідкові матеріали, які подано переважно у зручній формі таблиць. Система вправ і тестів дозволяє ефективно засвоїти даний курс, у тому числі самостійно.

Матеріали книги було апробовано автором протягом декількох років у Центрі наукових досліджень та викладання іноземних мов НАН України.

Unit 1

Science and Scientists
Essential Academic Vocabulary
The Scientific and Popular Senses
Culture Flavored Words
Some Ways of Quoting
Basic Intonation Patterns &
Pronunciation Tips

TEXT

Read the text and be ready to answer the questions that follow.

Students of science *major in* various *fields of science*. They take part in *R&D* at their institutions. *The faculty and staff* at the universities and institutes will assist the students as they fulfill their academic and professional *goals*.

Research advisors — well-known *scientists* will help their students with *research*.

Graduate students spend most of their time in independent study and original research. For example, graduate studies in the USA can be divided into two phases:

Phase I leads to Master's *degree* and consists of lecture-type coursework. This degree is usually *required* in fields such as engineering, library science etc. The MBA, or Master of Business Administration usually takes two years.

These degrees are considered stepping stones toward a PhD. Normally few, if any laboratory courses are offered. A thesis, calling for significant research and/or design effort may be required.

Phase II leads to doctoral degree — PhD (doctorate). Students who are enrolled in a doctoral program are known as PhD candidates. They will spend some time in class, but the most important work is spent in first-hand research. It may take three years or more *to earn* a PhD Degree. This degree normally requires four to six years of study beyond the Bachelor's degree, culminating in lengthy, *in-depth*, original research of a specific topic, which may be both theoretical and applied, or purely theoretical.

Usually, doctoral studies *focus* very heavily on developing advanced scientific *skills*.

A PhD dissertation is considered a unique, original contribution to human knowledge. This paper must contain views, research or designs that have not been previously published.

The best and the most suitable *methods, techniques, approaches* and *procedures* should be used.

Several research publications on *issues relevant* to the investigation should be prepared. Most universities awarding the PhD Degree also require doctoral candidates to have a reading knowledge of two foreign languages, to

to major (in) — to study as the chief subject(s) when doing a university degree укр. спеціалізуватися

field of science — a branch of knowledge or area of activity. Synonyms: sphere, area, branch, domain, realm укр. галузь, сфера

R&D — research and development укр. науково-дослідна робота

faculty and staff — all of teachers and other professional workers of a university or college укр. професорсько-викладацький склад

goal — one's aim or purpose — укр. мета

Compare: objective — an aim that must be worked towards over a long period укр. стратегічна мета

research advisor — укр. науковий керівник

well-known — укр. відомий Synonyms: famous, prominent, eminent, renowned, celebrated

research — serious and detailed study of a subject. укр. дослідження Synonyms: study, investigation, studies, investigations

scientist — a person who works in science укр. науковець, вчений Compare: scholar — a person with great knowledge of, and skill in studying the subject

degree — a title given by a university to a student who has completed a course of study укр. ступінь Bachelor's Degree (baccalaureate) — ступінь бакалавра (бакалаврат); Master's Degree — ступінь магістра; PhD — ступінь доктора філософії; PhD candidate/student; doctoral student — аспірант; postdoc — докторант

to require — to demand by right with the expectation that it will be obeyed укр. вимагати; **requirement** — укр. вимога

required — укр. обов'язковий Synonyms: — mandatory, obligatory; required reading — обов'язкова література.

to earn — to get, to gain, to obtain — укр. отримати

in-depth — a thorough and giving careful attention to detail укр. глибокий, детальний, докладний

to focus (on) — to direct one's attention to something укр. зосереджувати увагу

skill(s) — special ability to do something well, esp. as gained by learning and practice укр. навички

issue — a subject to be talked about, argued about, укр. питання, проблема

relevant — directly connected with the subject Synonyms: pertaining to (pertinent), dealing with, regarding, concerning, relating to, touching upon, bearing relation to укр. релевантний, той, що стосується

pass a qualifying examination that officially admits candidates to the PhD program, and to pass an oral examination on the same topic as the dissertation.

If the dissertation *meets* all **the requirements** it will be accepted and approved by a special **board** of academics after oral defense.

Most scientists spend many years studying and working in laboratories. Scientists can work individually or in a team. **In many cases**, scientists are **devoted** to their work and may find little time to do other things. Usually scientists **are involved in** studying various **aspects** of

their fields, and work on one or two major projects at one time.

A good example of a dedicated scientist and researcher is U.S. investigator Benjamin Carson. Speaking to young people around the country, Carson always concludes with the same message: «Think big!» He explains the meaning of each letter:

T — is for talent. Recognize your God-given talent.

H — is for hope. **Anticipate** good things and watch for them.

I — stands for **insight**. Learn from people who have been where you want to go.

N — is for nice. Be nice to people — all people.

K — represents knowledge. Knowledge is the key to your dreams, hopes and **aspirations**.

B — is for books. We develop our minds by reading.

I — equals in-depth learning, where **acquired knowledge** becomes part of you.

G — stands for God. Never drop God out of your life.

«If you can learn to think big, nothing on earth will keep you from being successful in whatever you choose to do», says Carson. And eminent American astronomer Vera Rubin gives the following piece of advice to young scientists: «Don't **give up**. Remember that science is ever so **vast**; learn one thing very well. Doing so gives you great confidence, **allows** you **to share** knowledge with colleagues. It helps if you know what you really want to do. Work hard. Learn to give good talks. Be imaginative. If you are interested in science you must have a fundamental **curiosity**».

to meet the requirements — укр. відповідати вимогам

board — an official body or group that has responsibility for a particular organization or activity укр. рада

in many cases — often укр. у багатьох випадках, часто-густо

devoted — showing great fondness, caring a great deal. **Compare:** dedicated — very interested in or working very hard for an idea, purpose; committed укр. відданий

to be involved in to take part, to be engaged in, to participate укр. бути залученим, брати участь

aspect — a particular side of many-sided idea, plan etc. укр. аспект, бік
Synonym: facet укр. грань

technique — method of doing something that needs skill

укр. методика, метод;

tried-and-true technique — перевірена часом методика

procedure — a set of actions necessary for doing something

укр. методика

approach, way — a method of doing something or dealing with the problem укр. підхід, метод

method — a planned way of doing something укр. метод

methodology — the set of methods used for study of a particular subject укр. методологія

to anticipate — to expect, to guess or imagine in advance укр. очікувати, передбачати, передчувати

insight — the power of using one's mind to see or understand the true nature of a situation укр. проникливість

aspiration — a strong desire to do something or have something, esp. something great or important. **Synonym:** longing укр. прагнення, поривання

acquired knowledge — укр. набуті знання

***to give up** = to give in укр. здаватися

vast — very large and wide, great in amount укр. широкий, величезний

to allow — to permit, to enable укр. дозволяти

to share — to have, use, pay or take part in (something) with others or among the group укр. розділяти, ділитися

curiosity — the desire to know or learn укр. допитливість

curious — eager to know or learn. **Synonym:** inquisitive укр. допитливий

1. What is the subject under discussion?
2. What are the primary responsibilities of graduate students?
3. What is specific about each phase of graduate studies?
4. Why is it important to «think big»?
5. Why is Vera Rubin's message important especially for young scientists?

NOTE.

to deal with / to touch upon

to be concerned with

to be about

to have to do (with)

to be associated with

стосуватися, торкатися

The issue has little to do with science — Це питання не стосується науки.

**all things scientific* — усе, дотичне до науки

when it comes to...

as far as ... is/are concerned...

*as for...

as to...

speaking of...

with respect to...

concerning...

regarding.../in regard to.../with regard to...

що стосується...

стосовно...

When it comes to me ... — Що стосується мене (щодо мене)...

As far as science is concerned, ... — Що стосується науки, ...

It is about the new method. Це стосується нового метода.

to concentrate/

to center attention/efforts/activities on/aroundзосереджуватися (на)

according to... / in accordance with... / under ... відповідно до... .

taken in that light, .../ on this evidence, ... у такому ракурсі,

Exercise 1. Give English equivalents for:

спеціалізуватися у галузі науки; науковий керівник; стратегічні цілі; досягати мети; відомий науковець (учений); самостійне дослідження; ретельне вивчення; теоретичні та прикладні аспекти; навички наукової роботи; Вчена Рада, унікальний внесок; питання, що стосуються дослідження; оригінальна методика; брати участь у науково-дослідній роботі; одночасно працювати над кількома проектами; бути відданим науці; не здаватися; ділитися знаннями з колегами, бути надзвичайно допитливим; що стосується цього параметра, відповідно до цієї теорії; у такому ракурсі; аспірант; докторант.

Exercise 2.

Identify characteristics of a scientist by matching the two columns. The first one is done for you: 1-F.

I.

1. intelligent
2. objective
3. creative
4. open-minded
5. curious
6. talented
7. dedicated
8. persistent
9. analytic(al)
10. decisive
11. goal-oriented
12. ambitious
13. well-versed

- A** receptive of arguments and ideas
- B** remaining at a task for a long amount of time to complete a task or project
- C** making observations and decisions based upon evidence, not personal opinion or hearsay
- D** very interested in working very hard, devoting a lot of time to complete a task or project
- E** producing new and original ideas and things, inventive
- F** having a high degree of mental capacity
- G** having or showing special abilities for a particular type of work
- H** eager to know or learn
- I** wishing to reach or obtain one's aim or purpose
- K** having a strong desire for success
- L** knowing a lot about something
- M** showing determination and firmness, resolute
- N** skilled in using methods of careful examination, especially in order to separate things into their parts

II.

- | | |
|----------------------|---|
| 1. decision-maker | A searching for new discoveries |
| 2. communicator | B being able to make important choices or/and judgements |
| 3. designer | C creating new models or designs |
| 4. inventor | D making opinions and information known and understood by others, sharing and exchanging opinions. |
| 5. problem-solver | E a person who hopes for and tries to get a position of importance or honor |
| 6. aspirant (to/for) | F being able to find answers to difficulties |

Exercise 3.

Give Ukrainian equivalents for:

a positive approach to failure; open-mindedness, cooperation with others; tolerance for other opinions, explanations, or points of view; avoidance of broad generalizations when evidence is limited; demand for verification; longing to know and to understand; respect for logic; consideration for consequences; a book about organic food(s); a monograph on telecommunications.

Exercise 4.

Prepare an oral presentation about characteristics of true scientists based on Text 1 and Exercises 1-3. Tell your colleagues about yourself.

Exercise 5.

Translate Ukrainian sentences into English. Then match the two columns.

- | | |
|--|---|
| <p>1. Я не фахівець у цій галузі.</p> <p>2. Яка мета Ваших досліджень?</p> <p>3. Вона спеціалізується у галузі прикладного мовознавства.</p> <p>4. Якою галуззю науки ви цікавитесь?</p> <p>5. Це питання стосується вашого дослідження.</p> <p>6. Якою наукою ви займаєтеся?</p> <p>7. Його дисертація відповідає усім необхідним вимогам.</p> <p>8. Вони беруть участь у науково-дослідній роботі.</p> <p>9. Мій науковий керівник — відомий вчений.</p> <p>10. Вони дійшли цікавих висновків.</p> <p>11. (А) якою є Ваша думка? (А) як Ви гадаєте/вважаєте? Що Ви думаєте (про це/з цього приводу)?</p> <p>12. Чому вони поставили під сумнів цю теорію?</p> <p>13. Не робіть поспішних висновків.</p> <p>14. У наукових дослідженнях ентузіазм справді важливий.</p> <p>15. Вони прийняли рішення після багатьох роздумів.</p> <p>16. Він поставив важливе (за)питання.</p> <p>17. Чи знаєте Ви (про) цю теорію/проблему? (Чи обізнані Ви з цією теорією/проблемою?)</p> | <p>A What field of science are you interested in?</p> <p>B This issue deals with your investigation.</p> <p>C His dissertation meets all the necessary requirements.</p> <p>D What science are you doing?</p> <p>E That's outside my field.</p> <p>F She majors in applied linguistics.</p> <p>G What is the objective of your research?</p> <p>H My research advisor is a well-known scientist.</p> <p>I They've come to/reached/drawn interesting conclusions.</p> <p>J They are involved in R&D.</p> <p>K When it comes to research, enthusiasm does matter.</p> <p>L Are you familiar with this theory/problem?</p> <p>M After much thought, they've arrived at a decision.</p> <p>N (And) what do you think?</p> <p>O He posed an important question.</p> <p>P Why (how come) they question the theory?</p> <p>Q Be careful not to jump to conclusions.</p> |
|--|---|

Exercise 6. Place steps of scientific research in correct order.

- Deciding how to solve a problem
- Choosing a topic
- Selecting an approach
- Identifying a problem
- Choosing the best solution of those available
- Expressing all ideas clearly
- Presenting materials and information correctly and clearly
- Developing a plan and time line
- Evaluating good and bad points
- Carrying out the plan on schedule
- Sharing the results with other people
- Generating ideas and methods
- Arriving at conclusions

Exercise 7. Choose the correct word and fill in the blanks.

product (próduce)	producer (s)
production	productive
to produce	productivity

1. We had a very ____ meeting last week.
2. The two lasers combine ____ a powerful cutting tool.
3. The country's main ____ is oil.
4. New ____ methods have led to increased ____ .
5. This country is one of the world's leading oil ____ .
6. The wine bottle was marked « ____ of France».

to predict	prediction	predictable
------------	------------	-------------

7. The economists ____ an increase in the rate of inflation.
8. You're so ____ !
9. It is hard ____ when it will happen.
10. His ____ turned out to be correct.

science	scientific	scientist
---------	------------	-----------

11. I'm fond of reading ____ fiction.
12. He is a famous ____
13. I don't need any ____ proof.

to apply	applied	application(s)
----------	---------	----------------

14. This rule does not ____ in your particular case.
15. A new discovery has a number of industrial ____ .
16. Her research is both theoretical and ____ .

(to) require requirement(s) required

17. To carry out this plan would ____ increasing our staff by 20 %.
 18. This monograph is ____ reading for our course.
 19. Candidates who fail to meet these ____ will not be admitted to the university.

curious curiosity

20. There was an intense ____ about their plans.
 21. I'm ____ about what happened.

(to) imagine imagination imaginative

22. You can't ____ how surprised I was.
 23. She has a vivid ____ .
 24. Be ____ !

(to) develop development

25. This was an important stage in country's ____ .
 26. I'd like ____ my idea.

Exercise 8. Render the following text into Ukrainian.

In 1948 a 32-year-old electrical engineer and mathematician published in the *Bell System Technical Journal* a seminal paper with the promising title *A Mathematical Theory of Communication*. The landmark treatise raised considerable interest and made the author immediately known to everybody in the field of communications. His name: Claude Elwood Shannon. It was this outstanding contribution that created the necessary conditions for a theory of information. Without Claude Shannon there might well be no long distance phone calls, compact discs, digital television, satellite communications, cell phones, and e-mail.

Claude Elwood Shannon (1916-2001) was born in Michigan, USA. It is reported that Thomas A. Edison was the admired hero of his childhood. Mathematics and science were his preferred subjects in school, and in 1932 he began to study mathematics and electrical engineering at the University of Michigan. In 1936 he accepted a position as a research assistant at the Massachusetts Institute of Technology (MIT). In 1940 Shannon graduated from the MIT with a M.S. degree in electrical engineering and a PhD in mathematics. For the next 15 years he was with the Bell Laboratories together with other first-rate mathematicians and scientists, including the signal theorists Nyquist and Bode, and the inventors of the transistor, Bardeen, Brattain, and Shockley. During that period Shannon has worked hard on a theory of information, which culminated in the publication of his landmark paper, «A Mathematical Theory of Communication». The scientist who has been noticed so far only by his colleagues for his sophisticated and original ideas tried to show for the first time in this article that information can be measured independently of any semantic aspect and that every data source may be uniquely described with respect to its information content. But first of all, he assured that an error-free data transmission must be possible if the information rate is smaller than the so-called channel capacity. The work provided critically important insights into the nature of communications. Claude Shannon laid the cornerstone for the field of digital communications. In 1956 Shannon was invited to be a professor at MIT. He continued his affiliation with the Bell Laboratories until 1972, and retired from MIT six years later, in 1978.

In 1985, when he and his wife decided spontaneously to visit the International Symposium on Information Theory in Brighton, England, many people noticed the shy gentleman wandering in and out of the different sessions. As the word spread that it was Shannon himself, the reaction of the conference participants was as if Newton has shown up at a physics conference.

Many stories have been written about his varied interests and even eccentricities. In the mid-1960s he had been invited by the Popov Society to the USSR. His wife accompanied him. Although there had been no prior mention of money, close to the end of their visit, he was surprised to learn that a prize of some 3000 Rubles was awarded to him. Unfortunately, he had only a few days to spend it, as it was not possible to take money out of the country at the time. So, with some difficulty, he managed to cancel his full schedule for the next few days to go shopping. Finding nothing to buy that interested him sufficiently, he was about to abandon his quest when he came upon some high-quality East German musical instruments. So he came home with a bassoon, an oboe, and probably other instruments. He remarked that he would never have bought a bassoon or an oboe unless he had to.

Many comparisons to heroes are made when describing Claude Shannon. A number of Shannon Websites claim that he is to our time what Sir Isaac Newton was to his. Some say that he is to communications what Louis Armstrong is to jazz. Everyone mentions Albert Einstein. His awards include the Alfred Nobel Prize, the IEEE Medal of Honor, and the National Medal of Science presented by the President of the United States.

Exercise 9. Read the following text. Discuss the point with your colleagues.

Stefanie Olsen, staff writer, CNET News.com, published an electronic article called «Academia's quest for the ultimate search tool» in August, 2005. She has learned that the University of California at Berkeley is creating an interdisciplinary center for advanced search technologies and is in talks with search giants including Google to join the project. The project is one of many efforts at U.S. universities designed to address the explosive growth of Internet search and the complex issues that have arisen in the field. She points out that U.C. Berkeley, the school where Google CEO Eric Schmidt got his computer science doctoral degree, is bringing together faculty members from various departments to cross-pollinate work on search technology. The principal areas of focus are: privacy, fraud, and multimedia search. The success of the \$5 billion-a-year search-advertising business is fueling Internet research and development in many ways. Interestingly, Google and Yahoo were practically hatched in the same dorm room at Stanford University by several graduate students roughly six years apart. Stanford, Carnegie Mellon University, the Massachusetts Institute of Technology (MIT), and many other universities are working to solve problems presented by the digitized library of tomorrow. Sifting through and organizing billions of digital documents will require new search technology. MIT, for example, has teamed with the World Wide Web Consortium to create next-generation search technology. Under that umbrella, an MIT graduate student has developed a tool called Piggybank: software lets people surf the Web, tag visited sites with keywords and build an annotated collection that can then be published to a site called the bank. Therefore, it turns into a «Semantic Web browser».

Exercise 10. By employing various search tools (google.com, yahoo.com, altavista.com, surfwax.com etc.) find the information on:

- IEEE SPECTRUM
- MIT OpenCourseWare
- ResearchBuzz
- The Ukrainian Research Institute at Harvard University
- The Nuts and Bolts of College Writing
- Science News Online
- IEEE the Institute «How Today's Techies Work»
- «One thing I'd like to clarify...» . Observations of Academic Speaking (by Anna Mauranen)
- The origins of a computer «bug» (clues: US Navy's Harvard Mark II computer; 9 September 1947; Admiral Grace Hopper; Thomas Alva Edison, Pall Mall Gazette, 1889; an electrical handbook of 1896: telegraphers' joke term for noisy lines)
- Other Than That

ESSENTIAL ACADEMIC VOCABULARY

Study the following high frequency academic word list. Listen to the words and phrases and pronounce them after your instructor. Whisper the words as you write them into your notepad. Memorize the words. Put down the words as your instructor dictates them to you. Read them aloud. Compose short sentences using the words. Expand the sentences you've composed.

Author, co-author автор, співавтор	Comment коментар
Colleague колега	Normal звичайний
Methods/techniques/procedures/approaches методи	Important важливий
Allow, permit, enable дозволяти	Positive позитивний
Unique унікальний	Negative негативний
Question (за)питання	Previous попередній
Theory теорія	Primary первинний
Hypothesis гіпотеза	Relevant релевантний, відповідний, той, що стосується
Assess, evaluate, estimate оцінювати	Authentic автентичний
Area, field, domain, sphere, realm, subject area галузь, сфера, царина	Circumstances обставини
Analyse аналізувати (analysis)	Component складова
Context контекст	Item предмет
Data дані	Constant постійний, незмінний
Paradigm парадигма	Contribute робити внесок
Strategy стратегія	Region регіон
Alternative альтернатива, альтернативний	Emphasis наголос
Design конструкція	Criteria критерії
Function функція	Illustrate ілюструвати
Identify ідентифікувати, визначати	Imply мати на увазі
Interpret інтерпретувати	Pseudo-scientific псевдонауковий
Involve залучати	Rely (on) / depend on покладатися на
Issue питання	Sequence послідовність
Occur траплятися (occurrence)	Survey, overview огляд
Percent відсоток, відсотки	Though, although, albeit хоча
Period період	Impact вплив
Process процес	Consequences наслідки
Require, requirement вимагати, вимога	Thesis / dissertation кваліфікаційна наукова праця
Research, investigation(s) дослідження	(Conference) proceedings матеріали конференції
Respond, react відповідати, реагувати	Poster presentation стендова доповідь
Vary варіювати	Journal
Aspect, facet аспект, грань	Magazine (application-oriented)
Affect впливати на	Transactions (on) (research oriented) науковий журнал
Final остаточний	Abstracting journal реферативний журнал
Examine/study/look at вивчати, досліджувати	Refereed journal (провідне) фахове видання
Determine визначати	Book/monograph книга/монографія
Decade десятиріччя	
Detail/Detailed/In full (minute) detail деталь, докладний, у найменших подробицях	

Exercise 11.

Pronounce the following words correctly. If necessary, consult the dictionary or other source(s).

Albert Einstein; Alfred Nobel; Gustav Eiffel; Niels Bohr; Fahrenheit; Descartes; Cartesian; Coulomb; Harry Nyquist; rough; trough; tech-savvy; Ivy League Universities: Brown University, Columbia University, Cornell University, Dartmouth College, Harvard University, Princeton University, (the) University of Pennsylvania, Yale University; Novell; IBM; IEEE; ACCC; VCR; ASCII; A.S.A.P.; TBA; TBD; Tucson, Arizona; Niagara Falls; Illinois; Utah; Iowa; Arkansas; Missouri; Rosslyn; psychological; paradigm; subtle; moral; morale; human; humane; colleague; technique; unique; procedure; soldier; although; determine; examine; alterations; audio; authentic; decade;

consequences; circumstances; question; in lieu of; browser; diaphragm; Mark Jacobson; Roman Jacobson; Ivar Jacobson; elite; mnemonic; memorabilia; to ascertain; palm; numb; systemic; studio; typo; typos; Michael Crichton; Arthur Rubinstein; Estee Lauder; Neiman Marcus; McDonald's; Ronald Langacker; Dimitri Bevc; hierarchy; Ramada Inn; Hotel Marriott; Eldorado; aoud/oud wood; flawless; vehicle; plateau; genre; luxury; luxurious; anxious; anxiety; society; Xerox; niche; cliché.

THE SCIENTIFIC AND POPULAR SENSES

науковий дискурс та загальнонародна мова

device / gadget / gimmick	whatsit / thingy / thingummy / gimmick / widget / gizmo
in lieu of = instead of = rather than	instead of
since / because	because
might (conveys approximately 5% probability)	might (conveys doubt: «I don't think so»)
so to speak	so to say
a book on	a book about
why	how come
a lot of / many / much	lots / a lot of / many / much
a large amount / a great number	masses of / heaps of / bags of / loads of / oodles of / umpteen
myriad / plethora	
(a) plenty (of)	plenty of
mainly / in the main / for the most part / predominantly	mainly / mostly
the remainder	leftover
rather good	pretty good
scattered or sporadic amounts of something	drips and drabs
upon / after	after
at times / occasionally	every now and then
recently/ lately/ of late (up) until (quite) recently	not (so) long ago
for some time; over a period of time; over the years	for some time
approximately/around/about circa [+time marker]	round /around / about
several/a number of a little/a few	a couple of/ several a bunch of a touch of/ a scrap of a little/a few a (little) bit / a tad
(a) sort of / (a) kind of	(a) sort of / (a) kind of / kinda
and so on /etcetera (etc) or something of that sort (kind) (,) and the like	and all (that sort of thing)/ or stuff (like that)/ or what have you/ you name it / and whatnot

CULTURE FLAVORED WORDS

MIND some culture flavored elements encountered in the language of science. Remember that the meaning of various linguistic devices will always be context-specific.

- **aggressive** *ефективний, гійовий*

- **challenge/challenging**

challenging — needing the full use of one's abilities and effort; difficult, but in an interesting way; difficult but not impossible: *складний, але цікавий/перспективний*, used RATHER THAN difficulty/difficult.

ALSO: **conundrum** *складне завдання, що його треба вирішити*
used INSTEAD OF difficulty/difficult.

- **interesting** (important but somewhat unexpected or strange) *гецо цікавий*

- **very interesting** and **its equivalents**: more interesting; the most interesting; of great interest; interesting and provocative; interesting and intriguing (*гуже/справгі*) *цікавий*; Interestingly, ...*Цікаво, що...* (*ужите на початку речення як засіб привертання уваги читача*)

*Better still, ... = A more interesting idea...

- **to argue** *зазначати, уважати; мати підстави вважати*

- **arguably/it seems** *очевидно; імовірно; вочевидь*

- **current; present-day; hot; burning; urgent** *актуальний*

- **new/ brand new/ the latest/ the newest/ the recent/ (most) novel/ innovative/ frontier/ cutting-edge/*state of the art / *state-of-the-art** the phrase implies the newest or best techniques in some product or activity: *сучасний; новий; новітній; новаторський*

- **certain*** — some but not all *деякий, деякі*

- **certain**** — particular; specific; of a particular but not clearly described type *певний, певні*

- **plausible** — seeming to be true or reasonable; more or less OK, but may be not true, reasonable or feasible (*прийнятний*) *за певних умов*

- **compromised** *невдалий*

- **moot** — controversial, debatable; deprived of practical importance, abstract or purely academic; concerned with a hypothetical situation *такий, про який важко сказати напевне / напевно не можна стверджувати / можна лише теоретизувати з приводу...*

Exercise 12.

Render the following sentences into Ukrainian.

1. Aggressive design goals include, but are not limited to low cost, small form factor, and high-speed data transfer.
2. We do not have problems, we have challenges.
3. This is a challenging task.
4. The amplifier in question can meet the abovementioned challenges.
5. The conundrums of the craft of teaching occupy many prospective teachers.
6. The challenges of producing such promising devices are numerous.
7. These contributions increase the potential of significant analysis and positive impact on the problems that challenge educators in North America today.
8. This resulted in thinly educated faculty, academically weak students, and unchallenging curricula.
9. None of these things damage the collection, however, they simply give the collection an interesting, and somewhat hard to characterize feel.
10. Although interesting, we do not see much security value in overly precise semantics.
11. But it is interesting that he pays almost no attention to it.
12. The above discussion suggests some interesting avenues of further research.
13. One of the more interesting techniques for enhancing information system security is described below.
14. Of great interest, therefore, is whether providing students with relevant activities would facilitate the learning of a specific grammatical form that is difficult for them to learn.

15. Interestingly, many students mentioned that they learned at least as much from observing fellow students perform as they did by performing themselves.
16. Client/server is a hot topic — but a term that is overused, confusing, and poorly defined.
17. Innovative approaches to the integration of such systems are keys to achieving these goals.
18. The system's most novel aspect is its introduction of the concept of fusion.
19. A novel technology has been developed to design high-performance components.
20. To accomplish this feat, a novel element has been developed.
21. Nanotech is the new frontier in biomedicine.
22. I argue against the opposite position.
23. It is also argued that such services are highly wasteful of resources.
24. Arguably, such concepts are beyond the scope of linguistic competence.
25. This limits the usability of some applications in certain situations.
26. It is used in certain applications such as audio.
27. For example, your house is in a certain location, has a specific size, was built in a certain style in a certain year out of particular materials, and is a certain color. It currently belongs to you, has a certain market value, and so on.
28. A rather more plausible scenario is that an alternative method of communication could emerge, which would eliminate the need for a global language.
29. Core values of our conventional system may be compromised.
30. And it doesn't matter what the original purpose was. That's moot.

SOME WAYS OF QUOTING

Charles Kingsley	says, argues, writes, states, claims,		
In the words of Charles Kingsley,		«We act as though comfort and luxury were the chief requirements of life, when all that we need to make us happy is something to be enthusiastic about.»	
In Charles Kingsley's words,			
To borrow Charles Kingsley words,			
As Charles Kingsley put it, According to Charles Kingsley,			
Charles Kingsley	notes	that	we act as though comfort and luxury were the chief requirements of life, when all that we need to make us happy is something to be enthusiastic about.
	observes		
Charles Kingsley	has spoken	of the fact that	

«We act as though comfort and luxury were the chief requirements of life, when all that we need to make us happy is something to be enthusiastic about,»	said/says noted argued observed stated	Charles Kingsley.
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The scientist	defines what he calls describes	the Babel Effect. (the) so-called Babel Effect.
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It is classified as a floral-aldehyde,	per according to	Jan Moran.
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Frohmann (1994) applies the kind of discourse analysis practiced by Michel Foucault to the field of Library and Information Science.

Exercise 13. Employ various ways of quoting. Be creative!

Somerset Maugham: *«It's a funny thing about life; if you refuse to accept anything but the best, you very often get it.»*

Steven Wright: *«You can't have everything. Where would you put it?»*

Thomas Edison: *«Opportunity is missed by most people because it is dressed in overalls and looks like work.»*

Henry David Thoreau: *«Do not hire a man who does your work for money, but him who does it for love of it.»*

Mykola Gogol: *«It is no use to blame the looking glass if your face is awry.»*

Exercise 14. Match the columns, whenever applicable.

A.

R&D	invalid	question(s)	point of view/ view(point)
S&T	wrong	resource(s)	
	incorrect	need	
serious	false	tools	method(s)
	erroneous	expertise	technique(s)
hands-on	misleading	efforts	procedure(s)
	confusing/confounding	idea(s)	approach(es)
leading/top/ most successful	unreliable	concept(s)	
	bad	data	scientist(s)
important	no good	findings	researcher(s)
good	simplistic/oversimplified	results	investigator(s)
valid	completely wrong approach	outcome	scholar(s)
improved	utterly hopeless	evidence	coworker(s)
promising	formidable	facts	colleague(s)
reinforced	bogus		peer(s)
strengthened	clueless	title/topic	coauthor(s)
correct	farfetched	subject	editor(s)
accurate/precise/ exact	bizarre		reviewer(s)
reliable	malfunctioning	plus(es)/merits/ benefits/advantages	PhD candidate/ doctoral student
sophisticated	underperforming		research advisor
good	vulnerable	mistake/error	learned secretary
cost-effective	troublesome	confusion	
efficient		discrepancy	thesis
effective	out-of-date/ outdated	misunderstanding	dissertation
reliable	obsolete	disadvantage	paper
modern/updated/ up-to-date		drawback	text
upgrade(d)	frustrating	downside	writing(s)
strong	pricey / costly	minus/demerit/pitfall/ loophole/fallacy/ limitation	book(s)
robust	controversial		monograph(s)
competitive	compromised	conflict / argument / disagreement	treatise(s)
stunning			article(s)
noteworthy			case study

newsworthy	allied	stalemate	abstract
elegant	related	hypothesis	summary
highly efficient		theory	resume
technologically savvy	established	assumption/supposition	synopsis
aggressive	emerging / nascent	interpretation	survey/overview
promising		area(s)	review(s)
reputable		subject area(s)	report
comprehensive	current	field(s) /discipline(s)/	textbook
in-depth		domain(s)/realm	manual/user's guide
straightforward	relevant / pertinent /	affiliation	grant proposal
clear(cut)	germane (to)	research	conference proceedings
lucid		study	journal
easy-to-comprehend	unique	investigation(s)	abstracting journal
far-reaching	one-in-a-million	inquiry	refereed journal
the best possible		insight into	(annotated) bibliography
by far the best	routine	basis	glossary
proactive		paradigm	footnotes
first-of-its-kind		framework/context/situation	map(s)/atlas(es)
cutting-edge		background	gazetteer
up-to-date		foreground	table of contents
state-of-the-art		underpinning(s)	chapter(s)
new/ novel		rationale	standing committee
innovative/ frontier		components/parts	steering/organizing
seminal		academic(s)/	committee
landmark		higher school educator(s)	poster presentation
indispensable			mailing list(s)

B.

to deal with/touch upon/ to address	parameter(s)	
to use/employ	technique(s)	
to work out/ develop	approach(es)	
to offer/suggest/put forward	outline/layout	in full detail
to apply	section /sector / component / subsection	
to define	proportion / ratio / relationship	(only) tentatively
to enumerate / to list	issue(s) /problem(s) / matters /questions	
to examine	result(s)	
to add	template	
to determine	(rough) draft	
to emphasize	fact(s)	
to compare/contrast	concept(s)	
to discuss	principle(s)	
to introduce	theory (theories)	
to summarize	experiment(s)	
to observe	a crucial question /	
to reveal	the key point /	
to confirm	one of the most important issues	
to verify		
to refute	the problem	
to assess/evaluate/estimate		
to demonstrate/show		
to specify		
to indicate		
to place/put/lay emphasis on		
to run/do/perform/ conduct		
to solve		
to tackle		

BASIC INTONATION PATTERNS

NOTE. Please take care of the appropriate intonation, pitch, stress, pausing and phrasing — an important part of the English language rhythm.

Yes/No Questions, as well as Negative Questions require final rising tone (pitch).

Are you ready?
 Do you like driving?
 Does she like telling jokes?
 Did you find it, Rose?
 Did you work all day?
 Is he shopping? **Cf.** He is shopping?
 Is she out? **Cf.** She is out?

Couldn't you speak slower, please?
 Wouldn't you feel safer this way?

Could you lend me 20 **euros**? (normal statement)
 Could you lend me **20** euros? (not ten or fifty)
 Could you lend **me** 20 euros? (not anybody else)
 Could you **lend** me 20 euros? (I don't want you to give it to me)
 Could **you** lend me 20 euros? (I've asked other people)
Could you lend me 20 euros? (Do you have that much — is it possible for you?)

Do you like **cole slaw**? (a specific kind of cabbage salad)
 Do you like **cold** salad? (the way the salad is served)

Are you «**busy Michael**»? (I heard it was your nickname)
 Are you busy, Michael? (Do you have free time?)

Questions with Wh-words (What? Where? When? Who? Why?/How come? How?) as well as answers to them require a final falling tone (final falling pitch).

Where have you been?
 Who did it? Why did she do it? Where did they do it? Why?

What time is it? It's 5 p.m.
 How come we haven't considered this opportunity?
 Do you know what his native language is?

Why don't we get together again? Sounds good. It's a superb idea!
 When did you see him? Yesterday.

NOTE. Mind the difference:

What do you think? Як ви гадаєте? Яка Ваша думка? Що ви думаете (про це /з цього приводу)?

What do you think of my book?
What do you think of this infomercial?

How do you think? Як (яким чином, у який спосіб) ви думаете?
How do you think? How do you formulate your thoughts and ideas? What form do they take inside your head? Random, scattered words? Images? Movies? Conversation? Music? What?

Cf.:
 How do you think the general public view science?

How do you feel about it?

Alternative Questions (questions with OR) require a rising tone before OR, falling tone after OR.

Would you like a monograph or a dictionary?

Would you like a book or a journal or an atlas?

Statements usually require falling intonation.

High pitch generally indicates new or contrasting information, discourse cues, the views of another speaker or other authors. **Low pitch** usually conveys something given, predictable, or merely marks function words. It also indicates finality, the end of a thought. Plateau could signal continuation, topic development, interdependency between current and subsequent statements by the author, and may also mark current topic closing, with asking for permission to go on further.

I can **do** it. (affirmation)

I **can't** do it. (negation)

I know it's true.

She is shopping.

He is out.

Some people have intriguing pastimes.

It's a computer that I want for my birthday.

Sentences starting with IF require a rising intonation in the first part, and falling intonation in the end.

If you need this **book**, give me a **call**.

In enumerating (making a list) use the rising tone on all the items except the last one.

The New Yorker Store sells «The Complete New Yorker» on DVD and hard drive, signed books by New Yorker contributors, desk diaries, and other New Yorker merchandise.

Please mind the pauses (///).

Olga said Michael is upstairs. (Olga is talking about Michael)

«Olga», /// said Michael, /// «is upstairs». (Michael is talking about Olga).

Finally, /// we decided to do it ourselves,/// no matter how long that would take.

«Although I do firmly believe /// that the brain is a machine, /// whether this machine is a computer /// is another question» (Rodney Brooks).

Arguably, /// the phrase «part of», /// as opposed to «a part of», /// is more dramatic, /// literary, /// and is more common in writing. /// It also has a more professional tone. At the same time, /// there may be some distributional differences. For example, /// an educated native speaker might use the first sentence /// but not the second: ///

1. It's a part of life /// I've never been interested in.

2. It's part of life /// I've never been interested in.

«Part of»/// might also be preferable /// when you're referring to a section /// or a segment.

Expressing positive and negative emotions (disbelief, sarcasm etc) and commands requires a final falling tone.

What a challenging task!

What a nice day!

I had a great time.

Oh, no.

Fill it out.

Put it down.

Follow the instructions.

Aw, c'mon, Dad! (Oh, come on / Stop teasing me!)

Expressing surprise requires a rising tone. A possible comment to it (with differing information or just a tag question) requires a falling tone.

- I like jogging.
- Really?

- I go there every other week.
- You do?

- I am fond of Internet surfing.
- You are?

- I went to the theater yesterday.
- You did?

- What an impressive presentation!
- Impressive? You think it's impressive?

- I have been to Paris.
- Have you? I thought you've been to Monte Carlo.

- I am off to the library.
- The library? Today? I thought you might go to the department meeting instead.

- They weren't there, were they?
- No, they weren't.

- You weren't late, were you?
- No, I wasn't.

PRONUNCIATION TIPS

VOWELS

NOTE 1. American English: r after a vowel - (r)

mother care sure park where under the weather cashier near
 here atmosphere store floor supermarket door alternative depart
 early four more important hours temperature readings expertise zircon

NOTE 2. American English: ju: → u: few // [u:^w OR ju:] knew dew due to
newspaper introduce new New York

[ju. jə OR ju:] you

*i it is if this device criticism probably fifty-fifty issue even degree election
 experiment exam examine determine exactly serendipity painted veils picture dictionary
 learned secretary naked eye long-awaited I have decided to resolve the issue.*

i: sequence nominee attendee degree unique elite colleague expertise breathe pizza

[i OR i:] detail

Mind the contrast: sheep — ship heel — hill cheeks — chicks leave — live

iə period criterion cafeteria stereotype *Is there a cafeteria near here?* // **[i:^(b)] vehicle**

i — **open your mouth wider** → *e* friend any experiment stereotype everybody shelf
 decade Venice breath says technique unless ten cents best scent expertise hotel Nobel

Mind the contrast: win — when wrist — rest bill — bell fill — fell till — tell

e → *e^əi* opaque fragrance veil decade elite nation gauge/gage bathe beige

Mind the contrast: pepper — paper tell — tale test — taste

e → *æ* **open your mouth wide** absolutely manager exactly natural national plan
 paragon paradigm access examine rationale automatic salmon swank ant and

NOTE 3. American English: ask answer past fast last enhance sample

Mind the contrast: pen — pan men — man said — sad

æ → ʌ tongue up and back mother

Mind the contrast: cap — cup bag — bug rag — rug

æ → e^əi

Mind the contrast: natural — nature national — nation

ə («shwa») an onion bananas a question some chocolate a cup of coffee percent
 complexion perception presentation proposal per diem politician musician, fashion
 graduation nation national and

Linking (do NOT pronounce «d»): wait and see and so on and so forth. pros and cons

eə^(r) air airy hair vary various fair country fair fairy tale

a:^(r) father mark park parliament palm bizarre Martha's Vineyard

ʌ → o tongue down and back: get ready to pronounce ʌ, but ACTUALLY say o
 knob nod It's not a problem, colleague.

Mind the contrast: hat — hot nut — not cut — caught

ʌ → o^əi toy boy enjoy noisy annoying noise

Mind the contrast: ball — boil all — oil hall — oyster

ʌ → au^(w) how now house town hour south Calm down!

Mind the contrast: pound — pond found — fond south — southern

a: / ʌ → /ɜ: ^(r) star — stir far — fur hard — heard shut — shirt
 early world journal occur thirty thirtieth circumstances perfect superb survey
 interpret determine commerce

a^əi I might try design item fly high like clockwise paradigm otherwise
 primary criteria aisle rhyme verify finally invite Michael library

ɔ:u^w [OR ə (:)u^w] OK. Oh, no. Hello! window vogue coat yoke snow
 although focus component folk studio memo innuendo Yosemite National Park

Mind the contrast: hall — hole bought — boat ball — bowl

o → ɔ:

Mind the contrast: obvious — awe trough — thought

ɔ:/o → u short, relaxed sound put good look

Mind the contrast: talk — took ball — bull fall — full

u → u:^w tongue up and back route blue shoes smooth

Mind the contrast: full — fool pull — pool

auə ^(r) our hour flour flower

aiə ^(r) fire higher acquire

CONSONANTS

p t (tongue — behind front teeth) *k f h s θ* *voiceless*
b d (tongue — behind front teeth) *g v z ð* *voiced*

Linking (pronounce initial linking sound only): *R&_D* *Let_Ted meet_Ben.*

Mind the contrast:

pie — buy	boat — vote	and — ant
pear — bear	best — vest	write — ride
pack — bag	feel — veal	tie — dry
coat — goat	fine — vine	pulled — pushed
back — bag	few — view	closed — watched
big — deal	fly — try	opened — walked
	leaf — leave	filled — brushed

hill hello husband hope happen happy vanity fair verifiable evidence emphasis

***s* (voiceless; touch side teeth with the sides of your tongue; tongue forward)**

psychology	psyche
psychological	pseudo-politician

Linking (pronounce initial linking sound only): *Let's_stay at the hot?!. It's his_sweet.*

***z* (voiced)** *languages* *questions* *gestures* *Rosslyn* *xylophone* *rhythm*

Mind the contrast:

sip — zip	worth — worthy	free — three	day — they	north — northern
price — prize	breath — breathe	first — thirst	dare — there	south — southern
face — faith	bath — bathe	sink — think	tree — three	
size — scythe	bathe — beige	mouse — mouth	tent — tenth	

What's this? What's that? Is it authentic? Is this authentic? Is that authentic?

This is the author with the co-authors.

This is the Xerox. This is the new hypothesis. Is this the method? Is this the zenith?

Thank you. Thanks a lot. Thanks a million!

Upscale Bethesda. Birth certificate. A thorough analysis. I think it's the thirtieth.

I thought a thought. Suzuki method.

Is today your father's birthday? It's the thirteenth of September. Ken is back to Quebec.

***s* → *ʃ* (sh) push your lips forward a little; make it soft, voiceless**

push issue tissue cashier show sure insurance Chicago

Linking (pronounce initial linking sound only): *Spanish_shawl Danish_ship*

Mind the contrast: *sea — she sell — shell*

sushi parachute She sells seashells at the seashore. Nice suit. It's her suite.

***ʃ* (t+ch → (t)ch) soft, voiceless (similar to Ukrainian «ш»)**

***ʃ* - *ʒ* (sh → zh) soft, voiced (similar to Ukrainian «ж»)**

beige treasure measure Asia pleasure occasion television garage genre gauge/gage

***tʃ* (sh → (t)ch) soft, voiceless (similar to Ukrainian "ч")** *picture watch*

ts *pizza*

Mind the contrast: *what — watch cash — catch pita — pizza*

[s + (t)ch] posture gesture gestures question questions

***dʒ* (tsh → (tsh)dzh) soft, voiced (similar to Ukrainian «(ч)дж»)** *joke John agency*
magenta large region passenger bridge cutting-edge procedure change original
This job is just about done.

Noteworthy

Choose a job you love, and you will never have to work a day in your life.

Confucius

First learn the meaning of what you say, and then speak.

Epictetus

Say not, «I have found the truth,» but rather, «I have found a truth.»

Kahlil Gibran

Use soft words and hard arguments.

English Proverb

Good science is never outdated.

H. Shwan

The endless cycle of ideas and action

Endless invention, endless experimentation

Brings knowledge of motion,

But not of stillness.

Knowledge of speech, but not of silence.

Where is the wisdom we have lost in knowledge?

Where is the knowledge we have lost in information?

T.S. Eliot, Choruses from «The Rock»

Unit 2

The Importance of Science

Expressing Quantity

Writing Scientific Abstracts

**Tips for Dealing with Reading
Comprehension Tasks**

TEXT

Read the text and be ready to answer the questions that follow.

The word «science» originates from the Latin word «scientia», meaning «knowledge». Thinking about science, Goethe once said, «To one man it is the highest thing, a heavenly goddess; to another it is a productive and proficient cow who supplies them with butter.» The **results** of science and the motives for doing it are **diverse**.

Curiosity is the most powerful **motivation** for research professionals — and for many amateurs, too. Science clarifies, explains and **occasionally** predicts. Understanding a piece of universe can bring **satisfaction** and excitement to anyone. Science serves the missions of **improving** health, national security, energy, the environment and communications, it creates new products, meets the demands of **emerging** markets and satisfies social needs. But even strong **faith** in science may crack in **strained circumstances**.

When it comes to future justification for curiosity-driven and mission-oriented research, we **encounter** three **related undertakings**.

First, we have to rethink the case from inside the scientific **community**. Government, businesses and universities must demonstrate that investments in science are the only way of fulfilling **long-range goals**. Research executives will have to document the **ample** returns from past investments and then outline future paths. Setting priorities will not be easy, and **stern** management to ensure excellence will be **essential**.

Second, we should broaden the dialogue. Society must be engaged in continuing exchange about national goals and research priorities. The press, industry, nonprofit organizations must participate.

Finally, we must **expand** the **accessibility** of knowledge.

The entire professional community must pay more attention to building a scientifically literate society. Support for science, and for the **benefits** of technology, increases with educational level. To be successful, we need more science, not less.

result — something that happens because of an action or event. **Synonym**: outcome; укр. результат, наслідок

diverse — different (from each other), showing variety укр. різноманітний

motivation — need or purpose. **Synonyms**: incentive, stimulus, motive укр. стимул, мотивація

occasionally — укр. час від часу, інколи

to satisfy — to give enough for укр. задовольняти

to improve — to make better укр. поліпшувати

to emerge — to come or appear from inside or from being hidden укр. з'являтися

faith — firm belief, trust, complete confidence укр. віра

strained circumstances — difficult because lacking money. **Synonym**: money is short укр. фінансова скрута

to encounter — to meet or have to deal with (esp. something difficult) **Synonym**: to be faced with укр. стикатися з, натрапляти на

related — connected in some way укр. суміжний, пов'язаний

undertaking — a job, a piece of work or anything needing effort укр. нелегка справа

community — a group of people living together and/or united by shared aims and interests укр. спільнота

long-range — covering a long distance or time укр. довгостроковий, довготерміновий

ample — enough or more than enough укр. достатній

stern — firm, strict, severe укр. суворий

essential (to, for) — completely necessary for the existence, success of something. **Synonyms**: most important, notable, fundamental. **Also**: indispensable — too important or too useful to do without укр. нагально необхідний, істотний, суттєвий, дуже важливий

to expand — to increase in size, number, volume, degree; to grow larger, to broaden укр. збільшувати, розширювати

accessible — easy to reach, enter or obtain. **Synonym**: obtainable укр. доступний

accessibility — доступність

access — доступ

benefit — anything that brings help, advantage or profit укр. перевага, користь

NOTE.

<u>переваги</u>	<u>недоліки</u>
advantage(s)	disadvantage(s)
merit(s)	demerit(s)
plus(es)	minus(es)
benefit(s)	weakness(es)
	shortcoming(s)
	limitation(s)
	pitfall(s)
	drawback(s)
	loophole(s)

1. What are the motives for doing science? What is the most powerful motivation?
2. What are the missions of science?
3. Are there any problems concerning scientific development?
What are some possible ways of solving them?
4. What can be done to build a scientifically literate society?
5. What major conclusions does the author arrive at?
6. Why did the author mention «the goddess» and «the cow»?
7. What was the author's purpose for writing this passage (to inform, to describe, to persuade, to explain, to entertain or something else)? What is the author's opinion on the subject?

Exercise 1. Give English equivalents to:

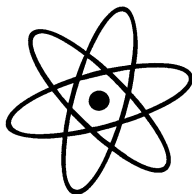
сильний стимул; професіонали та аматори; різноманітні мотиви; поліпшувати; слугувати меті; час від часу, фінансова скрута; довкілля; задовольняти потреби; довгострокові цілі; наукова спільнота; некомерційні організації; розширяти доступність знань; приділяти більше уваги; переваги науки та техніки; національна безпека; встановлювати пріоритети.

Exercise 2. Discuss the following point. Use an example provided below as possible response to the issue raised.

Problem: Around the world science is both indispensable and *vulnerable*. Indispensable because the world has goals that can be reached only with deeper understanding. Vulnerable because money is short and patience with research is running short, too.

Sample answer: Why support science? For hundreds of years one justification has been that research fulfills a passionate human *quest* for knowledge. But these days curiosity is not enough. Most people support science and think research leads to practical benefits: economic growth, better health, labor saving devices. The challenge is to integrate the drive for knowledge with the delivery of useful outputs.

vulnerable — weak, not well protected, sensitive, easily harmed
укр. уразливий
quest — a long search, an attempt to find something
укр. пошук



EXPRESSING QUANTITY

I. LARGE QUANTITY

With count nouns	With both	With non-count nouns										
<p>MANY (<i>more, the most</i>)</p> <p>There are many books in our library. У нашій бібліотеці багато книг.</p>	<p>A LOT OF</p> <table style="margin: auto;"> <tr> <td style="padding-right: 5px;">a lot of</td> <td style="border-left: 1px solid black; padding-left: 5px;">books</td> </tr> <tr> <td></td> <td style="border-left: 1px solid black; padding-left: 5px;">time</td> </tr> <tr> <td style="padding-right: 5px;">багато</td> <td style="border-left: 1px solid black; padding-left: 5px;">книг</td> </tr> <tr> <td></td> <td style="border-left: 1px solid black; padding-left: 5px;">часу</td> </tr> </table>	a lot of	books		time	багато	книг		часу	<p>MUCH (<i>more, the most</i>)</p> <p>Much time is needed to solve this problem. Для розв'язання цієї задачі потрібно багато часу.</p>		
a lot of		books										
	time											
багато	книг											
	часу											
<p>A GREAT NUMBER (OF) LARGE</p> <p>a great number of students багато (велика кількість) студентів</p> <p>*not a few *quite a few *(a) host (of)</p> <p>There are not a few quite a few universities in the U.S. У США багато університетів. They have a host of friends. У них багато друзів.</p>		<p>A LARGE AMOUNT (OF)</p> <table style="margin: auto;"> <tr> <td style="padding-right: 10px;">a large amount of</td> <td style="border-left: 1px solid black; padding-left: 10px;">water (велика кількість води)</td> </tr> <tr> <td></td> <td style="border-left: 1px solid black; padding-left: 10px;">information</td> </tr> <tr> <td></td> <td style="border-left: 1px solid black; padding-left: 10px;">knowledge</td> </tr> <tr> <td></td> <td style="border-left: 1px solid black; padding-left: 10px;">evidence</td> </tr> <tr> <td></td> <td style="border-left: 1px solid black; padding-left: 10px;">significance</td> </tr> </table>	a large amount of	water (велика кількість води)		information		knowledge		evidence		significance
a large amount of	water (велика кількість води)											
	information											
	knowledge											
	evidence											
	significance											

OTHER EXPRESSIONS DENOTING LARGE QUANTITY:

a great deal of
a great variety of
a wide range of
abundant = plentiful

myriad(s)
plethora

a great deal of money — багато грошей
a great variety of reasons (багато причин)
a wide range of different opinions (багато різних думок)
The country has abundant supplies of oil and gas.
У цій країні великий запас нафти та газу.
a myriad stars — велика кількість зірок, мільярди зірок
a plethora of suggestions — надмір пропозицій

II. SMALL QUANTITY

With count nouns	With non-count nouns
<p>FEW (<i>fewer, the fewest</i>)</p> <p>They asked few questions. Вони поставили мало запитань. *a few — трохи, невелика кількість I may be a few minutes late. Я можу трохи запізнитися.</p>	<p>LITTLE (<i>less, the least</i>)</p> <p>We paid little attention to the proposal. Ми майже не звернули уваги на пропозицію. *a little — трохи, невелика кількість I have a little money У мене є трохи грошей.</p>

minute, tiny, infinitesimal — крихітний

a bit (of) / a dollop (of) / a grain (of) — невелика (незначна) кількість, дещиця; трохи. I'm a bit tired.
Я трохи втомився. There is a grain / a dollop of truth in what you say. У ваших словах є дещиця правди.

scarce — мало, обмаль. This winter snow was scarce. Цього року взимку було обмаль снігу.

Use **some** in affirmative sentences — I have **some** time. У мене є трохи часу.

Use **any** in negative and interrogative sentences — I don't have **any** information.

У мене немає ніякої (бодай найменшої) інформації.

Are there **any** letters for me? Чи є для мене (якись) листи?

sufficient
enough
ample
(a) plenty of

ДОСТАТНЯ КІЛЬКІСТЬ

We have plenty of time — У нас досить часу.

We have enough seats for everyone — У нас досить місць для усіх.

sufficient information — достатня інформація

ample money — досить грошей

a bunch of
several
a number (of)
a couple (of)
several
some

декілька

a bunch of | students
flowers

група студентів
букет квітів

He wrote

several | articles.
a number of |

Він написав декілька (низку) статей.

BUT:

the number (of) — кількість

The number of students in our group is 12.

У нашій групі — 12 осіб.

Approximators:

not exceeding / no more than / up to — не більш(е) (ніж/як), до
approximately

nearly

about / around / some

almost

roughly

close to

2 hours — приблизно (майже) 2 години.

relatively

rather

fairly

good — доволі добрий Або: X is good enough.

Succession:

The first, the second ... the last — перший, другий ... останній

*the former — перший за переліком

*the latter — останній за переліком

серед двох згаданих.

Of the two possibilities the former seems more interesting (than the latter).

З двох можливостей перша видається більш цікавою (ніж друга).

(Also: former — колишній, the former president — колишній президент)

*every other — через одного

every other year — кожні два роки (раз на два роки)

*in succession, in a row — поспіль, підряд

*the last but one

*next to the last | передостанній

*the last but not least — останній за переліком, але не за значенням (важливістю)

*between — (поміж) двома

*among — серед трьох та більше

NOTE

the last останній	the latest найновіший, найсвіжіший (про новини, інформацію, тощо)
Have you read <u>the last</u> book by academician Vernadsky? Ви читали останню книгу академіка Вернадського? <u>The last</u> chapter presents conclusions. В останній главі наводяться висновки.	Have you read <u>the latest</u> article by our professor? Ви читали нову статтю нашого професора? The author provides the reader with <u>the latest</u> information. Автор надає найновішу інформацію.

the most найбільш	most більшість
This is <u>the most</u> interesting article I have ever read. Це найбільш цікава стаття серед тих, що я коли-небудь читав.	<u>Most</u> scientists usually work on one or two projects at one time. Більшість вчених звичайно працює над одним або двома проектами одночасно.

MIND:

- *for the most part / mainly / in the main / basically /generally — в основному, здебільшого
- *to make the most of — використовувати найкращим чином
Make the most of your studies!
- *another, a second, one more — ще один
- *other — ще один, інший (з декількох)
- *the other — останній, що залишився
- *in (full) detail — докладно, детально, ретельно, в усіх деталях (у найменших подробицях)

leftover, remainder
vestige(s)

решта,
залишки

OTHER EXPRESSIONS:

a dozen = 12
a score = 20
a quarter = 1/4
a half = 1/2

1,2,3... 80... 100... 300...	percent Ø hundred Ø million Ø	BUT:	hundreds of millions
	billion Ø dollars		10 dollar Ø bill(s)

* billion — мільярд — 10^9

two times — двічі
three times — тричі

* **-fold** There has been a **twofold** increase in company's business.
Прибуток компанії збільшився вдвічі.

twice	as little as much	вдвічі	менший більший
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NOTE

Mind such phrases as: «as much as», «as small as», «as early as»
as early as 1970 — (ще) у 1970 році

IS or ARE?

experience
 research
 time (5 minutes, 10 years [decade])
 money (40 dollars)
 distance (50 miles)
 the number (of)
 1 + 2, 12 + 80 (...)
 news
data
 evidence
statistics (as a science dealing with and explaining a collection of numbers representing facts or measurements)
electronics (science)

experiences
 police
 goods
 a number (of)
 several
 thanks
data
ethics
statistics (as a collection of numbers representing facts or measurements)
electronics (electronic devices and systems)

IS

ARE

Also

Chinese (as a language)
 Chinese **is** a difficult language.

the Chinese (as people)
 The Chinese **are** famous for their cuisine.

there + to be

There is (was) 1 professor and 2 (...) students.

There are (were) 2 students and 1 (...) professor(s).

WITH COLLECTIVE NOUNS:

committee
 faculty
 class
 team
 audience
 public
 personnel

IS having their meeting (**as a group**)

ARE going back to their homes (**separately**)

BORROWED PLURAL FORMS:

on → a um → a	phenomenon — phenomena феномен (явище) феномени (явища) curriculum — curricula навчальна програма — навчальні програми	Also possible: symposia symposium → symposiums criterion → criteria → criterions
is → es a → ae	analysis — analyses аналіз — аналізи formula — formulae формула — формули	formula → formulae → formulas
us → i	nucleus — nuclei radius — radii ядро — ядра радіус — радіуси	
ix/ex → ices → exes	index — indices / indexes індекс — індекси (показчик — показчики)	appendix — appendices / appendixes (додаток — додатки)

*bureau — bureaux бюро, офіс, заклад — бюро, офіси, заклади
 *dogma — dogmata / dogmas догма, доктрина, вчення — догми, доктрини, вчення

singular	plural
man woman child tooth goose mouse ox person, human being half passer-by experience alumnus (male), alumna (female)	men women children teeth geese mice oxen people, human beings, humans halves passers-by experience(s) alumnae/alumni / graduates
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> knowledge research aircraft spacecraft know-how equipment personnel </div>	
a piece of information a piece of news a piece of advice a piece of furniture	information news advice furniture

According to Oxford English Dictionary, the word «phenomenon» is of Greek origin. It was originally used in English as the plural, «phenomena». It denotes a thing that appears, or is perceived or observed. It can also denote something very notable or extraordinary, a thing, or a person remarkable for some unusual quality, a prodigy.

Exercise 3. Pluralize the following words:

radius, crisis, antenna, appendix, criterion, stimulus, encyclopedia, prognosis, sanatorium, axis, aircraft, medium, matrix, nebula, phasis, optimum, syllabus, supernova, synthesis, spectrum, thesis, equipment, maximum, hypothesis, equilibrium, millennium, oasis, curriculum, phenomenon, analysis, alumna, alumnus, bureau, half, human being, person, atrium, experience, spa, issue, research, «how and why», «do and don't», literatus, tenet.

Exercise 4. Translate the following sentences into Ukrainian.

1. There are infinitely many bases to choose from.
2. You may first wish to try a few examples to illustrate that formula.
3. There are many interesting results concerning matrices.
4. Unfortunately, formulas like the ones above do not come easily.
5. There did not remain any questions.
6. This is the least acceptable variant — it's not cost-effective enough.
7. The latter procedure is much more complicated than the former one.
8. There are a lot of differences among languages.
9. We do not have enough information at present to offer sound answers to these questions.
10. They have sufficient information (from which) to draw a conclusion.

11. The reaction accelerated fivefold.
12. These features are also important in a wide variety of applications.
13. The session foregrounds some of the ongoing issues.
14. Routine administrative responsibilities and myriad other chores comprise too much of a science workforce job.
15. If you need more books, there are plenty more over here.
16. We have discussed the preliminary proposals in (full) detail.
17. Electronics aboard the new aircraft are very sophisticated.
18. Many amateurs enhance the Internet. Arguably, they do a lot of research.
19. There is a huge range of clean technology available and ready.
20. Do you have room in your car?
21. No news is good news.

Exercise 5. Render the following passage into Ukrainian. Pay special attention to quantity words.

All About the Opryland Hotel

Hotels aren't usually tourist attractions, but this one is an exception to the rule. Opened in 1977, Tennessee's Gaylord Opryland Resort & Convention Center is one of the largest hotel facilities in the world. With over 2,500 guest rooms and 200 suites, the place is huge, but what makes it worth a visit are the three massive atria. Together, these atria are covered by more than 8 acres of glass to form vast greenhouses full of tropical plants. There are rushing streams, roaring waterfalls, bridges, ponds, and fountains. There are also plenty of places to stop for a drink or a meal. In the evenings, live music and a laser light show can be seen in the Cascades Atrium.

The largest of the three atriums here is the Delta, which covers acres of indoor gardens and has a quarter-mile-long landscaped indoor river, a waterfall, a fountain, and an island modeled after the French Quarter in New Orleans. As you might expect of a mega property, the Opryland Hotel features a considerable number of amenities. There are numerous shops and restaurants, which give the hotel the air of an elaborate shopping mall, lounges, room service, and even wedding services. You can take boat rides on the river and, at night, catch live music in a nightclub on the island.

Exercise 6. Read the text and try to appreciate its humor. Discuss the point with your colleagues.

Marion Eppley, the developer of the standard cell that bears his name, was credited with the following anecdote:

A young high school student returned one afternoon to the small retail store his father operated in conjunction with a partner.

«Dad,» asked the student, «what are ethics? My teacher said that tomorrow we are going to discuss them.»

«Well,» said the father, «I'll illustrate. Imagine that a man comes into the store to buy some stuff. I give him the merchandise, and he gives me the money. Then, after I gave him his change, he turns to leave and I discover that the \$20 bill he gave me seems thicker than usual. On closer examination I find that there are two \$20 bills stuck together.

Here, my son, is the whole question of ethics. Do I or don't I tell my partner?»

I'm sure you see Eppley's point.

Exercise 7. Discuss the following ethical issues with your colleagues.

A. Some words and phrases in a code of ethics are subject to varying interpretations, and any ethical principle may conflict with other ethical principles in specific situations. The entire IEEE

(The Institute of Electrical and Electronics Engineers) expects our members to behave professionally and ethically at all times. In fact, I suspect that it is generally taken for granted that people are aware of and understand which behaviors are ethical and which are not. But then, we have a membership made up of people from many different countries around the world, often with radically different cultures and ways of operating. How could we all have the same set of ethical standards? Can we all be expected to understand and subscribe to the same ethics? In order to ensure that everyone has the same understanding, IEEE does have a code of ethics. And we expect that all our members and volunteers also subscribe as a condition of membership. At the same time, what we see as ethical behavior can differ slightly from person to person, in the sense of the sensitivity of single individuals to the issue at stake. What a group considers ethical also changes over time.

B. Too many talented young women don't consider an engineering career because they grew up hearing that women engineers are unattractive and unappealing eggheads with few non-technical interests — in other words, «nerdy». The project «Nerd Girls» as a humorous play-on-words, because today's undergraduate women enrolled in engineering programs are anything but nerdy. According to Tufts Professor of Electrical Engineering Karen Panetta (who organized the Nerd Girls, a coalition of nine female students dedicated to challenging the stereotype of female engineers) the mission of the Nerd Girls is to demonstrate that women can be both attractive and intelligent. Karen Panetta knew that it was tough for women to be taken seriously in her profession if they wore jewelry, nail polish and bright-coloured clothing. An associate professor of electrical engineering, she nevertheless favors pink suits, high heels and long hair. She had been told she doesn't look like a scholar and would never get grant money. Yet she proudly notes she has won five grant awards from NASA and earned a National Science Foundation career award.

WRITING SCIENTIFIC ABSTRACTS

TWO MAJOR TYPES OF ABSTRACTS:

DESCRIPTIVE	INFORMATIVE
*Brief, usually one- or two- sentence paragraph explaining what the original document contains, e.g.:	*Summarizes key information from every major section from the body of the paper.
<i>This report provides conclusions and recommendations on ...</i>	*The informative abstract is NOT an introduction!

INFORMATIVE ABSTRACTS

«FULL» VERSION	«MEDIUM» VERSION	«MINIMAL» VERSION
BEGIN WITH: <i>The present paper/ This paper/ This study deals with / is about</i> Statement of objective(s)/purpose(s)/aim(s)/goal(s) of the study (usually INDIRECT) <i>To ...(determine...)...we... (compared...)... .</i> <i>To achieve (this,)</i> <i>X(s) seek(s) to ... (anticipate/ demonstrate/analyze...).</i>	Direct statement of objective(s) <i>Our objective/purpose/aim was to... .</i> <i>(study/test/determine...)</i> <i>Considered/Investigated here is/are... .</i> Materials	Objectives and materials combined Methods Results

<p>Rationale or justification for the study</p> <ul style="list-style-type: none"> ● <i>X is discussed in light of...</i> ● <i>The present paper addresses ... from the perspective of...</i> <p>Materials</p> <p>Methods (techniques/approaches/ways)</p> <ul style="list-style-type: none"> ● <i>X analysis showed...</i> ● <i>State-of-the-art / modern methodology was employed including (but not limited to)...</i> <p>Results</p> <ul style="list-style-type: none"> ● <i>It is argued that...</i> ● <i>X is considered to be ...</i> ● <i>The study of ... reveals (that)...</i> ● <i>X(s) is/are elucidated and discussed.</i> ● <i>The results of the study demonstrate clear signs of ...</i> ● <i>X(s) seem to / appear to/ turn out to/ prove to/ happen to ...</i> ● <i>Emphasized here are ...</i> ● <i>X(s) is/are also examined/ explored/ studied/approached/ investigated/ discovered/ analysed/determined/ described/ considered/presented/evaluated discussed/shown/developed/performed/verified.</i> <p>Overall conclusion</p> <ul style="list-style-type: none"> ● <i>X indicated/ suggested... (did not indicate/suggest...)</i> ● <i>X(s) may(be)/might (be)/ would seem to/ is/are likely to...</i> ● <i>It could be concluded that...</i> <p><i>The paper suggests theoretical and practical perspectives and directions for future research.</i></p>	<p>Methods</p> <p>Results</p> <p>Overall conclusion</p>	
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MIND:

*An abstract should convey as much new information as possible.

*Writing an abstract, highlight the objective and conclusions that are in the paper's introduction and discussion sections.

*Include key statistical details, if any.

*Mind that abstracts will always be somewhat field-specific, so study English abstracts related to your particular area carefully!

БЮЛЕТЕНЬ ВАК УКРАЇНИ 2002, № 5, с.11.

У рефераті дисертації потрібно вказати:

- Об'єкт дослідження
- Мета дослідження
- Методи дослідження та апаратура
- Теоретичні та практичні результати і новизна
- Предмет і ступінь впровадження
- Ефективність впровадження
- Сфера (галузь) використання

SUGGESTED ENGLISH EQUIVALENTS:

Dissertation synopsis should highlight the following:

- The object of the study (is)... .
- The aim/purpose/goal/objective of the investigation (is)... .
- The methods employed include... .
- A novel X ... is elaborated... .
- Outcome:
- Application:

MIND:

specifics — details деталі, подробиці
 specificity — специфіка, особливості
 typical of — властивий, притаманний

Try NOT to use the words «peculiar» or «peculiarities» in scientific abstracts!

MIND present-day research articles structure:

(bA)(f)//AIMRD//C(a)rb/(rw)(A)(Ab)

*brief abstract — foreword(preface) — **abstract** — **introduction** — **materials & method(s)** — **results** — **discussion** — conclusions — acknowledgement(s)/(thanks) — references— biographies — related works — appendix/appendices(appendixes)— annotated bibliography*

SAMPLE ABSTRACTS *(written by native speakers of English)*

IEEE Communications Magazine, February 2003

Optical packet switching promises to bring the flexibility and efficiency of the Internet to transparent optical networking with bit rates extending beyond that currently available with electronic router technologies. **New optical signal processing techniques have been demonstrated that enable** routing at bit rates from 10 Gb/s to beyond 40 Gb/s. **In this article we review** these signal processing techniques and how all-optical wavelength converter technology can be used

to implement packet switching functions. **Specific approaches** that utilize ultra-fast all-optical nonlinear fiber wavelength converters and monolithically integrated optical wavelength converters **are discussed and research results presented.**

Language Culture & Curriculum. Volume, 14 No 2, 2001. Special Issue: French Education in Canada

In this paper, we examine the language practices in three immigrant families of South Asian ancestry who reside in Canada and have chosen French Immersion education for their children. **Basing our discussion on** interview data, **we present** a profile of the inter- and intra-generational language interactions that distinguish each family. **Also, we describe** their reasons for maintaining their family language and their interest in French Immersion. **The findings reveal that** parents adopt language maintenance strategies that vary from one family to another and they attribute value to French and English as official languages of the country and important languages internationally. **Drawing on** sociocultural theories of language learning, **we argue that** these parents support language maintenance and opt for French Immersion education as part of a family project aimed at developing child multilingualism. **Multilingualism is viewed as** a means of securing advantages for their offspring nationally and internationally.

Conference workshop abstract

Bridging the Gap: Academic and Industrial Research in Dialog Technologies

In the past decade, we have seen a rapid increase of dialog systems in various industrial applications, including telephone-based services, in-car interaction systems, internet-based customer support, talking characters in computer games, and mobile devices. Industry-driven standards, such as VoiceXML, are also becoming popular. While there has been an increased amount of effort in dialog technology research in the academic world, progress from such academic research has not benefited the real world applications to a satisfactory extent. The purpose of this one day workshop is to provide a forum to bring industrial and academic researchers together to share their experiences and visions in the dialog technology development, and to identify topics that are of interest to both camps.

Exercise 8. Render the following abstracts into Ukrainian.

1. The book offers the know-how you need to understand and work with concepts.
2. How can the benefits of active networking be exploited in an environment where a large number of customers must share a common network infrastructure?
3. Can a satellite system compete with the capacity provided by terrestrial cable networks? If the answer is positive, and it will be shown in this article that it is, a second question arises: What new developments are required to migrate from the state-of-the-art satellite technology to such advanced concepts?
4. There still exist a number of barriers to the widespread deployment of Internet telephony, such as the lack of control architectures and associated protocols for managing calls, a security mechanism for user authentication, and proper charging schemes. The most prominent one, however, is how to ensure the QoS* needed for voice conversation.
5. The author challenges the emerging industry trend of adopting Internet-style distributed network control.
6. The author identifies some of the key problems one encounters when thinking about multi-access system.
7. The author explores possible transitional steps to add programmability into the Internet.
8. The class hierarchy model described in this article enables users to compose their own custom, flexible frameworks from either predefined or custom protocol components tailored to an application's needs.

*QoS — quality of service

9. Addressing the fast-growing need to integrate effective security features into wireless communication systems? This cutting-edge book offers you a broad overview of wireless security.

10. Get hands-on expertise with this complete, one-stop resource packed with straight-from-the-lab techniques, procedures and applications.

11. How can the benefits of active networking be exploited in an environment where a large number of customers must share a common network infrastructure?

12. The five parts of the book set out current practice and ways of thinking about language policy and planning, look at methodology and the key areas of education and literacy, provide case studies of key language planning and policy issues, and examine issues toward a theory of the discipline. The book challenges academics and practitioners to identify best practices, takes a global view and provides insights into the trends in practice that will shape the field in the coming years.

13. Why do engineers «report» while philosophers «argue» and biologists «describe»? In «Disciplinary Discourses: Social Interactions in Academic Writing», Ken Hyland examines the relationships between the cultures of academic communities and their unique discourses. Hyland also presents a useful framework for understanding the interactions between writers and their readers.

Exercise 9.

Compare a brief abstract and a full version of conference workshop description. Pay special attention to information compression means, and text structure.

Computational Approaches to Figurative Language

Figurative language, such as metaphor, metonymy, idioms, among others, is in abundance in natural discourse. The recognition of figurative language use and the computation of figurative language meaning constitute one of the hardest problems for a variety of natural language processing tasks, such as machine translation, text summarization, and question answering. As natural language processing moves to an unprecedented new stage, it has become more urgent than ever to tackle the bottleneck presented by figurative language. This workshop will provide a venue for researchers in this area to inform each other and the natural language processing community at large of the state of the art of current systems and to reach a better understanding of the new issues and challenges that need to be tackled.

Computational Approaches to Figurative Language

Figurative language, such as metaphor, metonymy, idioms, personification, simile among others, is in abundance in natural discourse. It is an effective apparatus to heighten effect and convey various meanings, such as humor, irony, sarcasm, affection, etc. Figurative language can be found not only in fiction, but also in everyday speech, newspaper articles, research papers, and even technical reports. The recognition of figurative language use and the computation of figurative language meaning constitute one of the hardest problems for a variety of natural language processing tasks, such as machine translation, text summarization, information retrieval, and question answering. Resolution of this problem involves both a solid understanding of the distinction between literal and non-literal language and the development of effective computational models that can make the appropriate semantic interpretation automatically.

As natural language processing moves to an unprecedented new stage, it has become more urgent than ever to tackle the bottleneck presented by figurative language. There has been an increasing amount of work in this area in the past few years (e.g. theoretical semantic/pragmatic analyses of non-compositional phenomena, research on psychological/neuro-linguistic modeling of figurative language comprehension and production, research on the structure of the lexicon, knowledge representation and figurative language comprehension, domain-specific figurative language detection, computational corpus studies of figurative language), but much more work needs to be done (e.g. large-scale automatic figurative language detection, automatic extraction of idioms and non-compositional phrases from large corpora, automatic semantic interpretation of figurative language, automatic figurative language generation, machine translation of non-literal phenomena, etc.).

The goal of this workshop is to provide a venue for researchers in this area to inform each other

and the natural language processing community at large of the state of the art of current systems and to reach a better understanding of the new issues and challenges that need to be tackled.

The workshop is intended to be highly interdisciplinary. We encourage the participation of people whose research deals with figurative language from different perspectives, including (but not limited to) applied linguistics, psychology, corpus linguistics, human-computer interaction, natural language processing, etc.

Topics covered by the workshop include, but are not limited to:

- (1) Computational models of figurative language processing, including
 - extracting idioms and non-compositional phrases from large corpora
 - classifying metaphoric/non-metaphoric and humorous/non-humorous language use
 - computing non-literal meaning
 - multilingual or cross-lingual processing of figurative language
 - computational modeling of human figurative language comprehension and production
- (2) Psychological models of figurative language processing, including
 - figurative language comprehension
 - figurative language production
 - figurative language acquisition
- (3) Corpus-driven studies of figurative language, including
 - corpus-based studies of figurative aspects of any language
 - corpus-based studies of specific linguistic cues for figurative language
 - effects of domain and genre on studies of figurative language
 - annotation of non-literal phenomena in corpora
- (4) Theoretical discussions on literal and non-literal language, including discussions on
 - the distinction between literal and non-literal language
 - the distinction between different types of figurative language
 - cross-linguistic differences of figurative language
- (5) Lexical and ontological resources for figurative language processing, including
 - representation of non-literal meaning in lexicons
 - development of new lexical resources for figurative language processing

(6) Evaluation of figurative language processing in large-scale NLP systems, such as machine translation, Computer-assisted Language Learning (CALL), question answering, dialogue systems, etc.

The emphasis of the workshop is on computational approaches to figurative language. We particularly are interested in submissions that deal with figurative language in the context of Machine Translation, Word Sense Disambiguation, Information Extraction, Document Retrieval, Dialogue Systems, Intelligent Tutoring systems, etc.

TIPS FOR DEALING WITH READING COMPREHENSION TASKS

Good readers preview the text first, i.e. look over the **whole** passage for a moment. This helps (to) make them good and fast readers.

Anticipation and **prediction** are two basic reading skills that are used to guess or predict how the passage will develop. We anticipate before we read a passage, and we predict after the passage begins. Our anticipation is therefore related to our own personal background knowledge of the subject. After a passage begins we find «**clues**» that help us predict what is going to come next. These clues may be in the meaning or in the grammatical structure of a sentence or its vocabulary.

Some writers may announce what they hope to tell you, or why they are writing.

Writers may have something important to say in the end. Some writers repeat the main idea once more, some draw a conclusion or summarize.

Skim and scan the text. When you're skimming, go through a passage quickly in order to get a general idea of what it

whole — the complete amount, entire укр. увесь, цілий
to predict — to see or describe in advance as a result of knowledge, experience. **Synonyms:** to foretell, to forecast, to foresee, to make prognosis

укр. прогнозувати

clue — something, such as an object or a piece of information that helps to find an answer to the question: «I'll never guess the answer — give me another clue!»

укр. підказ, ключ, інформація

is about. When you're scanning, look for some specific piece of information (a figure, a date, a name) that you need.

Individual words do not tell us much. They must be combined with other words, and readers should see words in meaningful combinations. Read in message units — try to group the words into phrases that have natural relationship to each other.

The paragraph is the basic unit of meaning. If you can understand the main point of each paragraph, you can comprehend the author's message.

The topic sentence, the sentence containing the main idea, is often the first sentence of a paragraph. It is followed by other sentences which support, develop or explain the main idea. Sometimes a topic sentence comes at the end of a paragraph (then the supporting details come first). Sometimes following the dominant noun through its repetitions and transformations into synonyms will **eventually** lead you to the main idea.

Just as readers read for different reasons, writers write for different reasons. What purposes may an author have for writing?

1. **Inform** — give facts or information about a subject.
2. **Define** — provide definitions on a subject.
3. **Describe** — give an account of a subject in words.
4. **Persuade** — influence a person's opinion or behavior about something.
5. **Explain** — make plain or understandable, give the reason(s) for or cause(s) of.
6. **Illustrate, compare, contrast** and so on.
7. **Entertain** — interest or please.

eventually — at last, finally,
ultimately укр. зрештюю

to blur — to make less clear or noticeable укр. зливатися, ставати нечітким

to imply — to express, show or mean indirectly укр. мати на увазі, розуміти під

Sometimes distinctions among these types are **blurred**, but the purpose should always relate to the main idea. If the main idea is not stated somewhere within a paragraph, it must be inferred, or figured out from important details of the paragraph. A good reader is able to infer the things that the author **implies**.

If the author says, «Who needs it?» he or she actually implies that nobody needs it. If the author writes, «Our research primarily (but not solely) involves proactive and situated data collection for system design», the implication is **the following**: we confine our research only to several points, though potentially there could be other ramifications.

the following: укр. такий/таке/така:
to reveal — to show, to make known укр. виявляти
obvious — easy to see and understand, clear укр. очевидний

Understanding how the facts all fit together to deliver a message, is, after all, the reason for reading. Good readers organize facts as they read, they discover the writer's plan by looking for a clue or signal word early in the text which might **reveal** the author's structure. Sometimes the author gives you **obvious** signals. If s/he says «There are three reasons...» a good reader looks for a listing of three items.

1. What is the subject of the passage?
2. What is meant by anticipation and prediction?
3. What is the difference between skimming and scanning?
4. What is the main idea of a paragraph?
5. What should you look for when you're trying to determine the main idea of a paragraph which is implied?

Exercise 10.

Read the passage and answer the questions about it. Dealing with multiple choice questions, choose just one correct answer out of several options given. Incorrect options are either too vague, or only partly true, or irrelevant to the question.

When colonists from Europe first arrived in America, they had to decide what to preserve of their cultural heritage, and what to discard. They also had to decide upon a means to preserve

and build upon their legacy. Their answer was the town school. Within 30 years of the founding of the first settlement in Massachusetts (1620), all towns were required to hire a schoolmaster to teach reading, writing and arithmetic, as well as religion; larger towns were required to establish grammar schools to prepare children for the university. In 1787 the Continental Congress required every new township in the Northwest Territory to preserve land for public schools.

At the university level, Harvard (Massachusetts) was founded in 1636, and William and Mary (Virginia) in 1693. By 1776, on the eve of its revolution, America had 14 colleges in the new country and another score were founded by 1800. By that time schooling meant not only preserving parts of the classical education, but also teaching skills necessary to build a new North American Nation.

1. Which of the following is the best title for this passage?
 - a. European colonists in America
 - b. American educational system
 - c. Grammar schools and universities
 - d. The first steps of American education
2. Which of the following is NOT mentioned in the passage as a subject?
 - a. religion
 - b. reading
 - c. astronomy
 - d. arithmetic
3. How many colleges were founded by 1800?
 - a. 14
 - b. 34
 - c. 20
 - d. 30
4. In line 2 the word «heritage» could be best replaced by which of the following?
 - a. pride
 - b. example
 - c. criterion
 - d. legacy
5. The author implies that
 - a. public schools were the first to appear
 - b. there were quite a few universities
 - c. William and Mary established town schools
 - d. there was a tendency towards linking theory to practice

Exercise 11. Choose the correct word and fill in the blanks.

(to) improve

improvement

1. Your work shows considerable ____ .
2. I would like to ____ my German.
3. Your English is getting better, but there is still room for ____ .

(to) benefit

beneficial

4. He had the ____ of a first-class education.
5. The fall in prices will be ____ to our business.

6. He is most likely ____ .

technology technological technologist

7. The system uses advanced computer and satellite ____ .

8. We witness the rapid pace of ____ change.

9. A specialist in technology is called ____ .

10. We use the latest ____ .

Exercise 12. Read the passage and answer the questions that follow.

Multilingual Matters is delighted to announce the launch of the International Journal of Multilingualism (IJM). It provides a forum wherein academics, researchers and practitioners may read and publish high-quality, original and state-of-the-art papers describing theoretical and empirical aspects that can contribute to advance our understanding of multilingualism. The aim of the journal is to foster, present and spread research focused on psycholinguistic, sociolinguistic and educational aspects of multilingual acquisition and multilingualism. This interdisciplinary journal seeks to go beyond bilingualism and second language acquisition by developing the understanding of the specific characteristics of acquiring, processing and using more than two languages. Topics of interest to IJM include, but are not limited to the following: early trilingualism, multilingual competence, foreign language learning within bilingual education, multilingual literacy, multilingual identity. IJM is a peer-reviewed journal published twice a year.

1. The passage is part of
 - a. an abstract
 - b. a peer review
 - c. an article
 - d. an announcement

2. According to the passage, IJM is
 - a. an interdisciplinary conference proceedings
 - b. monographic research publication
 - c. advanced-level textbook
 - d. an interdisciplinary periodical

3. According to the passage, the editors encourage
 - a. independent research
 - b. the submission of advertising
 - c. the submission of papers in three languages
 - d. the submission of high quality papers

4. It can be inferred from the passage that the editors encourage the submission of papers on
 - a. psycholinguistics and sociolinguistics
 - b. early trilingualism, multilingual competence, foreign language learning within bilingual education, multilingual literacy, multilingual identity and other relevant topics
 - c. educational aspects of multilingual acquisition and multilingualism
 - d. early trilingualism, multilingual competence, foreign language learning within bilingual education, multilingual literacy, multilingual identity

5. It can be concluded that IJM deals with
 - a. purely theoretical investigations
 - b. applied research writings
 - c. both theoretical and applied research
 - d. neither theoretical nor applied studies

-
6. The underlined word launch could best be replaced by which of the following:
- start
 - stop
 - reorganization
 - continuation
7. The underlined word forum could best be replaced by which of the following:
- comparison
 - development
 - opportunity
 - meeting
8. The underlined word academics could best be replaced by which of the following:
- college or university educators
 - docents
 - academicians
 - high school teachers
9. The underlined word researchers could best be replaced by which of the following:
- assistants
 - investigators
 - advisors
 - attendees
10. The underlined word original could best be replaced by which of the following:
- outdated
 - similar
 - fundamental
 - new
11. The underlined word state-of-the-art could best be replaced by which of the following:
- modern
 - authentic
 - relevant
 - the earliest
12. The underlined word aspects could best be replaced by which of the following:
- facets
 - places
 - styles
 - conclusions
13. The underlined word aim could best be replaced by which of the following:
- intention
 - implication
 - introduction
 - investigation
14. The underlined word spread could best be replaced by which of the following:
- figure out
 - limit
 - disseminate
 - collect
15. The underlined word seeks could best be replaced by which of the following:
- pays attention
 - takes steps
 - makes a contribution
 - makes an attempt

Exercise 13. Give a short presentation on the topic.

SOME ACADEMIC EVENTS (USA)

SMALL LECTURES	Lecture class; class size approximately 40 or fewer students.
LARGE LECTURES	Lecture class; class size — more than 40 students.
STUDENT PRESENTATIONS	Class other than a seminar in which one or more students speak in front of the class or lead discussion. *Additional discussion section (called recitation) may be designed for maximum student participation.
LAB SECTIONS	Lab sections of science and engineering classes; may include problem solving sessions.
SEMINARS	Any class defined as a seminar (primarily graduate level).
COLLOQUIA	Departmental or University-wide lectures, panel discussions, workshops, etc.
DISSERTATION DEFENSES	PhD theses defenses.
MEETINGS	Faculty, staff, student government, research group meetings, not including study group meetings.
ADVISING SESSIONS	Interactions between students and academic advisors.
INTERVIEWS	Interviews for research purposes.
OFFICE HOURS	Held by faculty or graduate student instructors in connection with a specific class or project.
TUTORIALS	One-on-one discussions between a student and an instructor or peer tutor.
TOURS	Library, computer center, language laboratory, university museum guided tours conducted by docents (екскурсоводи).

Noteworthy

The name «quark» was coined by Irish poet and novelist James Joyce in the 1930s, and adopted by quantum physicist Murray Gell-Mann in 1964. Gell-Mann took it from the novel «Finnegan's Wake» in which a flock of swans sings this song to one of the characters:

«Three quarks for Muster Mark!

Sure he hasn't got much of a bark

And sure any he has it's all beside the mark».

Although «quark» had no relevance to physics, it was probably as good a name as any for a mysterious building block of matter.

Unit 3

Science and Society

Anglo-American Intellectual Style: Linguistic Devices of

- **Linearity and Clarification**
- **Politeness**
- **Compression**

Visuals

TEXT

Read the text and be ready to answer the questions that follow.

In industrial countries, there is a close correlation **between** the rate of increase in the number of graduate engineers and the level of industrial productivity.

The speed at which new knowledge is **transferred** to industry is a key factor in preserving economy's **competitive** position vis-a-vis **tough** rivals.

The modern world is facing several disturbing **trends** in human resources. In quantitative terms, we will have **to cope with** the **consequences** of an aging population, a decline in the working people. In more qualitative terms, there is a **mismatch** between the supply of young graduates and the needs of industry **resulting** in skills shortage. For that matter, continuing vocational training and retraining in a constantly changing industrial and technological context need **radical** improvement. It has been shown that intellectual capital depreciates by 7% every year if it is not **maintained**.

To improve the situation, some recommendations have been made. Most of these are what one would expect — attract more young people into science, more science in schools, better contact between industry and education, investment in continuing education to make labor mobility **respond** to regional needs, and to avoid a **brain drain**.

The United States, Japan and Germany each employ between roughly fifty and seventy-five scientists and engineers for every 10000 workers in the labor force. In developing countries the number is between five and ten. By emphasizing education at all levels and by selectively entering globally competitive markets, countries **prosper**. That prosperity then **enables** higher investments in R&D required for economic development. **The very dynamics** of R&D institutions is changing. Universities create hybrid academic-industrial centers, often with partial government funding, to accelerate the transfer of scientific results to commercial applications.

between & among: when you are talking about only two things use **between**. укр. серед (двох) If you are talking of three or more things use **among**. укр. серед (трьох та більше)

to transfer — to move from one place to another укр. переносити, переміщати

competitive — based on competition укр. конкурентоспроможний

competitor — Synonym: rival укр. конкурент, суперник

tough — difficult to do or deal with, not easy, needing effort укр. складний

trend — a general tendency or direction in the way a situation is changing or developing укр. тенденція

to cope with — to deal successfully with a difficult situation укр. справлятися, переборювати

consequences — results, outcome укр. наслідки, результати

mismatch — укр. невідповідність

to result in — to have as a result; to cause;

укр. спричиняти, приводити (до), призводити (до)

vocational training — укр. професійно-технічна підготовка

retraining — Synonym: in-service укр. перепідготовка
Also: staff development — підвищення кваліфікації

radical — having wide and important effects.

Synonym: drastic укр. радикальний

to maintain — to continue to have (do) as before, to keep up, to take care (of), to support укр. підтримувати

to respond — to do something in answer, to react укр. відповідати, реагувати

brain drain — a movement of large number of highly skilled or professional people from the country where they were trained to other countries where they can earn more money укр. відплив спеціалістів/фахівців

to prosper — to become successful and rich.
Synonyms: to thrive, to flourish укр. процвітати

to enable — to permit, to allow укр. дозволяти

the very dynamics — укр. власне динаміка (сама динаміка) Compare: the very fact — сам факт

1. What is a key factor in preserving economy's competitiveness?
2. What is meant by disturbing trends in human resources?
3. Why is it necessary to maintain intellectual capital?
4. What is a brain drain?
5. What are the new forms of linkages between science and industry?

Exercise 1. Give English equivalents to:

сильний суперник, тривожна тенденція, справлятися з наслідками, професійно-технічна освіта, перепідготовка, радикальне поліпшення, залучати молодь до науки, подовжена освіта, реагувати на потреби, уникати впливу спеціалістів, процвітати, прискорювати процес.

Exercise 2. Give Ukrainian equivalents of:

industrial countries; modern world; disturbing trend; to cope with the consequences; the very dynamics; brain drain; skills shortage; mismatch; competitive.

Exercise 3. Translate Ukrainian sentences into English. Then match the two columns.

1. У них є багато зарубіжних конкурентів.
2. Вони наголошують на важливості освіти на всіх рівнях.
3. Професійна освіта допоможе вам пристосуватися до нових умов.
4. Внески (інвестиції) у науку дають велику соціальну віддачу.
5. Які показники результативності науково-дослідної роботи?

- A. Investments in science generate high rates of social return.
- B. What are the output indicators of R&D?
- C. They emphasize education at all levels.
- D. Vocational education will help you to adjust to new industrial context.
- E. They have a lot of foreign competitors.

Exercise 4. Discuss the following point with your colleagues.

Scientists think globally and act competitively. International competition is the norm. But scientists also have a tradition of global cooperation, just as corporations now seek global alliances and share the costs of research and development to reach new markets. By blending competition and collaboration, the international scientific system works. As many Asian nations have shown, the patient building of national base of technology and education flourishes when linked to global networks of research.



ANGLO-AMERICAN INTELLECTUAL STYLE

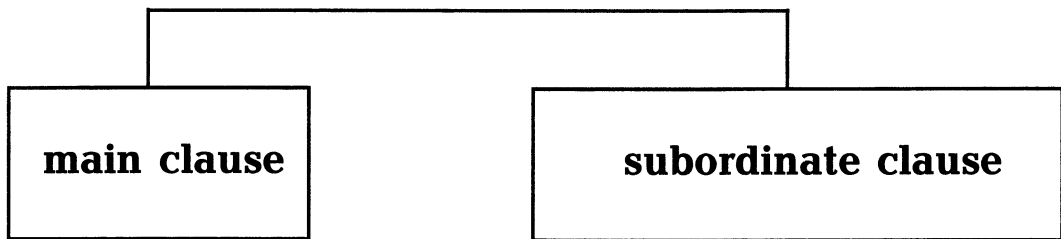
What adds «native-speaker flavor» to an English scientific text? One possible answer to this question may be found in the realm of cultural variation in discourse. It was J. Galtung who first described four basic «intellectual styles» — «Saxonic», «Gallic», «Teutonic», and «Nipponic» i.e. ways of presenting thoughts in writing. Overall, it is all about information decoding specificity.

First, it should be borne in mind that the structure of the English sentence can basically be described thus:

Subject — Verb — Object

<u>who</u>	<u>does (did)</u>	<u>what</u>
Popov	invented	radio

The basic structure of an English COMPLEX sentence is:



what	who	because/since
that	whose	if
why	when	unless
how	which	before/prior to
where	that	after/upon
when	where	though/although
		while

A **main clause** has a subject and a verb that stand independently:

He is reading the book.

A **subordinate clause** also has a subject and a predicate but is dependent on the main clause and cannot stand independently:

He is reading the book that I gave him.
main clause subordinate
clause

Mind that a **complex sentence** may consist of **two independent clauses**:

She likes physics, and he likes mathematics.

Second, mind that in Anglo-American scientific text the «**Rheme**» (NEW information) is followed by «**Theme**» (OLD information):

NEW information → OLD information

Third, when it comes to the English language, please consider the following major issues:
LINEARITY AND CLARIFICATION, POLITENESS and COMPRESSION.

LINGUISTIC DEVICES OF LINEARITY AND CLARIFICATION

EMPLOY:

- linear, non-digressive structuring of the text to help the reader decode information.

USE:

first(ly); first of all; first and foremost / in the first place *перегусім; насамперед*
we introduce/by way of introduction ми починаємо з

second(ly) *по-друге*

third(ly) *по-третє*

final(ly) / I conclude by... *наприкінці (зазначимо)*

(I/we) begin by/ set the stage by/ we first present/ the essay begins by ми починаємо з
the beginning / onset *початок*

we also present ми також розглядаємо

we then describe / deal with / touch upon / consider/ highlight *галі ми розглядаємо/*

висвітлюємо

the next few sections *наступні розділи*

throughout this essay *в усій роботі*

(as) we shall see later *(як) ми побачимо далі*

I discuss below *нижче розглянуто*

the rest (the remainder) of the article is organized as follows *останню частину праці*
структуровано так

the last but not least *останній за переліком, але не за ступенем важливості*

not to be left out *не слід забувати і про*

the former *перший за переліком*

the latter *останній за переліком*

thus we have surveyed / overviewed *таким чином, ми зробити огляд*

as already mentioned *як щойно зазначалося*

***aforementioned / abovementioned / mentioned above / mentioned before** *щойно / вище*
зазначений/згаданий

as emphasized above *як наголошується вище*

as previously noted *як було зазначено вище*

this topic has been revisited recently *нещодавно до цієї теми повернувся / звернувся*
знову

***the following (:)** *таке*

Let's agree on the following: *Давайте домовимося про таке:*

***in the following way / * like this /**

*** as follows** *таким чином / у такий спосіб / так*

We begin and end the chapter with the most fundamental question of all.

First and foremost, any postmethod pedagogy has to be a pedagogy of particularity.

Additionally, we present the latest statistics that are available online.

A final word is needed here.

True scientific method goes like this:

1. form a hypothesis
2. make predictions for that hypothesis
3. test the predictions
4. reject or revise the hypothesis based on the research findings.

The remainder of this essay is structured as follows.

● **explicit statement of purpose:**

USE:

intention/ intent/ purpose/ aim/ objective/ goal/ mission мета, ціль
to/ in order to/ in order that/ for (the purpose of)/
with the aim of / for... to... / for the sake (reason) of / in an effort to /
in behalf of/ with the view of з метою, загля, зараду

* *to this end* з цією метою, загля цього

**lest* (щоб не, аби не);

**with deliberate intent / *on purpose* навмисно

The intention of the author is to show some newly developed methods.

To get the best results, follow the directions carefully.

I explain it for you to understand.

It may be desirable in an effort to achieve higher accuracy.

Write down this exception to the rule lest you forget it.

They expressed it either with deliberate intent or spontaneously.

● **extensive paraphrasing and exemplifying:**

USE:

rather / or rather / but rather / or maybe / or better скоріше, радніше

to be more exact / more specifically /

more precisely/ more properly точніше; більш точно

in other words /to put (putting) it another way /other label for... is... інакше кажучи

simply stated/ simply said / simply put/ put simply / in simple terms / to clarify /

for (the sake of) clarity простіше кажучи

let us say скажімо

specifically / in particular / particularly / especially / notably особливо, а нагто

that is to say / I mean тобто

namely / i.e. / that is a same

also known as (aka, a.k.a) також відомий як

By X I mean... під X я розумію;

X (could be) called/termed X називається

analogy; analogies аналогія; аналогії

(by) analogy / by extension за аналогією

to illustrate/for example/say/e.g. /(taking X) as an example/by way of exemplification/

a case in point / say, / for instance, наприклад

such as такий як

correspondingly / respectively / accordingly відповідно

**thus(:) / in this manner(:)* так; таким чином; у такий спосіб

We don't prove the theorem here, but rather, we illustrate it with two examples.

Putting it another way, this is as far as we can go.

A change in the function of a word is generally known as conversion. Other labels for this very common process are «category change» and «functional shift».

In other words, contrary to our expectations, similarity in scores did not reflect similarity in scale descriptors.

The controller uses some of the Compact Flash memory to enhance the performance of the host (say, a camera or music player).

These discussions also help eliminate a lot of language confusion. For instance, the program has a checklist of elements we consider key to the mastery of each particular skill.

A case in point occurred yesterday.

Meteors are bits of material falling through Earth's atmosphere at altitudes of 50-100km. These chunks as they are hurtling through space are termed meteoroids. Large pieces that do not vaporize completely and reach the surface of the Earth are called meteorites.

Two analogies will illustrate that AI can be both more and less than human intelligence. An electronic book provides the same information as the real book. However, one cannot lie in bed and read an electronic book, at least not yet. A second example is the concept of virtual shopping mall. This doesn't give you the thrill of trying on real clothes before you buy them; however, it does let you walk around a virtual mall in Paris or Hong Kong, which could be expensive in person.

● **explicit statement of reason, cause, and effect:**

because / since / as / 'in that / for / for the reason that / for these reasons / which is why / that is why тому що; позаяк; адже; бо
thanks to / due to / owing to / because of / out of / on account of завдяки; через (ме, що)

to cause / to be responsible for / to lead to / to end in / to bring about / to stem from /

*to give rise to / *to translate into* спричиняти / спричинятися go

to motivate / to specify / to determine / to dictate / to (pre)condition / to stipulate зумовлювати

(to) result (in) / (to have) as a result / to necessitate привогути або призвогути (go)
the reason for причина

**thus/ hence / therefore / so / as a consequence / consequently* отже; тож; тому
effect(s) / result(s) / consequence(s) / implication(s) / outcome / corollary / upshot

результат(и)

aftermath наслідки

**(from this) it follows / so* звідси випливає

to influence / to govern впливати

They obtained accurate results thanks to up-to-date sophisticated equipment.

Ineffective management led to poor performance.

There are many reasons for questioning this theory.

The reason is that no adjustment is required.

The result: a format for the distribution and interchange of digital content.

As a result, the level of robustness was, to say the least, difficult.

The experiment resulted in no success.

Alternative energy could bring about economic benefits.

Another requirement arose out of the need to maintain picture quality.

This observation leads us to the following definition.

This invention has brought about many changes in our lives.

Good credit history translates into lower interest rates for consumers.

There is constant lack of information, so we cannot arrive at any conclusions so far.

● **concise summing up:**

USE:

in sum, / to sum up, / to summarize, / summing (it all) up, / in summary, / in toto (,) пісумовуючи; у пісумку

a soundbite summary короткий (стислий) пісумок

in short, / in brief (,) / briefly (,) / quintessentially, / for the sake of clarity and brevity (,) / (to put it) in a nutshell, / to put it briefly (,) коротше кажучи

**the bottom line is... / *the moral of this essay is... / *what it boils down to is (this)/*

● **EXPRESS reservation:**

reservation / caveat застереження

where possible там, де це можливо

somewhat дещо

partly / in part частково

just лише, лишень

at times / occasionally іноді; інколи

in some cases у деяких випадках

in principle в принципі

to a certain degree (extent) певною мірою

maybe (maybe X days/years etc.)

(X days/years etc.) or so / something on the order of мабуть, (приблизно; порядку)

**to be on the safe side / * just in case* про всяк випадок

** to be fair / honestly / * bluntly put* чесно кажучи

**in a way / in a sense* певним чином; у певному розумінні

**a sort of / a kind of* (щось) на зразок

**if at all / *if any* якщо взагалі

** in round terms and round figures / in round numbers* приблизно

**technically (speaking)* у суто технічному розумінні

**a rule of thumb* емпіричне правило

**a (cursory) glance (at) / *a glimpse (of) / *to skim the surface* побіжний погляд

**to shed some light* кидати (проливати) світло

subtle / loose / blurry / ambiguous / ambivalent / not clear / fuzzy невизначений; розмитий; амбівалентний; нечіткий

loosely у нагто широкому сенсі, без чіткого розуміння

to blur зливатися, ставати нечітким

** so far* дотепер

**So far, so good.* Поки що все гаразд.

The caveat here is that attached files can be very large.

To be on the safe side, we are to take into consideration everything.

The term accent, when used technically, is restricted to the description of aspects of pronunciation which identify where an individual speaker is from, regionally or socially.

In principle, every module may serve simultaneously as a library to higher level clients and as a client of lower level libraries.

Errors can be detected only at link time, if at all.

In a sense, communication channels physically constrain the flow and shape of human language just as a river bed directs the river's current.

It's a sort of flexible structure.

Our linguistic ability rests primarily, but not exclusively on our linguistic knowledge.

The distinction between multimedia and multimodal interfaces is subtle and can be confusing. These and other technical terms are often used loosely, without a precise understanding of what they connote.

Modular systems are written in languages that blur the distinction between libraries and application programs.

AT&T plans became somewhat ambiguous.

They're somewhat different issues.

He spent two decades or so studying the phenomenon.

In round terms and round figures, workstations sales will add a million units more.

Even a cursory glance at the Directory would show that US colleges and universities offer myriad programs under the umbrella term ESL .

In crude, layman terms, success is the abstract notion of «having gotten it».

A couple of years ago I watched four linguists chatting over lunch at a state university. Or perhaps they were working; the line is not always clear.

The chapter has just skimmed the surface of this important topic.

Due to relatively high prices, first generation devices have so far been used for professional applications only.

Even so, genre remains a fuzzy concept, a somewhat loose term of art.

• USE «diplomatic» language:

- *something in-between / Golden Mean* золота середина
*(both) yes and no / *it depends* і так, і ні
not very не дуже
not always не завжди
not necessarily не обов'язково
somehow певним чином
fifty-fifty п'ятдесят на п'ятдесят
*great harm as well as great good / good and bad / in part...in part... / a mix (of) / *mixed blessing / *for better or worse*
 (водночас) як позитивні, так і негативні моменти
just part лише частина
challenging складний, але цікавий
**to a greater or lesser extent / *more or less* більшою або меншою мірою; більш-менш
while / whilst у той час як
but / however / albeit однак, (а) проте
to hedge вуалювати
a balance баланс; вваженість
compromised невдали
**far from* далекий від
**«middle-of-the-road» estimate* обережна оцінка
**double-edged sword* палиця на два кінці
**to have the cake and eat it* і вовки ситі, і кози цілі; ніхто не зазнав шкоди
**the other side of the coin/ *flip side* зворотний/інший/ гругий бік медалі
**on the other hand, / from another standpoint, / then again, / but then again,*
 з іншого боку,
**(all) pros and cons* (усі) за і проти
**to put it mildly / * to say the least* м'яко кажучи

Public policy may or may not be a problem.

It depends. It's not necessarily good.

We have attempted to obtain a balance among various viewpoints.

We've been talking about extremes of behavior in standards. There is something in-between.

A «middle-of-the-road» estimate would be 1.200-1.500 million.

This can be a mixed blessing, though.

Service offerings, are, however, far from being ubiquitous.

Both questions have been addressed by somewhat ad hoc mechanisms.

Paleontologists find the situation frustrating, to put it mildly.

The trend has both positive and negative implications.

Any powerful technology can be used to do great harm as well as great good.

Java's ability to download, integrate, and execute code from a remote computer is a double-edged sword.

For better or worse, renewable energy sources retained their allure.

This is difficult, but not impossible.

There are ways of avoiding such conflict, which enables people «to have the cake and eat it».

This may be in part involuntary and in part deliberate — a mix which most likely pertains to electronic environments as well, though not necessarily in the same proportions.

However, is this just part of the solution, albeit a very important part.

It is everywhere, and it is nowhere.

There is a half-full view of the world and a half-empty view of the world. We subscribe to both.

We've been talking about extremes of behavior in standards. There is something in-between.

The good old days were not very good. However, our expectations were a lot lower. In any case, I am saying that the good present days are not always that much better.

● EMPLOY relevant authorial voice: from highly personal to impersonal one:

<i>I argue</i>	<i>We argue</i>	<i>Arguably</i>
<i>I think</i>	<i>We think</i>	<i>It is (sometimes) argued</i>
<i>I believe</i>	<i>We believe</i>	<i>It can/could be argued</i>
		<i>One can/could argue</i>
		<i>It is believed (that)</i>
Вважаємо	Ми вважаємо	Уважають, (що)
		<i>The data argues</i>
		<i>Research shows</i>
		Як свідчать дані (наукові розвідки)

My article argued that the language teaching should adopt such methods.

● CONVEY modesty:

at least / at least in principle принаймні; бодай
as far as we know / can tell / for all we know наскільки нам відомо
as far as anyone can foresee наскільки можна передбачити
insofar as it is possible to find out наскільки можна вивіститися
to (the best of) the author's knowledge / as best as (the author) can tell наскільки відомо авторові
to the greatest extent possible максимально можливий
my best hopes are сподіваємося, що
to decline to say не нагавати вігновігі
somehow певним чином

To the best of the authors' knowledge, they have not been used commercially in such systems.

To the greatest extent possible we have tried to collect a coherent set of essays.

I was somehow prophetic.

Novell is, as best as I can tell, a leader in this industry.

This is the first time, to the author's knowledge, that these integral equations have been used to estimate such parameters.

As far as I can tell, this is a genuine insight.

I have tried to outline the basic principles of the social-geographical approach.

● minimize social distance between the author and the addressee, ask indirectly for addressee's permission («we» as «you and I»; «let me»); employ non-sexist language (*he or she; s/he etc.*):

<p><i>Let us/ Let's... Давайте</i> <i>Let me ... Дозвольте (мені)</i> <i>You could (may)... Ви можете</i> <i>Please note.../Note (that).../</i> <i>Consider.../ Mind.../</i> <i>*Bear in mind ... Зауважте ...</i> <i>Ponder for a moment... /Think of... Подумайте про</i> <i>Turn to ... Зверніться до...</i></p>

The problem is so broad that maybe we should start by defining it.

Today, like hundreds of thousands of other people, I use my personal computer to join online communities.

Let's consider the latter problem.

Consider, for example, the manufacturing challenges.

Please note the phrasing here.

Now, break the device into two devices.

Perhaps we should consider the possibility that we do not yet have a complete understanding.

Let me try to summarize some of the things we have discussed.

Somehow each participant in the debate finds data to support his or her view.

● IMPLY alternative approaches, as well as modulations of categorical VS. non-categorical statements:

NOTE.

IMPLICATIONS AND INFERENCES

Sometimes the information is not explicitly stated, so it must be inferred, or figured out. A good reader is able to infer the things that the author implies, e.g.:

preliminary conclusion (IMPLICATION: the one that introduces more important conclusions, the one that may be just **tentative**);

a possible conclusion (IMPLICATION: other conclusions may be drawn as well)

one/a conclusion (IMPLICATION: one of many other possible conclusions)

A final conclusion is needed here. (IMPLICATION: there is no final conclusion so far).
A deeper problem is the superficiality of the author's treatment of scientific ideas.
 (IMPLICATION (retrospective): several **other** problems are mentioned above, and they are also **deep**).

It's not that they are unaware of this fact. (IMPLICATION: in reality, they are aware of this fact).

The liquid **boils** at this temperature. (IMPLICATION: in all cases)

The liquid **has boiled** at this temperature. (IMPLICATION: in many cases)

The liquid **boiled** at this temperature. (IMPLICATION: in that case)

The Green method (якщо ідеться про усталений метод)

___ Green method (якщо ідеться про метод, який ще не є усталеним)

The temperature drop (усталений термін: «пагіння температури»)

A temperature drop... («у даному випадку, пагіння температури ...»)

yes, but (on the other hand...) / **of course, ... but/however** так, але...

on the other hand, / **from another standpoint,** / **then again,** / **but then again,**

з іншого боку,

in part / **partly** / **partially** частково

but / **however** / **though** / **although** / **even though** / **albeit** / **yet** але; однак; проте

while / **whilst** / **whereas** у той час як

in spite of / **despite** / **regardless (of)** / **notwithstanding (the fact that)** / **no matter** /

with all не зважаючи на те(,) що; попри; гарма що

for all (that) і все ж

even so навіть якщо (і) так

whatever що б ні

whoever хто б ні

whether чи

at the same time водночас

clear signs (усі) ознаки

almost certainly / **a strong hint** / **X may seem** майже напевно

it does seem that.../ it certainly seems likely / **X(s) does (do) strongly suggest** справді
 видається

Yes, but on the other hand we also have to consider the people who do not like privacy.

This is probably partly due to discrepancies between the models.

The problem of implementing such a program would, of course, be huge. But such a goal is worthy of effort by companies and concerned individuals.

Attitudes to this problem are changing, albeit slowly.

With all its limitations, the procedure is still applicable.

It's a victory, for all that.

It's a good product, whatever you may say.

It certainly seems likely that students may be required to interact with such interfaces.

«I sat in Lou Perazzoli's office one afternoon while he described to me the ins and outs (almost literally) of a component of the virtual memory system. When he finished, I summarized what he said from my point of view and then asked, «Is that right?». He responded earnestly, «Yes, that's exactly what we sort of do». (H.Custer, Inside Windows NT, 1993, preface).

Actually

<p>The timing offset <u>actually</u> causes early transmission.</p> <p>(власне, зазвичай)</p>	<p>IMPLICATION: There <u>may or may not be</u> other causes of early transmission, but <u>definite</u> early transmission is provided by the timing offset.</p>
---	---

Argue

<p>She <u>argues</u> that grammar is not monolithic.</p> <p>(уважати; гадати) / мати (усі) підстави вважати)</p>	<p>IMPLICATION: to insist, be sure (of) + to indicate, to point out</p>
--	---

MIND also punctuation marks:

<p>NON-CATEGORICAL</p> <p>(')</p>	<p>CATEGORICAL</p> <p>—</p> <p>!</p>
-------------------------------------	--------------------------------------

And, others were predicting, the grand total would almost certainly reach 13 million — at least!

The only solution was to abandon that frequency and hop the channel to a hopefully cleaner portion of the spectrum.

● **EXPRESS references to previous research (use the so-called «historical present»: «X writes» instead of «X wrote») as well as thanks (подяка), acknowledgements (посилання), dedications (присвяти):**

Greenbergian universals; Bakhtinian perspective; Piaget/Piagetian theories; Krashenian Monitor hypothesis, Markovian models, Markov-modulated Poisson process, the Feynman Lectures on Physics etc.

According to an article by G.Pelosi (IEEE MTT Newsletter, Fall 1995), the Italian physicist Nello Carrara was the first one to use the term microwaves (microonde in Italian) in a 1932 paper of the first issue of Alta Frequenza.

In this important little book, Donald E. Stokes argues that the convention is seriously flawed.

An Open DVD (digital versatile disk) industry resource is on the Web at www.dvdvideogroup.com. Details on Divx can be found at www.divx.com.

The authors wish to thank Dr. R.N.Simons, NASA Lewis Research Center, Cleveland, OH, and Dr. R.F. Drayton, University of Illinois at Urbana-Champaign, Chicago, for their helpful discussions.

Special thanks. Many people helped us put this report together, but the IEEE members listed here were particularly generous with their time and knowledge. Any fault found with these pages rests with the editors.

The wizards responsible for growing Netscape Web site include Robert Andrews, Rod Beckwith, Bala Guthy, Wei-ming Lin, Sven Sjoberg, Robert Waugh, and Jeff Whitehead.

We also appreciate the input from the folks who took the time to read the drafts of our paper, who helped bring it up to date.

This book is dedicated to the members of the Windows NT team (H.Custer)

MIND: In Anglo-American scientific tradition it is sometimes possible to refer to as yet UNPUBLISHED research. Sources of that ilk may be labeled thus: «in press»; «in print», «forthcoming», «manuscript submitted for publication», «unpublished manuscript», or even «personal communication». However, often unpublished results and personal communications should not be in the reference list, but may be mentioned in the text. Citation of a reference as «in press» implies that the item has been accepted for publication.

● **MAKE appropriate corrections (виправлення), and, if necessary, express an apology (contrition) (вибачення):**

[Reader] This was a very good article but it needs a correction. VIS corp never actually owned Amiga but fought for it. Escom AG bought it right out from under it at the auction.

The author replies: The sources I saw said VIScorp did hold title after Escom, but they could be wrong.

Corrections. On p.22 of the October issue, in the fifth line, the city named should be Savannah, Ga.

Erratum. With apologies to the author and our readers, this figure was inadvertently left out of R.H. Abrams, B. Levush, A.A. Mondelli, and R.K. Parker's «Vacuum electronics for the 21st century» which appeared in the September 2001 issue of IEEE Microwave magazine (vol. 2, pp. 61-72). The figure is missing from the sidebar entitled, «Efficiency of Vacuum-Electronic Amplifiers» on page 70. Reprints of the article will include this figure.

— The Editors

Exercise 5. Render the following sentences into Ukrainian.

1. They base their data on the concept that information is really a kind of a bubble, and that related bubbles can be nested one inside another.
2. 3-D interfaces allow more flexibility in displaying information, permitting the images that represent information to look more natural.
3. We conclude by analyzing Web software approaches.
4. There are two reasons for discussing the problem.
5. In other words, the slow regime depends on the setting being linear.
6. He remains one of the most productive cross-fertilizers in engineering research, successfully importing techniques used in one field to obtain unexpected results in another.
7. She is widely known as skillful and charismatic diplomat who excels in the art of creative compromise.
8. Austin adds the notion of perlocutionary force, that is, the result or effect that is produced by the utterance in that given context.
9. Simply put, metaphors respond mainly not to what might be said, but to what is said.
10. What it boils down to is this: if the system response was above the expected or desired value, then the domain is slightly narrowed. That is, the left edge of the domain is moved slightly

to the right and the right edge is moved slightly to the left. Similarly, if the system response was below expectation, the domains involved are slightly widened.

11. For the sake of clarity and brevity, we cannot give a detailed description here.
12. As the author succinctly puts it, is not something we begin with; it is something we arrive at.
13. The main results can be summarized briefly.
14. Let us clear up a thing or two about the word «hacker».
15. Turn to Homer, Dante, Milton, Blake and you'll find this theme.
16. The paper is not fully referenced, and the overall layout is very poor with lack of clear headings, so that it is not immediately apparent what study you are reading about.
17. They are far more unlikely to devote time and resources to a pilot implementation than are, say, universities or vendors.
18. In particular, this automates common network programming tasks, such as object location, implementation startup (aka server and object activation) .
19. Simplifying, replace the rope by two rods.
20. As just noted, the two factors are intimately related.
21. Haptic (tactile) interfaces allow the user to explore virtual objects as if he or she were touching it in the physical world.
22. This essay certainly does not define all concepts and terminology relevant to computer security; nor does it address concepts and terminology for communication security and related communication networking technology. It does address concepts and terms that we consider to be the most critical to gain a fundamental understanding of computer security technology — that is, the theory of this technology and something of its implementation.
23. More specifically, I propose to take a closer look at the two key words in the term second language acquisition: language and acquisition.
24. To begin with, investigations seem to appear at times when societies need them.
25. The recent results are more convincing than those obtained in the past.
26. The novel procedure is less complicated than the one conventionally used in such cases.
27. A career in languages translates into success.
28. The downside of using it is the resulting errors.
29. These facts necessitate the design of communication algorithm.
30. From then on, to enable this, they need to declare license.
31. Put simply: what the mind can perceive and believe, it can achieve.
32. To some degree perceptions here reflect the affiliations of the respondents.
33. Studies in paleophysiology shed some light on the effects of possible changes of O₂ in the past.
34. According to Stephen Krashen, there are two independent systems of second language performance: «the acquired system» and «the learned system». The acquired system or acquisition is the product of a subconscious process very similar to the process children undergo when they acquire their first language. It requires meaningful interaction in the target language — natural communication — in which speakers are concentrated not on the form of their utterances, but on the communicative act. The Monitor hypothesis explains the relationship between acquisition and learning and defines the influence of the latter on the former. According to Krashen, the role of the monitor is — or should be — minor, being used only to correct deviations from normal speech, and to give speech a more «polished» appearance.
35. To use the analogy made by Kean (1981), if someone were to glue the pages of your dictionary together, you would not be able to look up the meaning of passacaglia, but the information would still be there.
36. «Using an Apple is like keeping kosher: the believers would not live any other way, but they cannot eat with members of other religions. Using Unix is like preparing your own meals from recipes in the «Joy of Cooking»: the effort involved initially exceeds the palatability of results, but experience eventually brings satisfaction. Using Microsoft windows is like eating at McDonald's: you can find one anywhere, and the food will keep you going, but it would be sad there were no other restaurant in town» (H. Boas).

Exercise 6. Find the one synonym to the underlined word:

1. In spite of the delay, we arrived on time.
 - a. because
 - b. despite
 - c. due to
 - d. because of
2. The debate has nonetheless enlarged our knowledge of the issue.
 - a. alternatively
 - b. nevertheless
 - c. notwithstanding
 - d. also
3. This problem together with mentioned above is of prime importance.
 - a. rather than
 - b. moreover
 - c. besides
 - d. alongside
4. In brief, we had to start it from scratch.
 - a. finally
 - b. in summary
 - c. in a word
 - d. in conclusion
5. These two methods are almost the same.
 - a. not always
 - b. very much
 - c. sometimes
 - d. never
6. The experiment has valuable implications.
 - a. reasons
 - b. indications
 - c. prospects
 - d. consequences
7. The experiment resulted in no success.
 - a. followed
 - b. realized
 - c. caused
 - d. accounted for

Exercise 7. Fill in the blanks.

1. The article contained some
 - a. inaccurate
 - b. inaccuracies
 - c. if inaccurate
 - d. inaccuracy

-
2. ... the CAD program has all of the mathematics embedded in it, the engineer using the program is really only using someone else's technology to solve a problem.
- Since
 - However
 - Despite
 - So that
3. Perhaps we can clear up this confusion with the ... hypothetical example.
- followed
 - following
 - to be followed
 - follows
4. In round ..., lasers or LEDs would use hundreds of times less power than a small LCD screen typical of a notebook.
- numbers
 - number
 - and numbers
 - and number
5. First, we should ... rationale for this method.
- outlines
 - outlining
 - to outline
 - outline
6. ... it can be used to provide energy, hydrogen is not readily available.
- Also
 - Though
 - Since
 - Due to the fact that
7. A short extract ... below.
- is shown
 - shows
 - showed
 - show
8. The article... to express further concerns.
- goes on
 - go on
 - to go on
 - going on
9. The result is a delay, ... latency.
- or
 - whenever
 - for to
 - which
10. As ... , they make strategic decisions.
- result
 - the result
 - a result
 - results
11. We should ... all pros and cons.
- to consider

- b. considering
- c. considers
- d. consider

12. On the other ..., speech recognition has improved greatly since 1968.

- a. side
- b. place
- c. view
- d. hand

13. I thank you for ... my paper.

- a. review
- b. reviewing
- c. to review
- d. reviewed

14. Scientists and engineers, ... become more productive, need sophisticated software.

- a. in order of
- b. rather than
- c. therefore
- d. in order to

15. The evidence is compelling, ... indirect.

- a. hence
- b. albeit
- c. because
- d. on the other hand

16. Roget's Thesaurus, a collection of English words and phrases, is arranged by the ideas they express ... by alphabetical order.

- a. rather than
- b. together with
- c. because of
- d. because

17. She got the job ... she was the best candidate.

- a. so that
- b. as soon as
- c. in that
- d. although

Exercise 8.

Render the following sentences into Ukrainian. Pay special attention to the modulations of categorical and non-categorical statements.

1. A concerted worldwide effort to reduce greenhouse gas emissions seems destined to be an increasingly important influence on planning electric power investments.
2. I am assuming global electronic commerce will occur despite current U.S. export constraints.
3. Stopping light in crystalline systems holds particular promise. Slow light might also emerge as a research tool for basic science.
4. Clearly, it is not a revolution in computing. At least, not yet.
5. It certainly seems likely that, in the near future, students in online environments may be required to interact with software interfaces.
6. It certainly would be possible to separate harmonics, but the calculation time would be much higher.
7. It would probably violate this axiom.
8. It requires a reinterpretation of common terms, at least partially.
9. You can't do it. No one could. And even if they could, they wouldn't want to.

LINGUISTIC DEVICES OF COMPRESSION

«If I were to offer a criticism of this book, it is that it suffers from verbosity — because of the vastness of the subject matter and the desire to cover it all... A related problem is that it often writes at great length about things which really demand a single figure.»

(Communications Magazine, 1996, No. 8, p.14).

USE various information compression devices:

- «-ly» adverbs in the initial position:

Structurally, she also uses several markers.

Структурно; у структурному сенсі; якщо взяти до уваги структуру
(IMPLICATION: if we consider structural aspects...)

MIND also words with «-wise»:

Teamwise, колективно, у колективному сенсі

- **AVOID** using «of-phrases» whenever possible. **USE 's, Nouns as Adjectives, (Noun Phrases), «for» rather than «of»:**

The theory explained discrepancy in Mercury's orbit.

The browser interface's purpose is fairly simple and straightforward: to navigate the Internet and view information.

It is a 800-meter-deep canyon west of the aquarium.

Get hands-on expertise with this complete, one-stop resource packed with straight-from-the-lab techniques, procedures and applications.

The Institute/center for... **RATHER THAN** The Institute/center of

The workshop format **INSTEAD OF** The format of the workshop

MIND correct article usage in **of-phrases**. In most cases, use «**the**»: e.g. **the** problem of...

BUT: in MEASUREMENTS context use «**a**»: **a** temperature of...

TRANSLATE noun phrases in the reverse, in most cases:

abbreviations dictionary

СЛОВНИК скорочень

connection price

ПЛАТА за з'єднання

system response

ВІДПОВІДЬ/РЕАКЦІЯ системи

5 percent increase

ЗРОСТАННЯ на 5 відсотків

devices readings

ПОКАЗНИКИ приладів

10 minute break

десятихвилинна перерва

- **AVOID** using *that, whose, which, etc.* **USE** infinitives, as well as gerunds and participles rather than nouns derived from verbs:

Observing, clarifying, measuring, recording, identifying and controlling variables, inferring, predicting, and so on are examples of the processes of science.

Making holograms requires self-discipline.

To solve this problem one has to consider several approaches.

The interface stored on a server can be downloaded on demand to a user's desktop.

The first product to address this challenge directly is EverNote.

The third problem being tackled by new interfaces is organizing information you create and collect.

This course is designed for anyone interested in becoming familiar with the theory.

Typical examples of compressing:

The images that represent information

→ The images representing information

Formats that are collected from the Web

→ Formats collected from the Web

The item that was clicked upon

→ the item clicked upon /the clicked upon item

The second edition that was thoroughly → Thoroughly updated second edition
updated

The issues that were discussed → The discussed issues OR The issues discussed

The issues that we address the issues in question
The issues that we consider the issues under consideration
The issues that we study the issues under study (scrutiny)
The issued that we deal with
The issues that we touch upon
The issues that we tackle

She did very well in her exams if one takes → She did very well in her exams considering
into account the rather surprising fact of how how little she had studied.
little she had studied.

Particles that have nanometer size → Nanometer-size(d) particles

All materials on this site, that include but are → All materials on this site, including, but not
not limited to, images, illustrations, audio and limited to, images, illustrations, audio and
video clips are protected by copyrights. video clips are protected by copyrights.

A series of experiments that test the new → experiments to test
device

He is the one who always comes first. → He is always the first to come.

It is one of the first companies that is build → It is one of the first companies to build upon
upon WebFountain. WebFountain.

A detailed guidance that deals with state-of- → A detailed guidance for state-of-the-art
the-art designs designs

The final volume of the series that includes 3 → The final volume of 3-book series
books

The features of the devices → The devices' features OR
the devices features

This kind of interface has menus that are → This kind of interface has application-specific
application-specific ones. menus.

This book that is a forward-looking one → This forward-looking book explains the latest
explains the latest techniques. techniques.

Infrastructure that connects vast amounts of → Infrastructure for connecting vast amounts of
text text

(For) the solution of the problem... → To solve/ For solving the problem...

But what is more serious is the fact that... → More seriously, ...

If we consider architecture, there are three → Architecturally, there are three common
common approaches. approaches.

They will make every effort in this direction. → They will endeavor to do so.

It is a good idea to solve this problem. → The problem is worth solving.

One can search it in Google. → It is searchable in Google.

Choose messages with advertising you are familiar with. → Choose messages with familiar advertising.

It is known that science affects the lives of people. → Science is known to affect the lives of people.

It is believed that this research is of great importance. → The research is believed to be of great importance.

It seems (appears) that they are concerned with the problem. → They seem (appear) to be concerned with the problem.

It is likely that the conclusion is of some theoretical interest. → The conclusion is likely to be of some theoretical interest.

It is widely accepted that fuel cells have performance appropriate for automotive use. → Fuel cells are widely accepted as having performance appropriate for automotive use.

Andrews showed that simple analytical relationships exist. Gray showed that these relationships can predict the behavior of the elements in question. → Simple analytical relationships (Andrews 1995) can predict the behavior of elements in question (Gray 1997).

This interface makes it possible to view multiple documents simultaneously.

This interface permits multiple documents to be viewed simultaneously.

The feature makes it possible for users to manipulate virtual objects with various degree of precision.

The feature allows users to manipulate virtual objects with various degree of precision.

VS.

The class hierarchy model described in this article makes it possible for users to compose their own custom, flexible frameworks from either predefined or custom protocol components tailored to an application's needs.

The class hierarchy model described in this article enables users to compose their own custom, flexible frameworks from either predefined or custom protocol components tailored to an application's needs.

MIND such important element of style as **VARIETY** of linguistic devices employed:

Sidebars that appear in Windows and Office applications will be used more.

«We cannot solve the problems that we have created with the same thinking that created them» (Albert Einstein).

● **REARRANGE** sentence elements. USE pronouns and other proforms (or substitutions — **one; that; those; such; it; they** etc.):

The processes in question are different from the ones (those) occurring today.

The node carries two converters. If one shuts down, the backup automatically kicks in.

Such revolutionary new interfaces are steadily moving into users' hands. Some will catch on; most will fade away.

Lately, interface and application designers have been looking into ways of extending the browser interface to provide a richer graphical user interface, or GUI. The first to go public with such a product is IBM Corp., with Workplace. The interface stored on a server can be downloaded on demand to a user's desktop. It has application-specific menus for a wide variety of applications.

Air density is less than that of water.

NOTE.

It is argued that the closer written language is to GOOD spoken language of an educated native speaker, the better it communicates. For that matter, it is sometimes preferable to avoid substitutes at all:

The home network connection price is lower than international.

Exercise 9. Transform the following language elements appropriately.

1. The companies that build products for their mainstream markets —
2. People who use special applications —
3. The images that represent information —
4. Formats that are collected from the Web —
5. A car that has medium size —
6. The firms that are small —
7. The issues that were considered —
8. The final volume of the series that includes 3-books —
9. The first of the series that consists of five-volumes —
10. The seven major principles that are presented in detail —
11. She is the one who always leaves last —
12. The problems that were discussed —
13. He is the one who always comes first —
14. It is known that she is a good interpreter —
15. It seems that he knows this rule —
16. A spin off of this research is the development of optical sensors —

Exercise 10. Fill in the blanks.

1. It was performed by a three-... staff.
 - a. person
 - b. persons
 - c. persons are
 - d. person is
2. ..., Linux allows enterprises to delay hardware upgrades for two years.
 - a. Typical
 - b. Type
 - c. Typically
 - d. Types
3. Panelists from the USA will address the subject from ... viewpoint.
 - a. its
 - b. theirs
 - c. it
 - d. their
4. ... the entire system would take 35 years.
 - a. Upgrade
 - b. To upgrade
 - c. Upgraded
 - d. When upgraded
5. By essentially ... the original collection of instructions, the emulation program provides the functions we want to run.
 - a. mimicking
 - b. mimicks

-
- c. mimicked
d. mimick
6. Some things are ill-
- a. defined
b. define
c. defining
d. definition
7. After ... the problem, they decided to solve it.
- a. discussion
b. discussing
c. to discuss
d. being discussed
8. We succeeded in ... reliable and accurate results.
- a. to obtain
b. obtained
c. and obtained
d. obtaining
9. A true scientist is interested in ... mistakes.
- a. being told
b. told about his or her
c. being told about his or her
d. told about his or her
10. We have covered this issue in our report in full
- a. detail
b. and details
c. details
d. detailed
11. This theory is popular ... scientists.
- a. along
b. between
c. among
d. as long as
12. His article would have been more helpful had he explored the relationship ... language and culture.
- a. between
b. among
c. together
d. alongside
13. ... , exactly whether and how it helps with language learning has often been assumed rather than vigorously tested.
- a. Pedagogy
b. Pedagogical
c. Pedagogically
d. Pedagogue
14. All factors ... the accuracy of the experiment should be carefully observed.
- a. are likely to affect
b. likely affect
c. and likely to affect
d. likely to affect

-
15. In the future, ... interfaces may go beyond the visual to the tactile.
- when users
 - use
 - user
 - to use
16. It seeks ... as a catalyst.
- to serve
 - served
 - and served
 - to be
17. This psychological phenomenon ... by physical activity.
- is affected
 - are affected
 - is an effect
 - serve
18. The thermometer ... 45 degrees Fahrenheit.
- shows
 - points
 - reveals
 - reads
19. As ... in the article, the content protection by encryption is sufficiently strong.
- describe
 - describing
 - described
 - to describe
20. The purpose was to select and fund research ... by various laboratories around the country.
- to be conducted
 - to conduct
 - conducting
 - conduct
21. It is appropriate ... wireless corporations to conduct in-house research.
- to
 - that
 - for
 - when
22. The electronics aboard the new aircraft ... very sophisticated.
- was
 - and are
 - is
 - are
23. This substance is highly explosive if ... to an open flame.
- is it
 - exposed
 - it exposed
 - exposing
24. Choose the phrase that best keeps the meaning of the original sentence if ... for it.
- it is substituted
 - is it substituted
 - is substituted
 - substituting

25. Electronics ... the science and technology of electronic phenomena.

- a. are
- b. is
- c. to be
- d. being

26. Potatoes, a popular food in Ukraine, are most delicious

- a. when roasting
- b. roasting
- c. roasted
- d. when roasted

27. The latest statistics ... not reliable enough.

- a. is
- b. are
- c. has
- d. has been

28. This was an ... sign that something big was happening.

- a. mistake
- b. mistaken
- c. unmistakable
- d. mistook

29. The ... city movement had reached second gear.

- a. sustainable
- b. to sustain
- c. for sustenance
- d. sustain

Exercise 11. Render the following sentences into Ukrainian.

1. Making smart choices is a skill worth honing.
2. Capturing three-dimensional images of objects requires using photographic plates made of glass or plastic.
3. Generating alternatives takes time and thought.
4. In doing so, he continues the glorious engineering tradition.
5. The exhibition was worth attending.
6. They were very interested in the subject discussed.
7. The results are worth reporting.
8. The abstract requires that you write a sentence of justification, a statement of objective, a reference to methods used, a list of most important results, and any conclusion reached.
9. Methods employed in solving this problem are strongly influenced by the research objectives.
10. The survey concerned synthesized materials.
11. The method used depended upon the material selected.
12. Hydrogen is the lightest element known.
13. We suppose this method to be of great practical value.
14. The temperature of the substance obtained remained constant.
15. The article to be translated is here.
16. Computer is a complex device if viewed as a whole.
17. Being invited too late, we couldn't attend the conference.
18. (When) going into reaction, elements change their properties.
19. Considered from this point of view, the issue is of little importance.
20. The problem to be solved is extremely difficult.
21. She was the first to study this phenomenon.
22. He was the next to investigate the phenomena.
23. The data obtained appear to be quite correct.

24. Only the methods known from practical experience to be reliable have been used.
25. A President-elect is a political candidate who has been elected president but who has not yet taken office.
26. The last 20 percent of the work to be done tends to take 80 percent of time.
27. Quintessentially, this is a novel approach.
28. Conceptually, differential GPS resembles real-time kinematic GPS.
29. Metaphorically, each row represents one generation.
30. It allows users to touch and manipulate virtual objects.
31. The idea is for the user to experience the object exactly as if he or she were touching it in the real world.
32. Attached please find the list of upcoming conferences.
33. He holds seven patents and has five pending.
34. This work has given me a bad case of «author envy».
35. Cabinetrywise, it's best to look at function before focusing on style.

Exercise 12. Render the following text into Ukrainian. Discuss the point with your colleagues.

THE MEANING(S) OF RESEARCH

Everyone has an intuitive understanding of what is meant by basic research, applied research, and development. Basic research calls up an image of a scientist in a laboratory who studies phenomena purely for the purpose of expanding the knowledge base. Consequently, some refer to the activity as «pure» research. Two of the numerous other adjectives for basic research are curiosity-driven and investigator-oriented. The opposite of pure research is «applied». The aim of applied research is to investigate technologies that could be used to create a new product or the next generation of an existing one. Development exploits new technologies to design products that are practical, reliable, and manufacturable. Some pinpoint the difference between basic and applied research thus: getting one thing to work out of 100 versus finding the one thing out of 100 that does not work. Others say that basic research is getting one thing to work.

It is also argued that R&D efforts include the following four categories: development, advanced technology, exploratory research, and basic research. Development is closest to the production phase. Upstream of development is advanced technology, in which researchers work closely with the business units. Exploratory research investigates alternative technologies. It often goes on independently of business units. The fourth category, basic science, is the science disconnected from business.

But research can be contemplated from yet another point, i.e. whoever is funding it and expects to benefit from it. Strategic research is the term widely used to label this perspective. Into this category fall several other expressions, such as long-term commercial research and goal-oriented research. In strategic research, the goal is defined first, then the research efforts (both basic and applied) needed to achieve the goal are laid out. Thus it has both basic and applied components.

Exercise 13. Render the following text into English. Compose your own text regarding the study program you are currently pursuing (think of any relevant curricula elements, if applicable). If necessary, use the Internet resources.

Old Dominion University: Doctor of Philosophy in English

The PhD in English is an innovative program that integrates writing, rhetoric, discourse, technology, and textual studies. Offering opportunities for creative reinterpretation of these fields within the discipline of English, we emphasize research that examines texts in a variety of overlapping and sometimes competing language-based worlds. Our focus is on how the creation and reception of texts and media are affected by the form, purpose, technology of composition, audience, cultural location, and communities of discourse. All students take 15 hours of core courses, 9 hours of electives, a 3-hour Dissertation Seminar, and 12 hours of specialized courses in one of two fields:

* Rhetoric and Textual Studies. Designed for those interested in applying the analytic tools provided by rhetoric, linguistics, and critical/literary theory to the study of verbal, graphic, and visual texts, this track prepares students for placement and advancement in academic and

nonacademic careers related to the study and teaching of rhetorical theories/practices, composition instruction and administration, as well as rhetorical approaches to composition, discourse, literature and culture.

* Professional Writing and New Media. Designed for those in education and industry who wish to study the connections between discourse and technology. Involving both theoretical exploration and experiential learning, this track prepares graduates for leadership roles in technical and professional communication, composition instruction and administration, and software development.

Students may pursue full- or part-time study through a combination of on-campus and distance learning courses. At present, we offer one to two distance learning courses per semester, and distance students will visit the campus to take six to nine additional hours through our Doctoral Summer Institute program, which offers intensive study of major issues in English Studies in the company of nationally-known specialists.

For additional information, visit our website at <http://al.odu.edu/english/academics/phd.shtml>

VISUALS

TEXT. Read the following passage, paraphrase it. Discuss the ways graphics affects people in workplace.

As we move into the technological age, we witness the increasing use of graphics all around us, and the **influence** that graphics has on the way everyone thinks. The visual world in which we live reminds us that graphics has **enormous** impact on our lives.

Computer users, for example, use graphic design within the texts they prepare on a word processor. Some researchers believe that graphics will **actually** help people communicate more effectively whether on a computer screen or a printed page. The goal of graphic design is to present information that can be understood easily and quickly. Graphic designs usually mean headlines, charts, graphs, tables, diagrams, symbols and pictures.

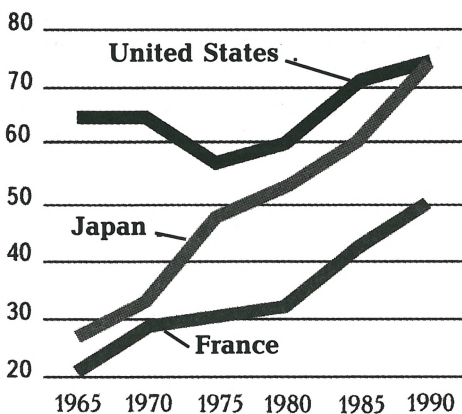
GRAPHS are a visual way of presenting information, especially statistical data. The three most important types of graphs are:

line graphs
bar graphs

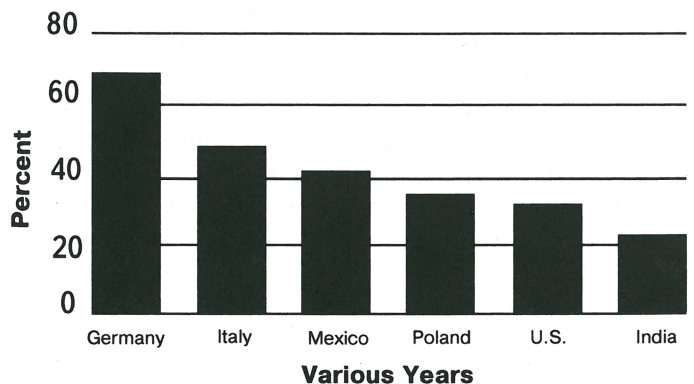
are useful in showing changes and trends (general tendencies or directions in the way a situation is changing or developing) involving quantities or amounts over time;

Scientists & Engineers in the Labor Force

Per 10,000 Labor Force

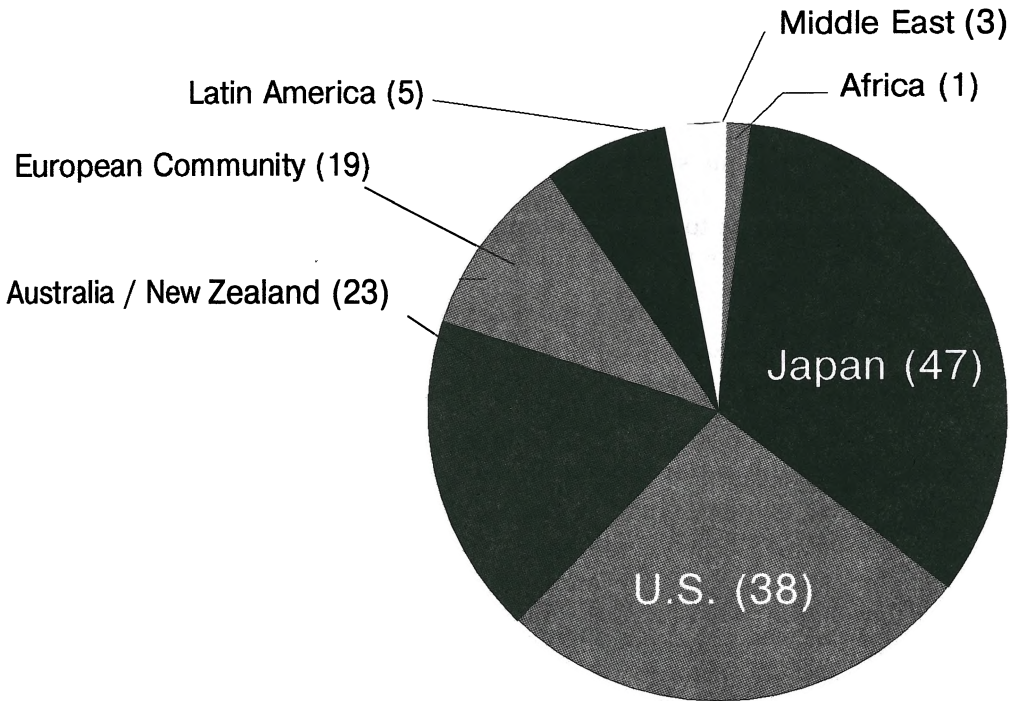


Ratio of Science and Engineering Degrees to Total First University Degrees



R&D Scientists and Engineers

Per 10,000 Population, 1995



circle graphs

sometimes called pie graphs, show percentage, and whole is divided into parts.

When analyzing information in a line or bar graph, note time periods and increases or decreases in amounts. In a circle graph, note the relationship of each part to the whole. Rank the percentages from the greatest to the least.

Comment on these graphs:

The present stock and flow of human resources engaged in the global discovery and application of science and technology are critical to the future pace of innovation. Historically, the world's largest reservoirs of scientists and engineers have rested in the Western economies. Over time, however, Asia, especially Japan, has begun to build equivalent **pools of scientists** and engineers in the labor force, and emerging economies are showing signs of producing relatively high proportions of scientists and engineers among their university graduating **cohorts**. As the global economy expands and nations become ever more interconnected, there may be reason to hope for a smoothing out of at least some aspects of global **S&T** human resources capacity.

pool of scientists, reservoir of scientists

укр. кадри (резерв) вчених

cohort — any group of people who share some common quality (same age etc.) — community

укр. когорта, група, спільнота

S&T — Science and Technology

укр. наука і техніка

Exercise 14. Study the following chart and its sample analysis. Prepare your own presentation based on some statistics.

Describing Charts

To decrease / to go down / to fall / to plummet / to slump /

To reduce / to diminish / to decline / to contract зменшуватися

To increase / to go up / to rise / to jump / to surge / to accelerate / to expand збільшуватися

To reach (a point) досягнути (позначки)

To remain the same залишатися таким самим

Discrepancy, divergence розбіжність

Improvement покращання; поліпшення

To improve поліпшувати

Slight / minor незначний

Gradual/ progressive поступовий

Sharp різкий

Major / dramatic значний

Median середній

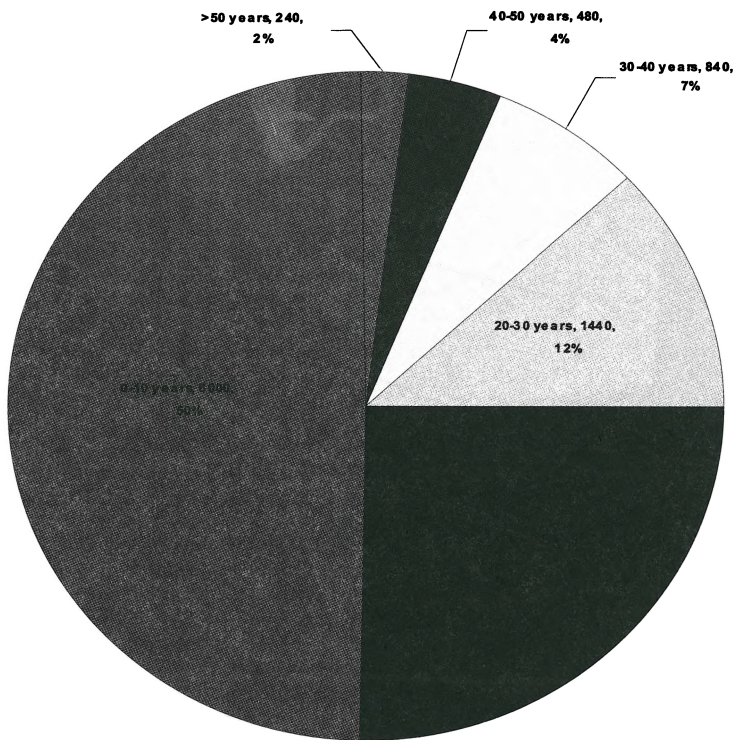
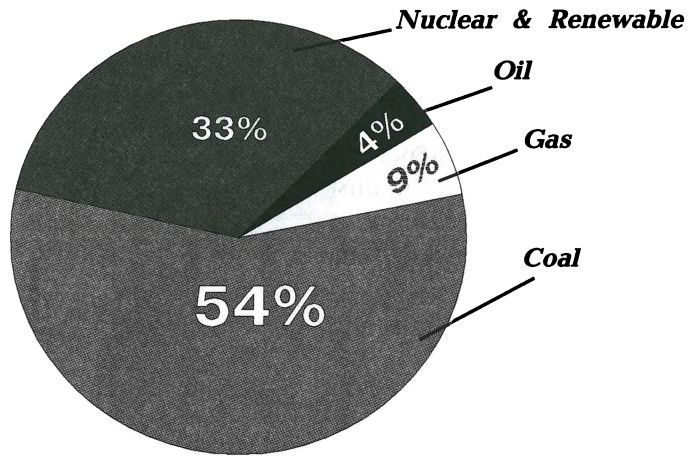
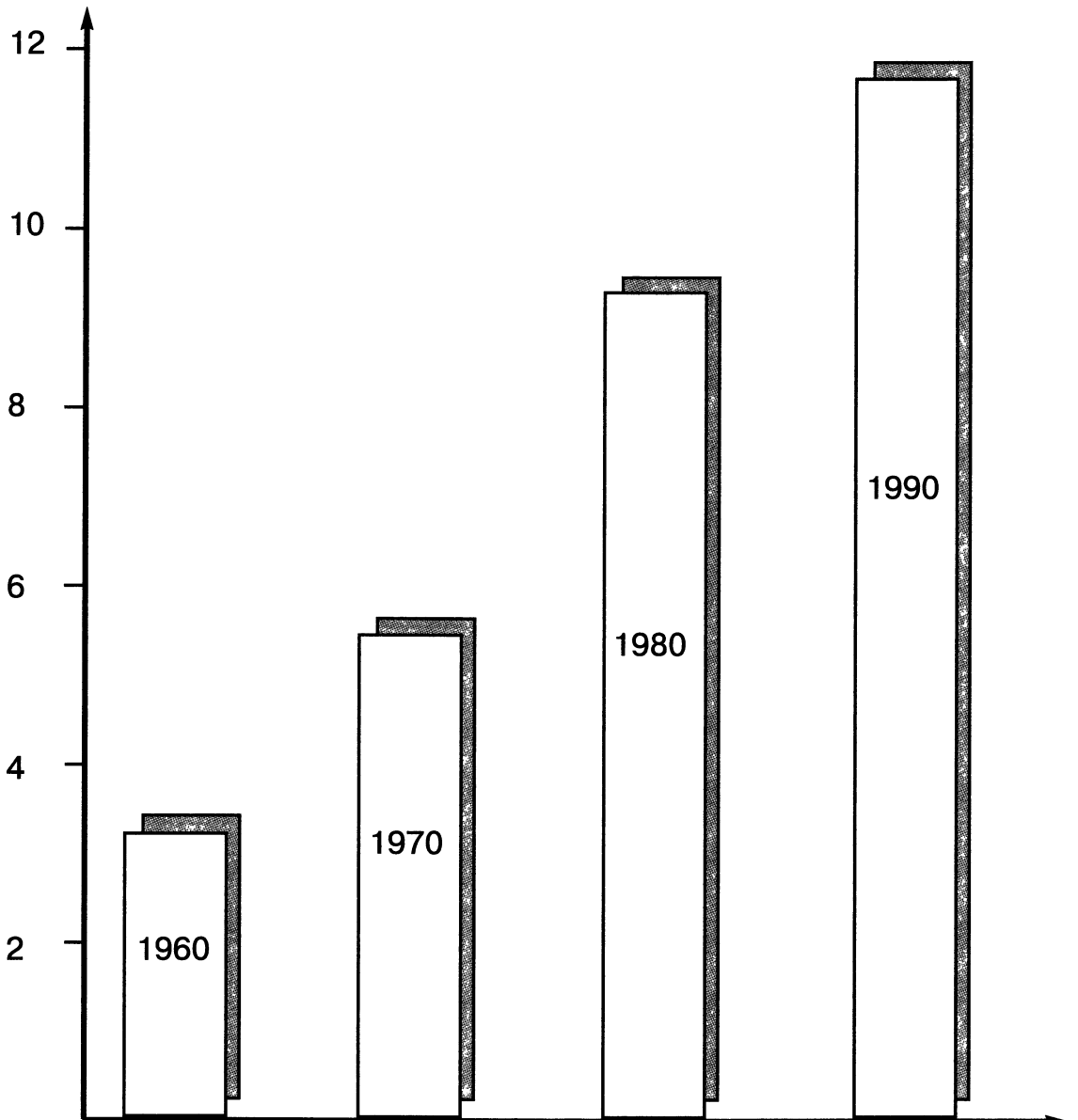


Figure 1. Demographics of Society membership

The median number of membership years in our Society is about 11, but that does not really tell the whole story. A better view of the demographics of our membership may be obtained by examining the distribution, as shown in Figure 1. We can see that 50% or 6000 of our members have been involved with the Society ten years or less. Looking further, we can see that half that number has been involved between ten and 20 years. Following this trend over the next several decades, the number of members involved in one decade is about half of that in the previous decade. This demographics may be attributed in part to the rapid growth of the Society in recent years. But we know that, particularly in the early years of membership, we lose a considerable number of members through nonrenewal. More careful study shows that the longer we retain a member, the more likely they are to renew.

Exercise 15.

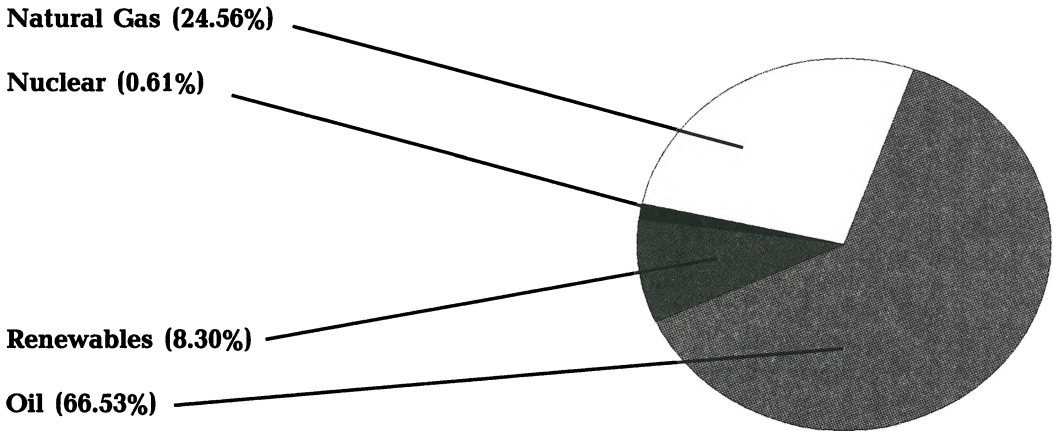
A. Make some predictions about the world electricity consumption if present trends continue.

Sources of Electricity Generated in the USA**World Consumption of Electricity (10^6 GWh)**

B. What does comparison of world energy consumption by source reveal?

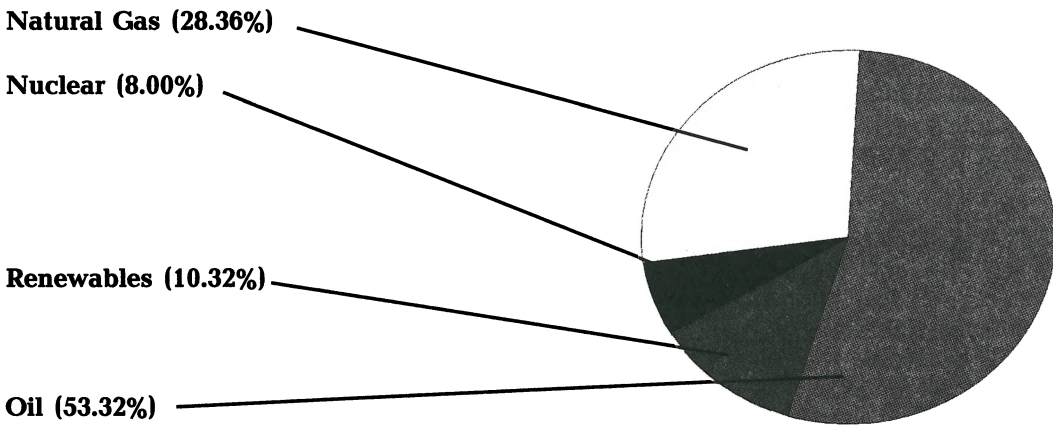
World Energy Consumption — 1970

Total: 206.7 Quadrillion Btu



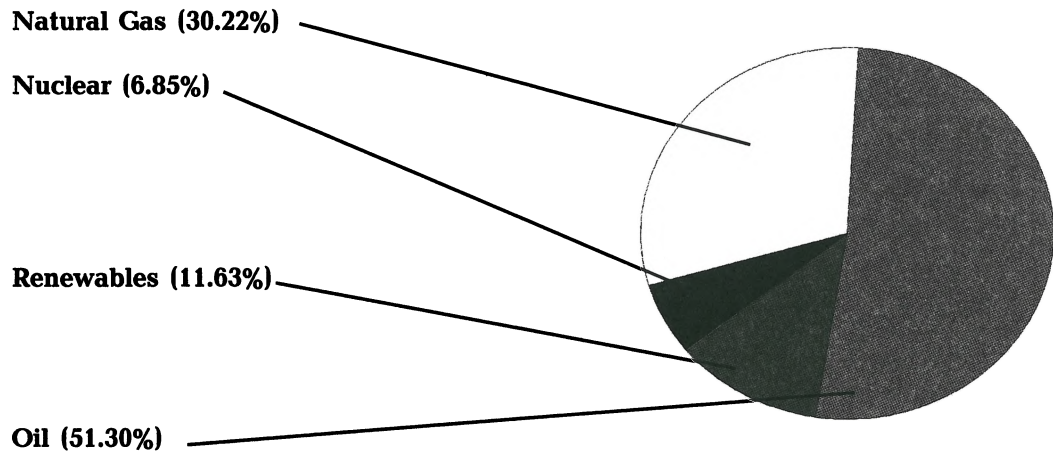
World Energy Consumption — 1990

Total: 345.6 Quadrillion Btu



World Energy Consumption — 2010

Total: 471.1 Quadrillion Btu



• MIND verbalizing the following symbols and other visulas:

@	at
*	the asterisk symbol, the «star» key on touch-tone telephone handsets
#	octothorpe/the pound key/tictactoe/cross-hatch/hash/square символ «гратка»
40+ (-) 10 =	forty plus (minus) ninety is/equals/is equal to ...
4x5=20	four times (multiplied by) 5 is/equals/is equal to ...
30:3=10	thirty divided by three is/equals/is equal to 10
x ²	x square (squared)
x ³	x cube (cubed)
7 ¹³	7 to the 13th power
0.3	zero/nought (o) point 3
0.03	zero (o) point zero (o) 3
1.234	one point 2,3,4
1/2	a (one) half
1/3	a (one) third
1/9	a one ninth
1/14	a (one) fourteenth
1/40	a (one) fortieth
(Cxm ²)/kg	coulomb-square meter per kilogram
Cartesian coordinates	

MIND the sequence of modifiers in English:

OpShaCOM

Opinion Shape Color Origin Material

E.g. a premium quality oblong magenta Swiss leather iPod case

Parameter(s)	At/next to/ close to/adjacent to/ In close proximity
Dimension(s) / (overall dimensions)	Left-hand (LH) Right-hand (RH)
Range/scope/extent/interval	Between Among
Rate/speed/velocity	In front of In the back/rear of
Size	On /over
medium(-sized) small; large; big	(On) top (of)
Shape	(At) the bottom (of)
circle	In / into / inward
triangle	Out/ out of / outer / outward
rectangular/oblong	Under/below/beneath/underneath
round	Up / upward нагору
square	upper верхній, горішній lower нижній, долішній
diamond	To/toward(s)
oval	Through
ellipse	Along
U-shaped	In the middle of
dome-shaped	center (American English) / centre (British and Canadian English)

«like this»; «that high»; «that deep»; «that wide» etc.	Peripheral/marginal/borderline
Curve	Perpendicular to
Segment	Parallel to
Broken line	Diagonal
Dotted line	Horizontal (axis)
Shaded area	Vertical
Weight	Left to right
(heavy, light)	Right to left
Frequency	Bottom-to-top
Cost	Clockwise
(cost-effective VS. expensive)	Counterclockwise
Resistance	To and fro
(highly resistant to...)	Up and down
	Around
	Linear(ly)
	Regular(ly)
	Random(ly)

Exercise 16. Fill in the blanks with the correct article: a , the or ___ . Pay special attention to articles usage in measurements context.

1. ___ Density is ___ mass divided by ___ volume.
2. It is usually measured in ___ kilograms per ___ cubic meter.
3. ___ Temperature drops with ___ height .
4. ___ temperature of 10 degrees Celsius was measured at the ground.
5. ___ temperature drop was constant.

Exercise 17. Analyze the following statements in terms of verbal and non-verbal linguistic devices interplay. Make conclusions about the role of visuals in various parts of written research.

1. It is easy to understand why, and Table 27 helps us to do so.
2. The text, consisting of 37 short chapters, is supplemented by artwork on nearly every page. The drawings are a cross between three-dimensional engineering views and artistic impressions. The combination of text and art work works well, holding the reader's interest.
3. Why a painting by Malevich appears on the front cover? We can trace that move from a metaphorical multi-modal world of text and image. A world which is not static but in a state of tension, open to innovation and creativity. The image captures that tense and dynamic integration of form, function and interpersonality which is at the heart of this book as the author shows the struggle between the demand for a conventionalized construction of knowledge and the need of original scholars and researchers to proclaim their authorial identity.

Exercise 18. Read the passage and answer the questions that follow.

The ubiquitous symbol of the Internet, the @ sign, seems to be rather old. An Italian academic, Giorgio Stabile, a professor of the history of science, has found evidence of its use in the records of Italian merchants nearly 500 years ago, when it was both a unit of weight and of volume, representing the capacity of one amphora (a kind of a terracotta jar). The shape of the amphorae resembled a letter «a». It seems that the symbol was employed across Europe for years to denote various things before it finally acquired its modern sense.

1. The passage is mainly concerned with

-
- a. trade issues
 - b. history of science
 - c. classification of the Internet symbols
 - d. the origins of one of the Internet symbols
2. According to the passage, @
- a. is a recent symbol
 - b. is very old
 - c. was invented by Giorgio Stabile
 - d. has never been used in Europe
3. According to the passage, nearly 500 years ago, the @ sign was
- a. a unit of weight and volume
 - b. not a unit of weight
 - c. a unit of volume
 - d. a unit of weight only
4. It could be inferred from the passage that the @ symbol
- a. did not change through years
 - b. underwent some transformations
 - c. was later discarded
 - d. was never used
5. We can conclude that @
- a. is now widely used on the Internet
 - b. is rarely used on the Internet
 - c. may soon be replaced by other symbol
 - d. is used just for fun
6. The underlined word ubiquitous could best be replaced by which of the following:
- a. unique
 - b. omnipresent
 - c. unlikely
 - d. optional
7. The underlined word academic could best be replaced by which of the following:
- a. academician
 - b. high school educator
 - c. higher school educator
 - d. laboratory assistant
8. The underlined word evidence could best be replaced by which of the following:
- a. proof
 - b. hypothesis
 - c. theory
 - d. assumptions
9. The underlined word nearly could best be replaced by which of the following:
- a. around
 - b. somehow

- c. exactly
- d. actually

10. The underlined phrase a kind of could best be replaced by which of the following:

- a. assortment
- b. the sort
- c. a sort of
- d. and sorts

11. The underlined phrase It seems could best be replaced by which of the following:

- a. It shows
- b. It turns out
- c. It appears
- d. It happens

12. The underlined word modern could best be replaced by which of the following:

- a. outdated
- b. current
- c. true
- d. false

13. The underlined word sense could best be replaced by which of the following:

- a. meaning
- b. use
- c. approach
- d. technique

Exercise 19.

Study the following passages. Be ready to talk about similar recent or upcoming events at your institution. Pay special attention to explicit and implicit ways of providing justification and rationale for the importance of respective studies.

A. The 21st Annual College of Communications Research Symposium (the University of Tennessee, Knoxville), represented a departure from tradition by broadening the scope of research in the College, and by implementing Scholar-to-Scholar Research sessions. Participants of the Symposium were invited to submit papers in the areas of Health and Biomedical Sciences, Information Technology, Ethics and the Professions, and International Communication. The College has developed these intellectual interest groups, among others, as a result of a wider University initiative to examine strengths and weaknesses across the campus. More traditional lines of research also were encouraged so that papers accepted for the Symposium represented a broader line of inquiry rather than a replacement of traditional subjects of research.

The Scholar-to-Scholar approach also was an experiment, and one that participants said was very helpful in stimulating thoughtful discussion of their research. The round-table approach facilitated sharing of ideas for strengthening the current inquiry and for stimulating new approaches. Some of the comments from the participants included the following: «It was a terrific event. I benefited academically and was given valuable advice for pursuing future research». Another participant said time spent at the Symposium was «very productive. I enjoyed every moment of my stay».

B. Simulation tools are becoming ever more critical in evaluating design parameters for high-performance optical communications. Complexity and cost of optical communications systems prevents even large companies from doing extensive experimentation for optimizing products. Consequently, modeling tools are increasingly becoming the tools of choice for product optimization. This workshop deals with the converging areas of device, system, and network modeling. Additional highlights will be the significant advances in the ease-of-use of graphical

user interfaces as well as the sophistication of the program models themselves. The workshop will be divided into two sessions (i) brief presentations by the participants, with a discussion aimed at the specific needs of the community, and (ii) table-top demonstrations. We hope that participants will include in their presentations a comparison between simulation and experiment, with an aim towards modeling validation.

C. The phenomenal growth and globalization of the Internet we have witnessed in the last decade created a series of new disciplines, products, and, obviously, challenges. E-commerce (a.k.a. e-business, or e-tailing, lately) is a typical example of such product, importance of which is very difficult to overestimate in today's business world. From its original position of a somewhat surprising by-product of the Internet (r)evolution, e-commerce has become one of its major drivers as well as one of the enablers of new standards and technologies. As such, e-commerce began to be treated with the appropriate seriousness and respect not only by industry, but even by government and academia.

Exercise 20. Translate the names of the following symbols into Ukrainian.

% percentage	> greater than
& ampersand	? question mark
, comma	[open square bracket
. period] closing square bracket
/ forward slash	(open parenthesis
\ back slash) closing parenthesis
: colon	{ open brace
; semi-colon	} closing brace
< less than	_ underscore
= equal	vertical bar

UNscientifically speaking...

A statement on the seal: «Before you break the seal on this product, please carefully review and read all the printed material enclosed.»

Noteworthy

Remember not only to say the right thing in the right place, but far more difficult still, to leave unsaid the wrong thing at the tempting moment.

Benjamin Franklin

Unit 4

Hackers

**Comparing and Contrasting
in English**

Conveying Additional Information

Negation in English

TEXT

Read the text and be ready to answer the questions that follow.

Who are hackers? What is hacking? Imagine that you had a properly working program that performed one task, and you needed another program to do something slightly different. Modifying the first program to create the second one was much faster than writing a new one **from scratch**. In other words, that led more to an **ax-hewn** bench than to a piece of finely crafted furniture. Taking an ax to a program to turn it into something else became the basis of the term **to hack**.

Whereas programming is like cooking in your own kitchen — a personal act of creation — hacking is like cooking in a stranger's kitchen in the dead of night. Hacking is not for the beginners.

As one might guess, The New Hacker's Dictionary, a collection of «in crowd» terms compiled at MIT, is full of definitions of the term «hacker»:

1. A person who enjoys exploring the details of programmable systems and how to stretch their capabilities, as opposed to most users who prefer to learn only the minimum necessary.

2. One who programs enthusiastically (even **obsessively**) or who enjoys programming rather than just theorizing about programming.

6. An expert or enthusiast of any kind. One might be an astronomy hacker, for example.

In «Hackers» (1984), one of the best books on the subject, Steven Levy noted in **early** 1960's, «a project undertaken or a product built not **solely** to fulfill some constructive goal, but with some wild pleasure taken in **mere** involvement, was called a «hack». «Secrets of Super Hacker» (1994) by Nightmare, pseudonym for Dennis Fiery (which is itself another pseudonym) offers this: «A

hacker is a person with an intense love of something, be it computers, writing, nature or sports. A hacker is a person, who, because he or she has this love, also has a deep curiosity about the **subject in question**...» For a computer hacker that means s/he respects the ability of computers to put him in contact with a universe of information and other people, and it means he respects those other people, and does not **intentionally** use knowledge of computers to be destructive. Such a definition differs a lot from the final definition in the dictionary mentioned above:

8. A **malicious meddler** who tries to discover sensitive information by **poking around**. Hence **password hacker**, **network hacker**.

But many people really forget that hacking is **pretty harmless** as long as the hacker avoids the **temptation** to cross the line and become a «malicious meddler».

In order to counteract the bad press, the hacking community tried to divide itself into good guys and bad guys. In general, those people who just liked to play and learn tried to retain the name **HACKER** by creating the term **CRACKER** for the bad guys. For crackers a major motivating force is definition number eight of «The New Hacker's Dictionary» — breaking into systems

* **from scratch** (informal) — starting from the beginning or with nothing

to hew — to cut using an ax or other cutting tool укр. рубати (сокирою)

to hack — to cut, especially roughly, violently or in uneven pieces. укр. рубати

obsession — a fixed and often unreasonable idea with which the mind is continually concerned укр. нав'язлива ідея

early — happening towards the beginning of a period of time укр. на початку. **Compare: late** — happening towards the end of a period of time укр. наприкінці

solely — only, not including anything else укр. лише, виключно

mere — nothing more than; only укр. просто, не більш ніж (як)

subject in question — under consideration, being talked about укр. питання, що розглядається

intentional — done on purpose, deliberate укр. навмисний

to meddle (in, with) — to take too much interest or take action about other people's private affairs. **Synonym:** to interfere (in) укр. утручатися

malicious meddler — укр. той, хто зловмисно утручається

* **to poke around** — to nose about, to search (in or for something) by examining other people's business укр. вишукувати

pretty harmless — укр. досить (доволі) безпечний, нешкідливий

to tempt — to persuade or attract (someone) to do something that seems pleasant or advantageous but may be unwise or immoral. Noun — **temptation** **Synonyms:** entice, lure, allure, seduction укр. спокуса

without authorization and with malicious intent. **In any event**, the distinction has failed **to catch on** outside the hacking community. All are still known as hackers.

The culture that we live in is being **threatened** by an oversimplified image of hackers as criminals or vandals. Anyhow, a computer hacker needs to understand how computers work, to study them, to learn programming. To hack means to be on the **frontier**, to be on the border. In computer science and technology this border is constantly being pushed back, and at a tremendous **pace**. As science becomes more and more computational, we need **to come up with** a better understanding of the nature of human activity in the information age.

in any event — in any case укр. у будь-якому разі (випадку)

* **to catch on** — (informal) to become popular укр. набувати популярності

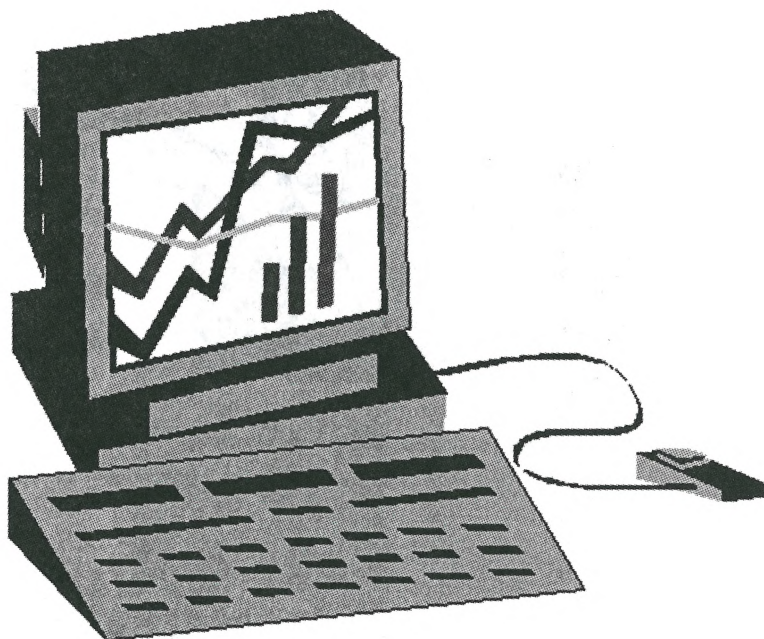
threat — an expression of an intention to hurt, punish, cause pain etc., **Synonym**: menace укр. загроза

frontier — the border, the limit or edge укр. (передній) край

pace — rate or speed укр. швидкість, темп

* **to come up with** — to have an idea about укр. спадати на думку

1. What is the subject of this passage?
2. Longman Dictionary of English Language and Culture provides the following definition of the word «hacker» — someone who is able to use or change the information in other people's computer systems without their knowledge or permission. Do you agree with this definition? Why?
3. What is the difference between hackers and crackers?
4. What are the positive and the negative sides of hacking? Express your opinion.
5. What is specific about subculture of hackers?
6. Why hackers are sometimes called «every security manager's worst nightmare»? Give your reasons.
7. Why is the word «hacker» sometimes used as honorable connotation of the word «lawyer»? Give your reasons.



Exercise 1. Give English equivalents of:

виконувати одне завдання; трохи відмінний; розширити можливості; лише, виключно; питання, що розглядається; поважати; навмисне використовувати; втручатися; набувати популярності, загрожувати; надто спрощений образ; величезна швидкість; краще розуміння; на початку 19 століття; наприкінці травня.

Exercise 2. Translate Ukrainian sentences into English. Then match the two columns:

1. На жаль, ця ідея не набула популярності.
2. Сподіваюся, вам спаде на думку кращий план.
3. Цей прилад з'явився наприкінці 20 століття.
4. Він зробив це навмисне.
5. Про це (питання) не йдеться
(це питання не розглядається).

- A That is not the point in question.
- B He did it on purpose.
- C I hope you can come up with a better plan (than this).
- D Unfortunately, this idea failed to catch on.
- E This device appeared in late 20th century.

Exercise 3. Render the following passage into Ukrainian.

A new philosophy of conceiving scientific theory is about to be born in the so-called computer laboratory, which, so to speak, stands half-way between theory and experiment.

Supercomputers will allow a whole new methodological research approach dealing with reformulation of the basic principles of economic and social systems. Thanks to these «artificial brains», it will soon be possible to model present and future reality with a degree of accuracy previously unseen.



THE LANGUAGE OF COMPARISON



X is (can be) compared to (with) / likened to X X можна порівняти з / порівнюють із

to resemble / to remind / to look like / to be reminiscent of / to be associated with
нагадувати, бути схожим на

to be typical of бути типовим (гля)

think of ... / imagine... / visualize уявіть...

similarity / semblance / similitude / verisimilitude подібність

similar to/akin to/ analogous (to)/ identical to/(with)/ comparable/ alike/ just as/ as...as/ as/ like подібний (го); такий, як; схожий на

*similarly/ likewise/ equal(ly)/ in the same way/ in an identical manner/ in like manner/ in this vein/ in a related vein/ by analogy/ by extension / *by the same token* аналогічно; подібно до

pretty (very much) the same/ in much the same way майже однаковий (однаково)

to have much in common with мати багато спільного

precisely/exactly/ just the same абсолютно такий самий

**as... as ever / as always* такий же (така ж) ... як і завжди

synonym синонім

synonymous with синонімічний

synonymy синонімія, подібність

● approximate comparison

almost /quite/ pretty/rather/ fairly [+Adjective] майже

nearly/ approximately/ roughly приблизно

relatively/ essentially/ somewhat гецо

** more or less / *to a greater or lesser extent* більшою або меншою мірою; більш-менш

**to be [+Adjective] enough (for) (e.g. the equipment is good enough for our experiment)*

in some way певним чином

(some) kind of / sort of / type of /

something like/ much like/ something of/ things like туну, (щось) на зразок

to have something in common (with) мати гецо спільне

**so to say / so to speak* сказати б; так би мовити

**of that type (kind / ilk) / that kind of things* такого туну

**a B of an A (an A is like a B)* А схоже на В («просто не А, а В»)

AFFIXES: *-ish; -ine; -ian/ean; -ous; -esque; -like; -shaped; -style; -thin / -thick;*

-colored; -looking; ('s) manner; near- (e.g. greenish; Balzacian age glasslike; statuesque; labyrinthine; manuscript-style; pomaceous taste; L- shaped; honey colored; paper thin; lecturer's manner; near-Biblical)

SensAble Technologies, Inc. offers a device that looks like a pen attached to robotics arm.

Both issues are equally important.

In an identical manner, we see that the law holds.

We support subject areas typical of schooling.

It is also reminiscent of pickle juice.

It is a box of an office.

Just look at that sort of three-legged stool of government, industry, and academia!

It's an extremely robust, ~~fault~~-tolerant, swarm-like kind of intelligent system.

NOTE.

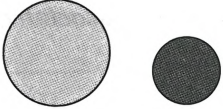
AS or LIKE?

Use **like** before nouns or pronouns, but if they are followed by verbs, use **as**:

He behaves **like you**.

He behaves **as you do**.

● **comparative degree**



unlike на вігміну віг

to be (markedly) different from... (значно) вігрізнятися віг

to differentiate from вігрізняти; розрізнявати

less (than) менш(е) (а)ніж

more (than) більш(е) (а)ніж

(to be)*no more than не більше ніж; не перевищувати

considerably / significantly/substantially/markedly значно; істотно; суттєво

well over / well above значно більше

to a lesser extent меншою мірою

slightly / a bit / somewhat гещо

to a greater extent більшою мірою

***far more** значно більше

***(or) better yet** (або) навіть ліпше

more and more усі більше й більше

Such argument(s) is/are

very much the same as
considerably/substantially different from
less pronounced than
more convincing than
better than

the abovementioned one(s).

This technique should be differentiated from the previous one.

***to out[+Verb]:** краще ніж e.g. «to outperform somebody» means «to perform better than somebody»

Our team outplayed theirs.

● **double comparative** чим... тим...

The more... the more...

The less...the less...

The more... the better

The sooner...the better

The -er A...the -er B

too ... to be +Participle II (за)надто ... щоб (аби)...

The less we study, the less we forget.

The more books you read, the better.

Sound comes in waves, and the higher the frequency, the higher the pitch.

The problem is too complex to be solved right away.

● **superlative degree**

(the/a) **most**

the **-est** най-... з усіх

(the) **best** Cf.: **second best** (not the best)

***by far** мабуть

the **best possible** (of all / than ever / I've ever seen / ever) найкращий за усіх

*as [+Adjective] as it gets

as good as it gets *краще не буває*

● **prospective and retrospective comparisons-evaluations**

A *more moderate*... *більш виважений*

No *less important*... *не менш важливий*

(Still) *another / a second (equally valid)*... *ще один (так само правомірний)*

*not the least *i, нарешті, не менш важливий*

This is by far the best approach.

A more moderate position is that a coherent theory of language would be enhanced by evidence from second language data. (IMPLICATION: the previous position was too strong, the coming one is more moderate — as compared to the previous one).

Surely the most widely noted confrontation of 1998 was that between U.S. antitrust prosecutors and Bill Gates. But no less important are the ongoing arguments between Sun Microsystems Inc. and competitors like Hewlett-Packard Co. Then, too, in operating systems, there is ongoing saga of NT versus Unix — and Unix offspring like Linux. And not the least, there is the race with time itself.

+/- *another +/- / a second*

The biggest challenge to the robotics field is to find the proper balance between human-associated systems and fully autonomous, robotic systems. Another challenge is to design robots that can work in close proximity to humans.

Let us clear up a thing or two about the word **hacker**. Raymond uses this word in its positive sense of a software or hardware enthusiast who enjoys exploring the limits of code or machine. However, there is a second, equally valid sense that refers to someone who breaks into or disrupts computer systems or networks.

NOTE.

Comparatives and superlatives of adjectives:

1. Adjectives of **one syllable** and adjectives of **two syllables** add **-er** and **-est**.

small — smaller — the smallest

2. Adjectives of **three and more syllables**, as well as adjectives of **two syllables** ending in **-ic; -re; -ful; -less; -ate; -ish; -ent; -ous; -ing; -gn; -mn**, and also adjectives **guilty** and **eager** take **more** and **the most**.

challenging — more challenging — the most challenging

IRREGULAR FORMATION

Positive	Comparative	Superlative
good	better	the best
bad	worse	the worst
little	less	the least

many		more	the most
much			
far		farther further	the farthest (about distance) the furthest
old		older elder	the oldest the eldest (especially about siblings)

Exercise 4. Render the following sentences into Ukrainian.

1. This year's show (also in Detroit) promises even more displays in this vein.
2. There are far more possibilities for those who have a good command of English.
3. Likewise, we must introduce in-vehicle intelligent transportation technology.
4. Similarly, it has two inputs also.
5. They have markedly different approaches to the problem.
6. By the same token, it also set a record.
7. Chapter 5 is much less successful. It contains interesting nuggets, but does not manage an integrated argument.
8. China's arable land is only 15 percent of its total land area. By comparison, the United States has 19 percent, Nigeria 31 percent, and Germany 34 percent.
9. For markets to work, you would need to establish some type of ownership right over the data.
10. You can have some kind of intrinsic slave, a tool that you use to explore the Internet.
11. It is not synonymy, but near-synonymy.
12. It is put on the stage, so to speak, and done with theatrical gestures.
13. Most regions of the mantle exhibit corkscrew-like particle motions.
14. Such devices are handy enough systems for detecting chemicals.
15. Sensing also offers another great potential advantage.
16. That's why the Internet can become this sort of ultimately plastic infrastructure.
17. Such specialists are more popular than ever.
18. The Feynman Lectures on Physics is a wow of a book.
19. The field lay relatively dormant.
20. The great majority of the world's neologisms never see print and vanish like frost in the sun before anybody takes notice of them.
21. The investigations could only have been done in the university research laboratory kind of environment.
22. The result is far better than most designs of its ilk.
23. The two approaches are essentially the same.
24. These facilities accelerate the refinement of existing code into more efficient code by removing redundancy.
25. They resemble galaxies.
26. Dinah certainly outdoes Billie, and is akin to Nancy.
27. This is a most excellent and thought-provoking book guaranteed to enrage the reader.
28. This is as typical as it gets.
29. This technique is similar to the Global Positioning System.
30. We expect the current to become, in some way, restricted to a smaller cross-section.
31. The odour profile is woody-earthly (mostly woody and slightly earthy), there is a touch of spiciness and a pineapple-like fruitiness; after a few minutes it becomes piney-resinous and celery-like, loosing some dryness and becoming sweeter.
32. You could sort of order e-mail that you receive.
33. Take Venus. It's surface at altitudes above 50 km is actually very Earth-like, with pressure levels similar to ours.
34. To visualize this detector, think of Russian nested dolls.
35. They are blamed for the problems of telecommunications industry, and, by extension, the world economy.
36. The facility has brought some semblance of order.
37. Best solution: ask an expert. Second-best solution: ask somebody who knows where to find the answer!
38. Last year our organization reached the highest ever membership of approximately 300 000 members worldwide.

39. The newly restored monument was unveiled a few years later, as vibrant and inspiring as ever.

40. Sometimes «good enough» is never enough!

41. This paper might be agreed to be «sort of like a review» or «to have something of a review-like quality».

42. It smelt akin to juniper. Bottle-wise, I really like the new perfume. Scent-wise, I think this fragrance is quite «generic».

43. Are you working with a kind of abrasive like a pumice stone or a sandpaper or something like that?

Exercise 5. Fill in the blanks.

1. The higher the altitude, the ... air.

- a. rarer
- b. rarer is
- c. is rarer
- d. rare

2. I'm glad that you arrived

- a. safe
- b. safety
- c. and safe
- d. safely

3. It penetrates more deeply into water than ... into soil.

- a. it does
- b. does it
- c. do
- d. does

4. He became ... interested in the project.

- a. most
- b. more and more
- c. the most
- d. a most

5. ...his students, professor Smith always comes on time.

- a. Unlike
- b. Similar
- c. Also
- d. The last but not least

6. This is the most sophisticated device

- a. I can see
- b. I saw
- c. I have ever seen
- d. I have seen

7. Our instructor is different ... theirs.

- a. from
- b. than
- c. to
- d. as

8. The computing resources turned out to be ... to handle the new content.

- a. too inefficient
- b. too inefficiently
- c. and inefficient
- d. inefficiently

-
9. The new format is considerably
- best
 - better
 - the best
 - good
10. The report was striking, both in its findings ... in its language.
- also
 - although
 - but also
 - and
11. The best-... of these procedures is the device of «double-translation.»
- know
 - knows
 - knowing
 - known
12. Our decisions could ... the company.
- significant help
 - significantly helps
 - significantly help
 - to significantly help
13. There are other ... between the approaches taken.
- difference
 - different
 - differences
 - differently
14. It will be ... improved.
- considerably
 - considerable
 - considering
 - consider
15. It grew rather more ... after the middle of the century.
- quick
 - quicker
 - the quickest
 - quickly
16. The fluid has ... the same index of refraction as the waveguide.
- nearer
 - near
 - nearly
 - the nearest
17. The higher the modulation rate, ... the spectral line.
- broader
 - the broader
 - the broad
 - broad
18. Users ... view a short preview than the entire movie.
- are more likely
 - is it likely to
 - it is more likely
 - are more likely to

19. The speed of light can be changed only slightly (... than 0.01 percent).

- a. less
- b. fewer
- c. few
- d. at least

20. more complex are the 3-D switches.

- a. Substantial
- b. Substantially
- c. Substantial is
- d. Substantially are

21. ... more useful is word recognition.

- a. Many
- b. The most
- c. Most
- d. Much

22. It is ... -growing operating system.

- a. fast
- b. faster
- c. fastest
- d. the fastest

23. When in Rome, do ... the Romans do.

- a. like
- b. as
- c. likewise
- d. as if

24. I think there are ... more than five options.

- a. neither
- b. not
- c. nor
- d. no

25. Wash it in commercial machine in water ... exceeding 95°C.

- a. nor
- b. not
- c. not just
- d. no

CONTRASTING IN ENGLISH

Basic contrast	Specific contrast	Afterthought or digression
<i>However, (а) проте, однак; однак</i> <i>Despite / In spite of /Regardless (of)</i> <i>незважаючи на</i> <i>But / Yet але; проте</i> <i>(But) anyway (але) у будь-якому випадку</i> <i>Instead, / Instead of/ Rather than замість (цього);</i> <i>а не; натомість</i> <i>Rather, скоріше, рідше</i> <i>(Yet) conversely/ Alternatively, / By way of</i> <i>contrast,/In (sharp) contrast /On the contrary/</i> <i>Otherwise /Contrariwise навпаки, на противару</i>	<i>; however,</i> <i>, but</i> <i>, instead</i> <i>, even if</i> <i>, even though/</i> <i>although</i> <i>, albeit</i> <i>, at the same time,</i> <i>, but rather...</i> <i>rather than/</i> <i>instead (of) /in lieu of</i>	<i>,however.</i> <i>, though.</i> <i>nonetheless.</i> <i>anyway.</i> <i>regardless.</i> <i>otherwise.</i> <i>after all.</i>

Basic contrast	Specific contrast	Afterthought or digression
<p>Yes/Admittedly/Clearly/ Naturally/Certainly/ Of course(,)... but.. так, ... але...</p> <p>It should be noted, however, ... однак (водночас) слід зауважити</p> <p>On (the) one hand, ...On the other hand</p> <p>At one extreme...At the other extreme/ end of the spectrum / (But) then again, ... З одного боку... з іншого...</p> <p>At the same time, водночас</p> <p>While /Whereas / Whilst у той час як</p> <p>Even if /Even though навіть якщо</p> <p>Although/Even though хоча</p> <p>Nevertheless,/ Nonetheless, тим не менше</p> <p>Notwithstanding (the fact that) незважаючи на (те (,) що)</p> <p>Even so, / All the same,/ Still, /After all/ For all (of that) I все ж; зрештою</p> <p>Unlike на відміну від</p> <p>The exact opposite абсолютно протилежний</p> <p>Arguments against аргументи проти</p> <p>A contrasting view /Opponents протилежний погляд</p> <p>Not only...but also не лише..., але й...</p>	<p>, on the other hand,</p> <p>, by way of contrast,</p> <p>, in contrast,</p> <p>, on the contrary,</p> <p>unlike</p> <p>different from</p> <p>, despite</p> <p>, in spite of</p> <p>, nevertheless</p> <p>nonetheless</p> <p>, otherwise</p> <p>, still</p> <p>and/or</p> <p>not only..., but also</p> <p>partly...partly...</p> <p>contradicting...</p> <p>суперечливий</p> <p>, regardless (of)</p> <p>*versus / vs./VS</p> <p>/against</p> <p>на противагу</p> <p>*pros and cons</p> <p>за і проти</p> <p>*vice versa навпаки</p>	

These two concepts are different, even though they use the same word.

It seems likely that it will be US (rather than UK) English.

New wired network «bandwidth» is created when new physical resources (cable, fiber, routers etc.) are added to the network. In sharp contrast, wireless communication requires sharing a finite natural resource: the radio frequency spectrum.

Over the years the electronics industry has deservedly won a name for environmental leadership. Even so, much remains to be done.

We have considered all pros and cons.

● **MIND THE FOLLOWING MODELS:**

on the one hand/at one extreme... on the other hand/at the other extreme...

At one extreme, you could simply use the class name as the class descriptor. At the other extreme, you could use the entire class text as the class descriptor.

● **Model**

YES...BUT and its equivalents:

Yes / Certainly / Sure(ly) / Of course ... / (on the one hand) ... Double negation (on the one hand) ...	But / Nevertheless / Still But (on the other hand/at the other extreme) However (on the other hand)
--	---

Certainly, there will be users who receive much more than 2 Mbytes/day. Nevertheless, we take this number as a reasonable guide to the average amount of traffic delivered to a typical user over a long period of time.

Yeah, sure, of course, there was no lack of enthusiasm for these changes as well. But don't let that divert you from the main thing.

In communities where only two or three languages are in contact, bilingualism (or trilingualism) is a possible solution, for most young children can acquire more than one language with ease.

But at the other extreme in communities where there are many languages in contact, as in much of South-East Asia, such a natural solution does not readily apply.

It isn't that there aren't great achievements today. However, it does seem that individuals stand out to a lesser degree than they once did.

• Model

Negation / (on the one hand)/ ... on the other hand+Negation

Thus it seems we cannot deny the existence of an autonomous grammatical component to language. On the other hand, we do not want to claim that grammar includes everything there is in language.

• Model

while/ whilst (on (the) one hand) ... Negation (also / on the other hand)... :

While he contends that language form can and should be examined in terms of form alone, he also argues that grammar is not monolithic.

• Model

It should be noted, however, (and its equivalents)

It should be noted, however, (and its equivalents)

Водночас (однак) слід зазначити

<i>indicates an opposition or contrast with the statement just before it;</i>	<i>attracts attention</i>	<i>a hedge to get the author "off the hook" if the statement isn't completely correct</i>
---	---------------------------	---

It should be noted, however, that this is not a limitation.

However, it should be mentioned that this technology is quite well developed.

It should be pointed out, though, that even multispeaker surround systems have a sweet spot.

• Model

Of course / Clearly / Admittedly + negation

Of course / Clearly / Admittedly

<i>concession and contrast</i>	<i>intensification, attraction of attention</i>
--------------------------------	---

Of course, some of our linguistic knowledge is not, strictly speaking, acquired.

The results of our study, though admittedly taken from a smaller corpus, are quite different from theirs.

CONVEYING ADDITIONAL INFORMATION

Besides/aside from (о)крім цього

also / and also також

not only/ not just (on the one hand)...but also (on the other hand) не лише...але й...

(but) in addition/ additionally, moreover/ what is more/

*plus/ so too/ *in a complementary vein*/ in order to supplement... на додачу, більше того*

both...and... як... так і ...

as well/ together with / alongside/ along with також

as well as а також

(yet) another/one more/a second ще один

(the) next наступний

further/ furthermore/ further still/ further downstream галі*

what is more більше того

**in turn у свою чергу*

**not to mention/ *to say nothing of/* let alone не кажучи вже про*

*not to be left out не сліг забувату і (про)

*for that matter принагідно

*for one thing... for another... по-перше... по-друге...

*the listing goes on перелік можна проговорити

just as.../ so(,) too так, як і

(,) either також ні (не)

In fact/ in effect/ indeed/ actually/ in truth/ as a matter of fact власне кажучи; насправді

Of course; clearly так, звичайно; авжеж

In addition, other transmission parameters may be varied as well.

This holds true for both established disciplines and nascent fields.

Within just the last 24 months, myriad audio, video, and cellular products have equipped people not only to tote around data, images, and audio, but in addition to swap the devices between various types of hardware. Besides, for certain applications, flash memory cards often have shorter access time.

Authenticity, broadly defined, deals not only with the source and quality of the text but also with the way users learn and perceive the text.

Word processors are very useful — they can help writers rearrange word order, not to mention checking spelling.

Just as «nano-» replaced «micro-» as a prefix standard, so too has «hyper-» replaced «super-».

Try not to talk too much in conversations, but don't be silent, either.

In addition to — signals a new subject

Further still — signals adding a related subject

In fact / In effect/ Indeed/ Actually/In truth/ As a matter of fact

<i>indicate additional information</i>	<i>indicate intensification, attraction of attention</i>	<i>may also indicate an opposition or contrast</i>
--	--	--

In effect, international testing cannot begin until next year.

In fact, it is not uncommon to hear researchers advocating such techniques.

NOTE.

Phrases with «and»; «both...and» take a PLURAL verb:

(Both) Mary and Michael are students.

Phrases with «in addition to»; «as well as»; «together with»; «along with»; «accompanied by» take a SINGULAR verb:

The tutor as well as his students is watching the movie.

Phrases with «not only ... but also ...» take a EITHER PLURAL OR SINGULAR verb depending on the subject nearest to it:

Not only professor, but also his doctoral students are attending the conference.

Not only doctoral students, but also their research advisor is attending the conference.

Exercise 6. Render the following sentences into Ukrainian.

- Purists prefer the terms «cracker», «white-hat hacker», «ethical hacker» and «samurai» being applied to those who use their computing skills for good rather than evil.
- However it should be noted that the process also takes into consideration certain adjustments and modifications too problematic under any circumstances to be deemed acceptable.
- Linguists, however, have been slow to address this research question.
- This will require the use of advanced heating techniques and/or other advanced approaches.
- We still ended up building the instrument for pretty much the same price we could build it for, though.

6. These aren't absolute binary issues, however.
7. For all of that, however, it will still come down to a single chip.
8. But anyway, we're now losing 30 percent during our peak hours.
9. Conversely, although the whole band occupied by the transmission is «owned» by other systems, much of it is unused at any given time.
10. In general, though, a methodology will only be as good as the designer's understanding of the problem.
11. This chapter does not present another approach to the study of language use. Rather, it examines intercultural miscommunication.
12. Yes, people talk about «curiosity-driven research» — research motivated solely by the researcher's desire to understand the natural world. I'm sure there's some of that, but an awful lot of research is need driven, motivated by a problem domain.
13. Yes, there's plenty of inequity with respect to access. Still that figure is incredible for those who can remember when the Internet was the exclusive province of well-endowed university research centers.
14. No one was in control. Yet somehow, things did get coordinated pretty well.
15. This is not the main issue, although we shall address that briefly in the last section.
16. It is probably one of the most significant steps. However, this is just part of the solution, albeit a very important part.
17. Many of these schools don't have an adequate infrastructure and electrical capacity for computers, let alone high speed connections and networks.
18. High-speed rail is also benefiting from technology improvements and built-in intelligence.
19. Not to be left out, magnetic levitation (maglev) trains are experiencing a sudden rejuvenation.
20. In some sense, business, and, for that matter, other organizations, are all about coordinating the work of different people.
21. In turn, automation is leading to so-called smart manufacturing techniques.
22. It should also be noted, however, that a closed file can be re-opened if necessary.
23. Although some could argue that the scope of protection of a patent application is unclear, the fact remains that a company which plans to file for patent protection on its contribution should at least disclose the fact.

Exercise 7. Fill in the blanks.

1. They can not only support this enterprise, ... help drive it.
 - a. and also
 - b. together with
 - c. but also
 - d. in spite of
2. Any major change has both upsides ... downsides.
 - a. too
 - b. also
 - c. and
 - d. but also
3. On the other ..., those who lack talent can be good «team-players».
 - a. side
 - b. part
 - c. place
 - d. hand
4. Possibly more of the cross-connects would be needed
 - a. well
 - b. as
 - c. as well
 - d. as well as

5. The workshop was ... professionally useful and socially pleasant.

- a. both
- b. not only
- c. and
- d. as well

6. It ... noted, however, that not all options might be available every year.

- a. should
- b. shall be
- c. should be
- d. be

7. Regardless ... our approaches, we must recognize that addressing the technical challenges of modern security and privacy will be a long march.

- a. from
- b. at
- c. to
- d. of

8. This problem alongside the other equally important issues mentioned in the previous chapter ... of prime importance.

- a. is
- b. are
- c. has
- d. have

9. The procedures in question can be used in physics. ..., some of them can be used in astronomy.

- a. As well as
- b. Moreover
- c. Not only
- d. Together with

10. Not only Michael, but also his colleagues ... arriving tomorrow.

- a. were
- b. was
- c. are
- d. is

NEGATION IN ENGLISH

is basically about cushioning negative and categorical statements:

The author, evidently a successful undergraduate instructor and television entertainer, is living proof that success with the spoken word does not necessarily carry over to writing.

IMPLICATION: the author is not a successful writer, though he may be a success in other spheres.

Yes, it works in practice, but not in theory.

At first glance, it appears that the loss introduced between noise source and test device by the tuner would be a drawback. In fact, this is not the case.

Unfortunately, the situation looks potentially unwinnable.

Unhappily, it is also true that such detectors may be defeated if minor alterations are made to the data.

Frankly speaking, I don't like the approach proposed.

It may be impossible, or at least exceedingly difficult, to directly implement the natural language policy.

Any action taken in response to that is likely to be ineffective.

A busy teacher might well argue that this methodology is inappropriate.

There is a jot of truth in it.

It is an open question.

MIND the difference between **scientific** and **popular** senses:

<i>Scientific English</i>	<i>General English</i>
We <u>had no</u> special equipment. They've answered all the questions <u>save / except</u> two. He was <u>not wealthy</u> . No.	We <u>didn't have any</u> special equipment. They've answered all the questions <u>except</u> two. He was <u>not wealthy at all</u> . No. / Nope.

MIND the specificity of the so called DOUBLE NEGATION:

It is not impossible ~ ... (might ~ 5-10% possibility) VS. It is not uncommon... (emphasis) <i>Існує ймовірність</i>	(It is common) <i>Зазвичай</i>
It is not unlikely... <i>Не схоже</i>	It's not that we are doing nothing... <i>Неправда, що ми нічого не робимо (ми щось робимо).</i>

• MIND

EXPLICIT VS. IMPLICIT

NEGATION

not identical *неоднаковий*
not for the first time *не вперше*
no good *невдалий*
to underrate *недооцінювати*
to disregard *не зважати на*
to overlook /to miss *пропускати, не бачити*
to overshadow (make appear less important)
робити менш вагомим
atypical *нетиповий*
misunderstanding *непорозуміння*
malfunction *несправність*
illogical *нелогічний*
unfair *несправедливий*
unfortunately/unhappily/alas *на жаль*
unintentionally *ненавмисно*
X-free (to be free from) *той, що не містить X*
X-proof *той, що запобігає гії X*
*no more than *не більше ніж*
*not a jot of (*ні /ані*) *на йоту; ніскільки;*
(a)нітрохи
rather than/instead of *а не*
barely (any) / almost no *майже нічого/*
легве-легве
It is unlike(ly) *не схоже, що*

all but about 1 percent *усе, окрім 1 відсотка*
to fail (to) *не удаватися, не виходити*
to escape detection /to be below detection
не бути визначеним
to be as good as *бути не гіршим за*
to be less than *не перевищувати*
to be beyond the score *виходити*
за межі/рамки
to leave room for improvement *бути*
небездоганним
to be far from *бути галеким від*
straightforward *нескладний*
second to none *непересічний*
other than *не такий*
out of control *некерований*
yet-to-be-specified *невизначений*
complimentary / free (of charge)
безкоштовний, без(о)платний
to be still awaiting *все ще очікувати на*
the other side of the coin / *flip side
зворотний бік медалі
myth *міф (неправда)*
seemingly / deceptive(ly) *такий, що лише*
вигається
compromised *невдалий*
*a jot of *йота; небагато*
*it should be borne in mind *не слід*
забувати
а «mistake» *так звана помилка (насправді*
не помилка)
*I wish ... / *If(s) *якби; якби-то; якщо*

«BOTH YES AND NO» MODELS

may or may not *може бути, а може й ні*

it depends / some say yes, others say no / both yes and no *і так, і ні*

in part...in part / a mix *частково... частково...*

to a greater or lesser extent / more or less *більшою або меншою мірою*

only time will tell / an open question (we don't know the answer to it)

stalemate *nam*

rhetorical questions: Eureka? І що, це справді відкриття?

This exception, although important, is beyond the scope of this article.

In any case, at least in terms of numbers, government representatives do not play a major role anymore.

This is deceptively large.

It fails to satisfy the necessary conditions.

This is not an easy problem to solve.

It isn't that there aren't great achievements today.

If portable applications were the only problem, there might be a better payoff for solving battery problem.

Some important parts still await final lines.

We barely understand it now.

It limits this approach to only a handful of applications.

However, cost reduction has recently achieved a plateau.

This is a nice sounding hypothesis, but does it withstand critical quantitative scrutiny?

While the LAN offers many advantages in terms of data access and flexibility, the other side of the coin is increased vulnerability.

We had to resolve the stalemate.

FAKE NEGATION УДАВАНЕ ЗАПЕРЕЧЕННЯ

(«на перший погляд здається, що..., але...»)

It might seem/appear/be anticipated (at first)

At first glance/ initially

On the surface

One might think

It is tempting to

Seductive(ly)

Seemingly/supposedly/presumably/allegedly/reputedly/ostensibly

Ideally/In the ideal situation/ Under ideal circumstances

In the ideal (perfect; dream) world / In the best of all worlds

For the sake of our analysis

Assuming/ with the assumption of

Theoretically/In theory/From a purely theoretical point of view

Intrinsically

... but / however

... in reality / in actuality/
in the real world/ realistically
however, (if)

in practice / practically

...

This might seem like stating the obvious, but it is not, for the notion of «special role» has many facets.

It is now very tempting to conclude that we understand the process.

Theoretically, the function of output is closely related to the previous issue.

Exercise 8.

Render the following sentences into Ukrainian.

1. Nothing stands still.
2. Too often, brainstorming, a classic creativity-enhancing technique, fails to produce anything satisfying or practical.
3. The predecessor to the United Nations, the League of Nations, was dismantled after several years of unsuccessful operation.
4. It is tempting to believe that our main focus ought to be on building more secure and reliable

systems in the first place. However, it is important to recognize that most engineering designs are based on assumptions, models, and paradigms that do not scale well.

5. It is tempting to argue, in cases like this, that there must be some subtle difference of meaning.

6. Very often, undoubtedly, such differences can be satisfactorily explained. But this is not always so.

7. This is difficult, but not impossible.

8. For the sake of our analysis, we assume the teams have measurable strengths. In reality, we understand that rankings are always controversial.

9. From a purely theoretical point of view such architecture will have lower capacity. However, the primary disadvantage of a this architecture is a practical, not theoretical, limitation.

10. Ideally, all language in classroom would be used cooperatively by students and teachers. Realistically, however, instances of conflict occur in classrooms.

11. At first glance, this requirement seems sensible.

12. In theory, unabridged dictionaries contain every word accepted for use in the English language. In actuality, an unabridged dictionary cannot contain every word because new words are created daily.

13. I wish I could say otherwise, but I think the major push has been and will continue to be Moore's law.

14. Further waiting would be unlikely to improve results.

15. Perhaps it was just pure enthusiasm. Or perhaps not.

16. A supposedly new cryptography system got the attention in the last few weeks.

17. The country will receive 500 000 tons of fuel, ostensibly to compensate immediately for a supposed energy deficiency.

18. This is a seductively easy and cheap method of covering vacancies.

19. If there is no limit to the changes I can make to my textual representation, is there actually a «real me»?

20. Our «normal» view, however, is actually a contorted one.

21. Unfortunately we are not told anything about the source of his data.

22. Alas, such is the cycle of life.

23. Some important parts still await final lines.

24. Do deficits lead to high interest rates? Some say yes, others say no. Are deficits inflationary? Some say yes, others say no. Are large deficits a roadblock to economic expansion? Some say yes, others say no.

25. Interestingly, both approaches support the viewpoint that this seemingly neutral element is an important one.

26. Alas, the truth is that I had only a half-baked idea, a shadow of a theme.

27. And for the most part wind does not seem to alter the landscape either.

28. We validly would have chosen more primitive rules. Doing so gives us the benefit of simpler rules of operation, but has the undesirable effect of moving the model another level away from the real system.

29. This cannot be definitively determined with the data at hand.

30. A situation is generally viewed as unacceptable.

31. Our linguistic ability rests primarily, but not exclusively, on our linguistic knowledge.

32. This situation, to put it mildly, creates opportunities for waste.

33. It's a term that is almost content-free.

34. Perhaps we should consider the possibility that we do not yet have a complete understanding. We barely have it now.

35. Will those differences be enough? Only time will tell.

36. The mechanism was not (at that time) widely deployed across the Internet. As a result, the load was often not uniformly balanced across the site.

37. There are two kinds of «experts» in question — the «PR experts» behind the scenes and the «independent» experts paraded before the public, scientists who have been hand-selected, cultivated, and paid handsomely to promote the views of corporations.

38. At least one previous reviewer seems to have missed this fact.

39. This isn't just a list of information, there are actual pointers for action in here.

40. People who prosecute patents are interesting. This myth does not even justify an explanation. Anyone who can write patent claims deserves kindness, not ridicule.

41. People who eat at their desks think that they are getting more done. Nope. They are just getting tired.

42. Are you working with a kind of abrasive like a pumice stone or a sandpaper or something like that?

43. Identifying a specific author or the source of certain Web sites is not always possible.

44. «In my salad days — and even, I guess, in my main course days — I used to wonder what retired people did with their time when they were no longer spending 50 hours a week in the office and bringing work home at night. Now that I am in my dessert days, I am finding that, lo and behold, I am as busy as ever and have quite a backlog of things to be done in the future» (Lyle D. Feisel).

Exercise 9. Render the following texts in Ukrainian. Pay special attention to specific negation devices.

A. Heeger, together with MacDiarmid, was already looking for nonmetallic conducting materials several decades ago. Yet the discovery of conducting polymers «was in fact a mistake», he told Spectrum. Shirakawa, investigating polymer properties in general in the early '70s, «instructed a student to use thousand times less of a catalyst. The student was Korean and his Japanese was less than perfect», Heeger continued, and so he made a «mistake». Instead of an improved plastic, Shirakawa obtained a silvery film that conducted electricity weakly. Later, Shirakawa joined Heeger and MacDiarmid in the United States, and they developed the first polymers with near-metal conductance by doping the polymer with other materials. Conducting polymers was a huge surprise, and an important result.

B. In an electronic mail debate on the risks of the computer revolution, Mitchell Kapor, founder and former chief executive of Lotus Development Corp., Cambridge, Mass., commented: «Risks, what risks? Computers are here to benefit all personkind :-)» But debate participants who did not notice the smilie :-) got into a heated debate over this remark. It was interrupted only when Kapor revisited the conversation and said, «The typographic glyph :-) which I included at the end of my comment is the on-line equivalent of an ironic or sarcastic tone of voice. It is intended to convey that the writer really means the opposite of what preceded. What I was saying was that there are risks in computers.»

Exercise 10. Read the passage and answer the questions about it.

Millions of visitors year round find their way to Niagara Falls. They are soon captivated by the natural beauty of the Falls themselves and the surrounding parklands that lie parallel to the Niagara River from Lake Erie to Lake Ontario. The Niagara River between Lake Erie and Lake Ontario is really a body of water flowing between the two lakes. Located on the Niagara River along the border between the United States and Canada, Niagara Falls actually consists of two falls, the American Falls and the Horseshoe Falls. The former is on the U.S. side of the border, in the State of New York, while the latter is on Canadian side. Most water in the Niagara River flows over the Horseshoe Falls, which is more impressive of the two falls.

Skyline Tower is one of Niagara's most famous landmarks where the «yellow bug» elevators glide the visitors smoothly to the Observation Deck, 775 feet above the Falls. Sightseers can also ride steamers «The Maid of the Mist» that come close to the boiling water of the Falls, or view them from parks on both sides of the river.

Rainbows can always be seen in the mist at Niagara Falls on bright sunny days. About 10 million people visit the Falls each year, most during the summer tourist season.

1. What is the best title for the passage?

- a. Popular attractions
- b. North America
- c. National parks
- d. Two spectacular waterfalls

2. Which of the following is entirely on the U.S. side of the border with Canada?

- a. Horseshoe Falls
 - b. Niagara Falls
 - c. The American Falls
 - d. the Niagara River
3. It can be inferred from the passage that Horseshoe Falls
 - a. is less impressive fall
 - b. is the larger of the two falls
 - c. is the smaller of the two falls
 - d. is in the state of New York
 4. According to the passage, where can people watch the falls?
 - a. From parks, boats, and Skylon
 - b. From airplanes
 - c. From trains
 - d. From cars
 5. It can be inferred from the passage that Niagara Falls
 - a. generates hot water
 - b. is only impressive during the winter tourist season
 - c. can be viewed from only one side of the Niagara River
 - d. is a unique natural wonder of the world

Exercise 11. Read the passage and answer the questions that follow.

garbage — Synonyms: litter, trash, refuse, junk укр. сміття

Garbology was a word invented by A.J. Weberman. Its primary academic meaning now is the study of refuse and trash. Garbage is an unavoidable fact of life, produced by all societies since the dawn of civilization. The studies of garbology and archaeology often overlap, because fossilized or otherwise time-modified trash is quite often the only remnant of ancient populations that can be found. Nowadays garbology is an academic discipline that has a major outpost at the University of Arizona, long directed by William Rathje (the project started in 1971). It is a major source of information on the nature and changing patterns in modern refuse. One of the findings is the actual composition of the American waste — over 40 percent of the volume of waste is paper, not glassware, metal items, wood, styrofoam containers and cups, plastic bags, wrappers etc. Another result is that middle-income families waste more food than upper- or lower-income families. In addition, Rathje's research uncovered some misconceptions about landfills. The scientist has arrived at some important conclusions. In particular, it was revealed that the rate of natural biodegradation is far slower than had been assumed. Industries wishing to demonstrate that refuse originating with their products is (or is not) important in the trash stream are avid followers of this research.

(After Wikipedia)

1. What is the main topic of the passage?
 - a. Archaeology research
 - b. Natural biodegradation
 - c. The composition of trash
 - d. Some garbology findings
2. According to the passage, the most common waste is
 - a. plastic wrappers
 - b. wooden objects
 - c. styrofoam cups
 - d. paper
3. More food is usually wasted by
 - a. upper-income families
 - b. lower-income families
 - c. industries
 - d. middle-income families

-
4. It can be inferred from the passage that garbology
- was popular worldwide in 1971
 - is a somewhat stagnant field
 - is a vibrant field with prospects for the future
 - has nothing to do with archaeology
5. We can conclude that
- industries are not very interested in garbology studies
 - industries are very interested in garbology studies
 - industries are indifferent to garbology studies
 - industries used to be interested in garbology studies
6. The underlined word primary could best be replaced by which of the following:
- principal
 - principle
 - primitive
 - primordial
7. The underlined word overlap could best be replaced by which of the following:
- cover each other partly
 - examine thoroughly
 - have too high an opinion of each other
 - do not notice each other
8. The underlined word Nowadays could best be replaced by which of the following:
- Currently
 - In the past
 - Lately
 - Recently
9. The underlined word discipline could best be replaced by which of the following:
- aspect
 - facet
 - order
 - field
10. The underlined word findings could best be replaced by which of the following:
- achievements
 - results
 - topics
 - accomplishments
11. The underlined word actual could best be replaced by which of the following:
- inevitable
 - real
 - current
 - important
12. The underlined word Another could best be replaced by which of the following:
- Any other
 - The other
 - Other
 - One more
13. The underlined phrase In addition, could best be replaced by which of the following:
- Besides,
 - On the contrary,

- c. Quintessentially,
- d. On the whole,

14. The underlined word uncovered could best be replaced by which of the following:

- a. found out
- b. outlined
- c. discussed
- d. overviewed

15. The underlined phrase In particular, could best be replaced by which of the following:

- a. Truthfully
- b. Basically
- c. Actually
- d. Specifically

UNscientifically speaking...

A woman was sitting at a bar enjoying an after-work cocktail with her friends when an exceptionally handsome young man entered. He was so striking that the woman could not take her eyes away from him. The young man noticed her overly-attentive stare and walked directly toward her. Before she could offer her apologies for being so rude for staring, the young man said to her, «I'll do anything, absolutely anything, that you want me to do, for 20 dollars, on one condition.» Flabbergasted, the woman asked what the condition was. The young man replied, «You have to tell me what you want me to do in just three words.» The woman considered his proposition for a moment, withdrew from her purse and slowly counted out four 5 dollar bills, which she pressed into the young man's hand along with her address. She looked deeply into his eyes, and slowly, meaningfully said... «Clean my house.»

Our friends have recently moved into a new house. The other day, the father took his car out of garage and was washing it when a neighbor came by. The neighbor stopped and commented, «That's a nice car. Is it yours?» «Sometimes,» the father answered. The neighbor was surprised. «Sometimes? What do you mean by that?» «Well,» said the father, «when there's a sports event, it belongs to my son. When I've washed the car and it looks really nice and clean, it belongs to my wife. And if it needs gas, it's mine.»

A traveler stopped at a historic hotel and requested the rates of for a single room. A room on the first floor is \$350, on the second floor \$250, and on the third floor \$150, replied the desk clerk. The traveler thought a bit, said «Thank you,» and turned to go. «Don't you like our hotel?» asked the clerk. «Oh, it's beautiful, said the traveler. It just isn't tall enough.»

Optimist: The glass is half full.

Pessimist: The glass is half empty.

Engineer: The glass needs to be redesigned.

In the Assuming trade three separate and independent cults are transacting business. Two of these cults are known as the Shakespearites and the Baconians, and I am the other one-the Brontosaurian. The Shakespearite knows that Shakespeare wrote Shakespeare's Works; the Baconian knows that Francis Bacon wrote them; the Brontosaurian doesn't really know which of them did it, but is quite composedly and contentedly sure that Shakespeare DIDN'T, and strongly suspects that Bacon DID.

Mark Twain

Noteworthy

Language shapes the way we think, and determines what we can think about.

Benjamin Lee Whorf

Listen a hundred times; ponder a thousand times; speak once.

Turkish Proverb

Words are also actions, and actions are a kind of words.

Ralph Waldo Emerson

Postmodernism, like modernism before it, is a blanket term, covering several different tendencies, directions and styles. Post-modernism is more populist and inclusive, while modernism had been more elitist and exclusive. Postmodernism has brought about a renewed partnership between the old and new, between past and present... Postmodernism also places more emphasis on content, while modernism has concentrated mainly on form... Postmodernism takes into account the ethnic and cultural diversity of today's pluralistic society.

William Fleming

Unit 5

«Politically Correct» Language

Authorial Voice: Impersonal vs. Personal

On Classifying

TEXT

Read the text and be ready to answer the questions that follow.

We regard as «true» the simplest explanation that satisfies all the data we have about any given thing. This principle is known as Occam's **razor** (sometimes spelled Ockham's razor); it is named after a 14th century British philosopher who originally proposed it. Without this rule, we would always be **subject to** such **complicated doubts** that we would accept nothing as known. Occam's razor, sometimes called the Principle of Simplicity, is a razor in a sense that it is a cutting edge that allows distinction to be made among theories. This is often paraphrased as «All other things being equal, the simplest solution is the best.» In other words, when multiple competing theories are equal in other respects, the principle recommends selecting the theory that introduces the fewest assumptions. Some other thinkers believe that the best position in this dispute is to avoid oversimplification, standing in a reasonable middle term, or Golden Mean. This is illustrated by the famous phrase attributed to Einstein (though actually of unknown origin): «Everything should be made as simple as possible, *but not simpler.*»

Anyway, science is based on Occam's razor, though we don't usually think about it. Sometimes, something that we call «true» might be more accurately described as a theory. The scientific method is based on hypotheses and theories. A hypothesis is an explanation of why something happens or happened. When it is shown that the hypothesis actually explains most of the facts known, then we may call it a theory. We usually test a theory by seeing whether it can predict things that were not previously observed, and then by trying **to confirm** whether the predictions are **valid**.

An example of a theory is the Newtonian theory of gravitation, which for many years explained almost all the planetary motions. Only a small discrepancy in the orbit of Mercury remained unexplained. In 1916, Albert Einstein presented a general theory of relativity as a better explanation of gravitation. The theory explained the **discrepancy** in Mercury's orbit. When his predictions were verified, his theory was widely accepted.

Is Newton's theory «true»? Yes, in most regions of space. Is Einstein's theory «true»? We say so, although we may also think that one day a new theory will come along that is more general than Einstein's in the same way that Einstein's is more general than Newton's.

1. What is specific about «Occam's razor»?
2. What is the correlation between the hypothesis and the theory?
3. What are possible ways of testing a theory?
4. Such language elements as «anyway», «anyhow», «in any case» (typical of spoken English, including academic lectures) are used to show that the speaker wants to either return to the main topic or continue with another. What is the function of «anyway» in this text?

razor — укр. бритва

subject to — tending or likely (to have), causing to experience укр. зазнавати

complicated — difficult to understand or deal with укр. складний

doubt — (a feeling of) uncertainty of belief or opinion, lack of confidence укр. сумнів

to confirm — to give support or certainty to (a fact, statement etc.) e.g. by providing more proof or by stating that something is true or correct

Synonyms: to verify, to prove, to corroborate укр. підтверджувати, стверджувати

valid — firmly based on what is true or reasonable укр. дійсний. **Antonym** — invalid

discrepancy (between) — difference, lack of agreement or similarity — укр. розбіжність, розходження, невідповідність

Exercise 1. Give English equivalents of:

сумніви; найпростіше пояснення; вперше запропонувати принцип; невелика розбіжність; більш точний опис; краще пояснення; широко визнавати; загальна теорія відносності; підтверджувати; фактично пояснювати; дійсний; «золота середина».

TEXT. Read the text and be ready to answer the questions about it.

Many customs and habits that once seemed OK in all-male workspace, now are no longer viewed that way. Among these, the use of **sexist** language, either intentionally or unintentionally, is a growing source of **anger** in the office.

One of the issues is the general use of the masculine gender **to denote** both male and female subjects. In many Indo-European languages, gender marks words as masculine, feminine or neuter.

This is not always accurate, however. Perhaps the most **ridiculous** example is the German word for girl, «das Mädchen», which is neuter. But the English language does not **utilize** gender. Instead, the sex of a person is designated by using the appropriate pronoun or possessive adjective. Traditionally, «he» has been used to denote a

sexless person, making it a neuter pronoun. A growing **consensus**, though, no longer accepts this view, so that the way people communicate is changing. In «The Elements of Nonsexist Usage» (1990), Val Dumond writes that pronouns present one of the greatest challenges for avoiding sexism in language. As a first choice, Dumond suggests **omitting** the pronoun whenever possible. A sentence such as «An engineer should never trust his computer» can be rewritten as «An engineer should never **trust** a computer». Alternatively, the plural form may be employed, generating in this case «Engineers should never trust a computer».

Even in traditional correspondence the use of «Dear Sir(s)» as a universal form of address to an organization, or to an individual when (his? her? their?) sex is not known has come under fire. Some suggest that the salutatory «Dear» has itself become an archaism, and should be dropped. Letters to organizations, which are usually **formal** could use a «To:» line with the name of organization or department, such as «Customer Service Manager».

The most useful rules are to avoid the generic use of **man** to refer to both **men** and **women**, and not to imply gender when it is unnecessary to do so. Make your language inclusive, always give equal treatment to both men and women. If the sex of the subject is not relevant to the matter, it should be omitted.

For dealing with titles and job descriptions, a non-gender-specific form of the word can usually be found. Luckily, the most common terms, such as «scientist», «engineer», or «technician» are already grammatically neuter.

sexism — the belief that one sex is not as good, clever, etc. as the other, esp. when this results in unfair treatment of women by men

anger — strong feeling of displeasure
укр.—гнів

to denote — to be a name of; to mean.

укр. позначати, виражати.

ridiculous — silly or unreasonable
укр. нісенітний, безглуздий

to utilize — to use, to make use of (to employ)
укр. використовувати

consensus — a general agreement, the opinion of most of the people in a group
укр. згода, одностайність

to omit — to leave out (by mistake or on purpose)
укр. пропускати

to trust — to believe in the honesty and worth of (someone/something), to have confidence in
укр. довіряти

formal — based on or done according to correct or accepted rules, e.g. social behavior or official business. **Also:** official
укр. офіційний, формальний

1. What is the subject of the passage?
2. What are the strategies of avoiding sexism in language?
3. Give examples of some grammatically neuter terms denoting titles and job descriptions.

Exercise 2. A. The following sentences contain stereotypes of male and female roles. Suggest your options to avoid stereotyping:

1. A secretary should be familiar with her duties.
2. Every member of congress will cast his vote.
3. When everyone contributes his ideas, the workshop will be very stimulating.
4. A professor should meet his students regularly.
5. A director will bring his draft.

B. Avoid sexist language by choosing the appropriate options:

spouses	to have a career	lay people	the average person/ordinary people
assistant	humanity	chairperson	police officer

1. This problem concerns the whole mankind.
2. My girl will inform committee members of the meeting.
3. Alexandra is a career woman.
4. The policeman arrested the criminal.
5. The common man will suffer most.
6. The professors and their wives attended the meeting.
7. Who is a chairman?
8. To laymen the jargon that hedges such words as WIMP can seem impenetrable.

Exercise 3. Draw a graph based on the following data. Make some predictions for the future if present trends continue.

Women-scientists in the USA (mid 1990s)

Percentage of physics PhD's to women — 8
 Percentage of mathematics PhD's to women — 19
 Percentage of chemistry PhD's to women — 25
 Percentage of biology PhD's to women — 38
 Percentage of psychology PhD's to women — 56

AUTHORIAL VOICE: IMPERSONAL VS. PERSONAL

● Use «I» freely; also employ «we» (the so-called «pluralis auctoris»)

What I'm arguing in this short discussion is that despite the obstacles presented, we must continue our efforts to make our classes as specific to student purposes as possible.

NOTE.

While «I argue» seems to signal claims that the speaker feels are (very) well supported, possibly conveying more certainty than «I believe» (not to mention «I feel/think»),

«arguably»/ «it is argued» can be paraphrased by «the facts speak for themselves here; I am not interpreting this; it's just out there in reality»; «in truth»; «it's evident/obvious/open to view/ visible/ clear or manifest to the understanding, appearing as actual to the eye or mind».

● Indefinite person(s) may be denoted thus:

most (people) / many (people) більшість

some (observers/commentators) / one / somebody / someone гехто

they say/arguably/ it is (sometimes) argued/it could be argued/ it is believed існує (висловлюється) думка про те, що; імовірно; очевидно etc. кажуть, що

researchers/scientists/investigators/scholars/academia/academics/

scientific (research) community/cadre/pool of scientists учені; наукова спільнота

*experts / *think tank експерти*

**expertise компетенція*

research shows/recent research advances (findings; observations) suggest/studies indicate дослідження свідчать

**it is rumored* подейкують

opponents / a contrasting view прибічники протилежного погляду

general citizenry звичайні (пересічні) люди

average consumer середній споживач

(prospective) users / clientele (майбутні) споживачі/клієнтура

electorate електорат

attendee(s) відвідувач(и); присутн(и)

**to be under way* перебувати/бути у процесі

MAX	Most
	Most?
MIN	Many

Yet I also know that many (most?) English speakers find it perfectly acceptable.

Because of its origins, Canadian English has a great deal in common with the rest of English spoken in North America, and those who live outside Canada often find it difficult to hear the difference. Many British people identify a Canadian accent as American; many Americans identify it as British.

Recent advances in global positioning system (GPS) technology have made it possible to detect millimeter scale changes in the Earth's surface.

This World Bank project is under way.

Arguably, no European computer company had a lead position in any computer technology.

A person needs only one language to talk to someone else, it is sometimes argued.

PacketCable uses what is known as a softswitch architecture.

USEFUL TIP: «Neutralize» «active» verbs (e.g. conduct, activate, connect, measure) by using them in the passive voice. On the contrary, use «passive» verbs (e.g. indicate, reveal) in active voice.

MIND also:

Suffixes -able, -ible:

Much of our work is predicted in theory, which is **demonstrable** but not **provable**.

Значну частину нашої роботи було передбачено у теорії, яку можна продемонструвати, але не довести.

Articles and their abstracts in these collections are fully searchable by index term, browsable by author, and also available in printable PDF formats.

Suffix -ee:

nominee — той, кого призначають

Phrases:

to be exposed to — зазнавати

under consideration in question — (те), що розглядається

The issue **under consideration** — питання, що розглядається

The problems **in question** — проблеми, що розглядаються

The passive voice is usually found with the following verbs and set phrases:

to answer	відповідати
to promise	обіцяти
to offer	пропонувати
to invite	запрошувати
to affect	впливати (на)

to follow to succeed	іти слідом (за)
-------------------------	-----------------

to allow to permit	дозволяти
-----------------------	-----------

to join to connect to link to bond	з'єднувати, поєднувати
---	------------------------

to influence	впливати
to tell	казати
to speak	говорити
to report	повідомляти
to watch	спостерігати
to precede	передувати

to ask to ask a question to pose a question	питати, ставити питання
---	-------------------------

to depend on to rely on	покладатися (на)
----------------------------	------------------

to think of/about	думати (про)
to call for	вимагати
to agree upon	погоджуватися
to comment on	коментувати
to insist on/upon	наполягати (на)

to do away with to get rid of	покінчити (з)
----------------------------------	---------------

to send for	посилати (за)
to account for	пояснювати, урахувувати (зважати)

to use — to make use of	використовувати
to refer — to make reference to	посилатися (на)
to mention — to make mention of	згадувати (про)
to contribute — to make contribution	робити внесок
to consider — to give consideration to	розглядати
to pay/give/draw/call attention to	приділяти увагу
to take notice/note of	звертати увагу
to make (an) attempt/to make attempts	(з)робити спробу (спроби)
to make (every) effort/to make efforts	докладати/докласти (усіх) зусиль
to lay/place emphasis (on)	наголошувати (на)

to take advantage of	скористатися (перевагою)
to take opportunity of	скористатися (можливістю)
to take steps	вживати заходів
to take care of	турбуватися (про), вживати застережних (запобіжних) заходів

The Get-Passive is used in spoken and informal English. The **get-passive** is used with verbs denoting **ONLY** actions and processes, **NOT** states. The **get-passive** is more common with animate subjects (usually actively involved in a process):

The President **was** elected last year.
The President **got** elected last year.

Cf.:

They will get married next week.
(action, process)

They have been married for 7 years.
(state)

MIND:

subject to /subjected to sth *ниггавати; зазнавати*

to be subject to /subjected to doubt(s) *брату ниг сумнів*

Without this rule, we would always be subject to such complicated doubts.

The scientists subjected the products to a number of rigorous tests.

object to / argue against *виступати проти; заперечувати*

The theory was objected to by almost everyone.

USEFUL TIP: USE modal verbs (especially *can, could, may, might*) in passive constructions
(Cf.: *Xs are based on...* — *Xs can be based on...*)

A simple example can be used to illustrate the approach described here.

The matter may be elucidated by further analysis.

It could be concluded that this is less important, but still far from being unnecessary.

● Create the so-called «objectivity effect»; concentrate on research itself by mentioning it in the very beginning of the sentence:

These theories are thought to be related.

Benefits of LANs are said to include more flexible network move.

It is demonstrable but not provable.

● **Imply «you and I» attitude:**

It is often said that software engineering is not mature enough because it's young.

This approach to the analysis of natural languages is commonly referred to as Montague grammar.

It is customary to refer to this mode of transmission.

When it comes to success, they say, perception is everything.

A classic way to attack an operational system is to attack its development environment.

Some of the problems discussed have a trivial cure. Their cause may simply be that somebody used the wrong formula.

I knew a guy who spearheaded the first Web project at Big Company X (a name you'd surely recognize, but which shall remain veiled in mystery for reasons soon to emerge).

● **Imply data validity:**

Following this, 100 random samples drawn from this prediction were constructed.

It was found that water use could be reduced substantially during the idle cycle.

Much has been written about various aspects related to standards and standardization.

Research has shown that out of concern for contamination, chip makers have used higher flow rates than necessary.

Computers, microprocessor controls, electronics are being applied in all forms of passenger and freight transportation.

AUTHORIAL VOICE

It could be said (that) *можна сказати*

It is argued/believed/thought/assumed/accepted (that) *вважають (що)*

It seems *очевидно*

It is known (that) *відомо, що*

It should be noted (that) *слід зазначити*

**It should be borne in mind* *не слід забувати*

Popular belief held *зазвичай вважали*

Popular belief holds/According to popular belief/

Traditionally/It is widely held (that) *звичайно / зазвичай вважають*

A classic way / approach *класичний підхід*

Historically / The prevailing view was

I contend / I am sure (of) /

I argue *вважаю, гагаю*

I believe / I personally believe/

Personally, I believe/I think

на нашу гумку (гадку)

In my view/opinion/ meaning.../

From my understanding /

My own view.../To my mind.../

My thesis is *на мою гумку*

I am an advocate of

ми виступаємо за

I will try to show

спробуємо показати

*X (is) was thought that/ * It used to be thought/*
The scientific community was adhering to a
notion that... раніше вважали
Presumably/Allegedly як вважають
The prevailing view is переважно вважають
Most/ many (people) / the majority (переважна)
 більшість
Some (could) say (that) / think (that)
Some say (that) / think (that) /Some will say/
One can say (that) гадають, вважають (що)
One can't deny (that) не можна заперечувати
We argue ми вважаємо
We are confident (that) ми впевнені
We present the argument
 ми висловлюємо гумку (щого)
We choose (not) to... ми (не) хочемо
We wish to... ми бажаємо
We take an approach / Our approach наш підхід
We propose/suggest ми пропонуємо
We report that... ми повідомляємо
We prefer... ми надаємо перевагу
Our advocacy... ми є прибічниками...

I should/would say можна сказати
I would suggest можемо запропонувати
I would like to... хотілося б
I predict /foresee/ forecast/
make a prognosis мій прогноз;
 можна прогнозувати

**It occurs to me...* Мені спало на гумку...

**It seems to me...* Скугається на те, що...

MIND non-sexist language:

man	→	he or she; s/he; she (her); they; human being, human, person; an individual; people
mankind	→	humanity
chairman	→	chairperson
layman	→	lay people
mailman	→	mail carrier
manmade	→	synthetic; synthetically manufactured; lab created; engineered
unmanned (air vehicle)	→	uninhabited/pilotless/robotic (air vehicle)
freshman	→	first year student (VS. second year student, or sophomore)

BUT: ombudsman, weatherman

MIND: politically correct language:

wife; husband	→	spouse
Indians; American Indians; Amerindians	→	Native Americans
Colored; Negro; black; Afro-American	→	African American(s); persons/people of color
Oriental	→	Asian (Pacific Islander; Native Hawaiian; Samoan; Filipino; Korean; Japanese; Chinese; Vietnamese etc.)
Eskimo; Aleut	→	Alaska native
Hispanic	→	Mexican American; Puerto Rican; Cuban; Brazilian; Colombian etc. OR: Latino/Hispanic; Latino; Latina
White	→	Caucasian; Euro-American; European American

Exercise 4. Render the following sentences into Ukrainian.

1. Some individuals would rather see the word «collaboration» used where we have utilized «cooperation».
2. Information is the key because life at the molecular level can be understood as a process in which information is copied from generation to generation.
3. These servers reportedly have few gateways.
4. Everything known about the frequency of this phenomenon, admittedly, is not enough.
5. Admittedly, the device works slowly, but its readings are always accurate.
6. They use the so-called «grid» technique.
7. Several projects are under way.
8. The multibeam is also reconfigurable.
9. A large number of interfaces can be used to connect them.
10. It may therefore be concluded that these individuals are far more likely to be employed by the academia.
11. One can note a style trend from the First to the Second School.
12. The Internet intelligentsia is opposed to management.
13. There are even murmurings of activity in the United States.
14. Corporations have started to view the environment as a major strategic issue.
15. It is conventionally subdivided into passive and active categories.
16. The latter have traditionally been closely associated with the Internet.
17. Look at the light emitted by the most distant observable galaxies.
18. An individual will not be out of touch with her business.
19. One can assume this to be self-evident.
20. Scholarship awardees are expected to provide a short report describing how the scholarship benefited them.
21. Word spread like wildfire that Something Very New was Up.
22. There is now a widespread view that it makes sense to try to reduce the numbers of languages involved in world bodies.
23. The problem has traditionally been solved by finding a language to act as a lingua franca, or «common language».
24. Mistakes are made, and decisions are often ambiguous and based on incomplete information.
25. Extensive upgrades and refurbishments were undertaken on various other facilities.
26. The models were developed from scratch.
27. It is best suited to a particular group: computer-savvy users.
28. This problem was not even thought of a couple of years ago.
29. The new evidence cannot be accounted for by existing theories.
30. A large amount of research is being conducted in the field of telecommunications.
31. Only a few examples will be given here.
32. The new data have been obtained, presented, and discussed recently.
33. These facts play an important role in the process under study.
34. One should not forget that.
35. The information given at the meeting had been shared beforehand in attachments that came with the meeting notice.
36. Historically, several approaches have been pursued.
37. Over the past years, a number of techniques have been proposed, and recently several interesting approaches have appeared in the literature.
38. It's been said that the most important event in human history will be when someone discovers that we earthlings are not alone in the universe.
39. This is a lab-created sapphire.
40. The most common cabinetry is made from engineered wood and plastic.
41. Trying to keep up with their heavy workload, attendees often multitask during meetings — writing and reading e-mail, surfing the Internet, or even doing their regular work.
42. A mentor can sometimes get a mentee considered a position that he or she might otherwise not have been considered for.
43. The report «iSociety» (where «i» stands for «independent») by the Future Foundation, a

British think-tank, names and discusses the group of workers that changes careers in search of greater independence.

44. If someone is expected to make a presentation or lead a discussion, they can come prepared to do so.

45. Arguably, such errors stem from the transfer of native language rules.

46. Almost everything we do is traceable and almost everywhere we go is trackable.

47. «In my youth there were words you couldn't say in front of a girl; now you can't say «girl». (Tom Lehrer, «The Oldie» (1996); quoted in the «Oxford Dictionary of Thematic Quotations» (2000).

48. Unlike «metrosexuals» (men who can't be pigeonholed as «übersexuals» — a drinking, skirt-chasing new lads who spend more time in the bathroom than their girlfriends), today's man is a «heteropolitan», trying to balance looking good with career success and a happy family life.

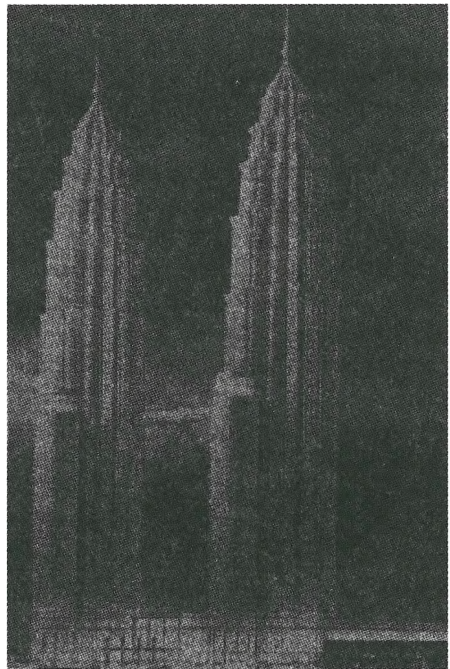
Exercise 5.

Prepare a report on one of the famous constructions in the world, i.e. The Empire State Building, the Golden Gate Bridge, the Eiffel Tower, the Statue of Liberty, Pyramids of Egypt etc.

Sample answer:

The first Seven Wonders of the World, cataloged 23 centuries ago, comprised massive piles of cut stone that marked the dawn of civil engineering. Even a 1930s list of Modern Wonders honored such civil engineering *feats* as the Empire State Building and the Golden Gate Bridge. Today, electronics is indispensable to these Wonders, consuming such massive quantities of labor, money and resources that they can be called «megaprojects».

An example of such spectacular projects is Kuala Lumpur City Center (KLCC) in Malaysia, a city-within-a-city that contains the 450-meter-high Petronas towers, named after national petroleum company. The Petronas towers include 436000 m² of floor space. The twin towers are joined half way up — at the 41 and 42 floors by a 58.4-meter-long sky bridge. In addition, the towers have 44-story side towers. The skyscrapers rize from a six-story retail *mall*.



feat — an action needing strenght, skill, or courage

mall — a large shopping center

Exercise 6. Fill in the blanks.

1. We can use them as an ... source of information.

- a. authoritative
- b. authoritarian
- c. authority
- d. authoring

2. The new versions ... in the archives as backups.

- a. are stored
- b. storing
- c. stored
- d. to store

3. He is the author of seven books that ... in twenty languages.

-
- a. have been translated
 - b. translate
 - c. translates
 - d. to translate
4. This book is a well- ... classic in management theory.
- a. regards
 - b. regard
 - c. regarding
 - d. regarded
5. ... , his team is experimenting with silicon nanotransistors.
- a. In the past
 - b. Currently
 - c. Lately
 - d. In the future
6. New software can ... to each camera.
- a. be downloaded
 - b. to be downloaded
 - c. download
 - d. to download
7. Business ... very good of late.
- a. has been
 - b. was
 - c. is
 - d. will be
8. Some ... it is better to choose a different approach.
- a. say
 - b. says
 - c. saying
 - d. to say
9. Last year consumers ... hearing another new acronym.
- a. begin
 - b. will begin
 - c. beginning
 - d. began
- 10 ... can appreciate the goals of these diverse technologies.
- a. When
 - b. Why
 - c. One
 - d. Once
11. The recommendation ... on the report's conclusion.
- a. based
 - b. was based
 - c. basing
 - d. be based
12. Product information ... as a reader service.
- a. provides
 - b. provided
 - c. is provided
 - d. providing
13. This concept should be ... worldwide.
- a. promote
 - b. promotion
 - c. promotes
 - d. promoted

-
14. It ... that you are going after them.
- seem
 - to seem
 - seemingly
 - seems
15. I ... its behavior friendly.
- considers
 - considering
 - has considered
 - consider
16. The standard is expected
- be ratified
 - ratify
 - to ratify
 - to be ratified
17. The routing is handled by so-... add-drop multiplexers.
- called
 - call
 - calling
 - calls
18. ..., Sonet data envelopes could be concatenated, or merged.
- Tradition
 - Traditional
 - Traditionalist
 - Traditionally
19. Symposium ... are encouraged to visit the Historical Exhibit during the regular exhibition hours.
- attends
 - attended
 - attend
 - attendees
20. Online education ... recent attention in both academic and educational settings.
- has gained
 - gained
 - gains
 - gain
- 21 ... estimated that the sun decreased its radiance slightly.
- Is it
 - It
 - Is
 - It is

Exercise 7. Translate Ukrainian sentences. Then match the two columns:

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Цю проблему треба вирішити (розв'язати). 2. Всі спостереження зробила група відомих вчених. 3. Професорові поставили багато запитань. 4. Експеримент провели минулого тижня. 5. Відвідувачів приймають щодня. 6. Проект критикувало багато людей. 7. Проблема вперше усвідомили декілька років тому. 8. Йому не треба казати двічі. 9. Фармацевтичній промисловості приділяють багато уваги. 10. Про цю нову теорію багато говорять та пишуть. 11. Ходили чутки, що йому запропонували фінансову підтримку. 12. У Канаді розмовляють англійською та французькою мовами. 13. Нас попросили прийти якомога раніше. 14. Дозвольте сказати декілька слів. 15. Схема видається надто спрощеною. 16. Я прийшов сюди першим. 17. Проблема досить важлива для того, щоб її розглянути. 18. Іноді дуже важко зробити так, щоб інші зрозуміли вашу думку. 19. Вони очікують, що ми прийдемо вчасно. 20. Нам буде досить легко владнати цю справу. 21. Дуже важко уникнути помилок. 22. Вам буде цікаво послухати його промову. | <ol style="list-style-type: none"> A English and French are spoken in Canada. B Visitors are received every day. C He doesn't need to be told twice. D The problem was first recognized several years ago. E The professor was asked a lot of questions. F Pharmaceutical industry is paid great attention to. G This new theory is much spoken and written about. H The project was sharply criticized by many people. I It was rumored that he was offered financial support. J The problem must be solved. K This experiment was made last week. L We were asked to come as early as possible. M All observations were made by a team of well-known scientists. N It will be easy for us to settle this problem. O They expect us to come on time. P The problem is important enough to be considered. Q To avoid making mistakes is very difficult. R Let me say a couple of words. S It will be interesting for you to listen to his speech. T The scheme appears to be oversimplified. U It is sometimes very difficult to make people see your point. V I was the first to come here. |
|--|--|

Exercise 8. Read the following text. Make the necessary corrections.

When one meets another person, he brings with him not only his intelligence, but also his personality. It is not possible for a person to leave his personality behind. His personality always

comes with him. So when two persons meet together, we have to expect the interaction of one personality with another. We call this interaction «chemistry», referring to the Random House Dictionary. Chemistry will be said to be good when friendship, mutual confidence, trust and understanding prevail. On the other hand, when distrust, hostility, and doubt prevail, chemistry will be said to be bad or poor. When two persons meet, there may be ambiguity, argument, conflict and disagreement. But, if chemistry is good, the argument becomes useful. The ambiguity will be resolved and disagreement and conflict will disappear or at least they will remain within each other's comfort zone. Chemistry can improve or deteriorate with time, sometimes quickly, and sometimes very slowly. Chemistry is nebulous entity. We do not know its true origin.

Exercise 9. Translate the following text.

Often called «The Most Beautiful Woman in Films», Hedy Lamarr's beauty and screen presence made her one of the most popular actresses of her day. She was born on November 9, 1914 in Vienna, Austria. At 17 years old Hedy starred in her first movie. In mid 1930s she signed a contract with MGM. As if being a beautiful, talented actress was not enough, Hedy was also extremely intelligent. In addition to her film accomplishments, Hedy patented an idea that later became the crutch of both secure military communications and mobile phone technology. In 1942, Hedy and composer George Antheil patented what they called the «Secret Communication System.» The original idea, meant to solve the problem of enemies blocking signals from radio-controlled missiles during World War II, involved changing radio frequencies simultaneously to prevent enemies from being able to detect the messages. Hedy's idea proved to be very important to both the military and the cell phone industry. This impressive technological achievement combined with her acting talent and star quality to make «the most beautiful woman in film» one of the most interesting and intelligent women in the movie industry.

NOTE.

NO tense changes are required in such cases:

• When you mention well-known facts, quotations, things that are always true, and statements that occurred only a short time ago:

My father always told me that to learn is never too late.

Hedy Lamarr used to say, «I am not difficult. I am definite.»

John said just now (only a moment ago) that he can't figure it out.

• With the following expressions and their equivalents:

It	is was has been	necessary необхідно	that you	<u>know it</u>
		important / vital важливо		be here <i>(American English)</i>
		desirable бажано		<u>should know it</u>
		essential суттєво, важливо		<u>should be here</u> <i>(British English)</i>

It is important that they **be** present at the meeting.

Важливо, **щоб** вони **були** присутні на зборах.

Cf.:

It is important that they **are** present at the meeting.

Важливо, **що** вони **присутні** на зборах.

I	suggest(ed) (make/made a suggestion) propose(d) пропонувати insist(ed)/urge(d) наполягати order(ed) наказувати recommend(ed) рекомендувати demand(ed) require(d) (it is/was a requirement) вимагати	that you	do it know
			be here <i>(American English)</i>
			should do it should know should be here <i>(British English)</i>

We **insist (insisted)** that the meeting **be** held tomorrow.
 Ми наполягаємо (наполягали), аби засідання відбулося завтра.

NOTE.

Use THE INFINITIVE with the following words: *job/task/duty* etc.
 Your *job* is *to improve* your language skills.

Exercise 10. Fill in the blanks.

- A wise man once ... that to err is human.
 - observed
 - observes
 - observation
 - to observe
- He said that English and French ... the two official languages in Canada.
 - are
 - were
 - was
 - is
- She always told that to understand ... to forgive.
 - had been
 - has been
 - is
 - was
- It was necessary that they ... it.
 - did
 - does
 - do
 - to do
- Considerable research over the past twenty years urges that science processes (the skills by which observations are made and meaning is constructed) ... on an equal level with science content.
 - be emphasized
 - were emphasized
 - to be emphasized
 - emphasizes
- Our duty is ... specialized equipment.
 - to furnish
 - furnishing

- c. furnish
d. furnishes
7. They suggested that we ... theoretical approaches rather than applied.
a. discuss
b. discussed
c. were discussing
d. have discussed
8. We insisted that the think tank ... their approach drastically.
a. reconsidered
b. reconsiders
c. reconsidering
d. reconsider
9. She suggests that the number of experiments ... increased.
a. is
b. were
c. will be
d. be
10. There was an increasing demand that everyone ... of recent developments in the field.
a. is informed
b. to be informed
c. be informed
d. will be informed
11. In 1913 Niels Bohr made the suggestion that electrons ... around nucleus in orbits.
a. spinned
b. will spin
c. spin
d. are spinning
12. He recommends that adequate measures ... taken.
a. are
b. to be
c. be
d. will be
13. It was strange that they ... about it.
a. had forgotten
b. forget
c. forgot
d. have forgotten
14. It is unlikely that they ... advantage of such an opportunity.
a. will take
b. took
c. had taken
d. to take
15. The cordless telephone ... available to the professional and general public in the years between 1970 and 1980.
a. is becoming
b. became
c. has become
d. had become
16. Recently, there ... considerable discussion about technology investments.
a. is
b. has been
c. was
d. is going to be
17. If you ... role in leadership, you are going to develop special skills.
a. take on
b. took on
c. will take on
d. were taking on

18. They ... that they had completed the task.
- reporting
 - to report
 - reports
 - reported
19. For many years the Academy ... science education in the schools.
- promoted
 - has promoted
 - promotes
 - is promoting
20. She will go to the university when she ... her paper.
- finishes
 - will finish
 - finished
 - had finished
21. We can talk about it after he
- will leave
 - is leaving
 - leaves
 - has left
22. The quality of education from elementary school through college ... a subject of special interest in recent years.
- has become
 - became
 - will become
 - becomes

TEXT.

Read the text and be ready to answer the questions that follow.

Virtual reality is a combination of various interface technologies that enables a user to intuitively interact with an **immersive** and dynamic computer-generated **environment**. Some people prefer the term virtual environment. Virtual reality (VR) has an ability to immerse users in the interactive three-dimensional (3-D) world. Another approach, called **augmented** reality is the use of computer-generated visuals to **enhance** a **perception** of his or her physical environment, providing a combination of the virtual and real world. In general, a VR system consists of a display, a tracking device for interactivity, a computer image generator, a three-dimensional database, and application software. There exist several types of displays. The greatest sense of immersion is provided by the head-mounted display (HMD) that blocks out the real world. A head-coupled display (HCD) is like a **huge** pair of binoculars supported by a movable robot-like arm; HCD can offer better resolution, a wider field of view, and a benefit of quick entry and exit. Of the various input devices used in VR, the wired glove (a glove wired with sensors and connected to a computer for gesture recognition enabling interaction with objects in three-dimensional virtual environments) is often the most useful. Its user can touch both virtual and real objects without difficulty.

VR has all sorts of entertainment possibilities, like immersive video games, and many practical ones, too. VR has the potential

virtual reality — віртуальна (уявна) реальність
to immerse — to cause (oneself) to enter deeply into activity; absorb укр. занурюватися, заглиблюватися
environment — physical, social and natural conditions in which people live
Synonyms: surrounding(s), milieu укр. навколишній (оточуючий) світ; довкілля; середовище
to augment — (to cause to) become bigger, more valuable, better укр. збільшувати
to enhance — to increase in strength or amount укр. посилювати
to perceive — to have knowledge of (something) through one of the senses or through the mind, to understand
perception — укр. сприйняття, відчуження
huge — extremely large
Synonyms: enormous, tremendous, gigantic укр. величезний

of revolutionizing design and manufacturing. Some predict savings in time and money, better market response, and better products. Virtual prototyping may **reduce** or **eliminate** the need for costly **mock-ups**. Moreover, it will permit the direct **involvement** of human beings in performance and ergonomic studies, providing immediate feedback. For instance, passengers will be able to comment on the convenience and look of a virtual car's interior. Engineering analysis will become more efficient through the integration of **simulation** results with virtual prototypes. Eventually, it will be possible **to alter** designs and see the immediate effects. Virtual simulation of assembly, production and maintenance tasks will reveal possible problems at an early stage of the design process. There are numerous scientific VR visualizations, from atoms to galaxies that may be used for educational and research purposes. Virtual reality applications in medicine include at least two trends in health care: the extensive use of ultrasound and magnetic resonance imaging (MRI) and endoscopic procedures, in which the doctor looks not at the patient but at a video screen to guide an optical fiber, light **probe**. Entertainment uses for VR have received the most attention, and experts agree that this large market will be a driving force in VR technology development.

Mature enough, virtual reality still needs a lot of work and **assessment** before it can become a common tool for industry. Building synthetic environment usually means hard work. When perfected, virtual reality systems may enhance people's activities, **enliven** and accelerate education and scientific modeling, in addition to **devising** new forms of **recreation**.

1. What is specific about virtual reality?
2. What are principal parts of a VR system?
3. What are possible applications of virtual reality?

Exercise 11. Give English equivalents of:

поєднання різних технологій; віртуальне (уявне) середовище; візуальний; посилювати сприйняття; широке використання; складання, виробництво та обслуговування; комп'ютерне зображення; змінювати конструкцію; макет; оцінювати; моделювання; рушійна сила; поживляювати навчання.

Exercise 12. Discuss the following point with your colleagues.

One cannot deny the positive impact that personal computers with **elaborate** graphical environments have had on modern engineering practice. However, one unfortunate result has been the encouragement of a type of engineering characterized as «cosmetic». «Cosmetic» engineering is more concerned with appearance than substance. It is performed by engineers whose first priority is to create things that look good: content and performance are of secondary importance. In other words, an engineering effort is «cosmetic» if it produces pleasing and professional-looking outputs whose content is, however, trivial or invalid. «Cosmetic» engineers enjoy their work.

to reduce — to make less in size, amount, price, degree etc. укр. зменшувати

to eliminate — to remove or get rid of completely укр. ліквідувати

mock-up — a full-size model of something planned to be made or built укр. макет, модель

involvement — укр. залучення

simulation — representation, imitation, model укр. імітація, відтворення, моделювання

to alter — to make or become different, but without changing into something else укр. змінювати

probe — укр. зонд

mature — fully grown and developed укр. зрілий

to assess — to judge the quality, importance or worth of; **Synonym:** to evaluate укр. оцінювати

to enliven — to make more active, cheerful, or interesting укр. поживляювати

to devise — to plan or invent cleverly укр. вигадувати, розробляти

recreation — way of spending free time

Also: leisure, free time укр. відпочинок, дозвілля

elaborate — full of detail, carefully worked out and with a large number of parts

They produce things that look good and make the customer feel happy. Real engineering involves complex and intellectually demanding tasks. «Cosmetic» engineering, by contrast, is relatively easy. Prerequisites for the job include knowledge of how to use a PC plus familiarity with one or more graphics packages. This is not to deny appearance, but an automatic washing machine should be able to wash clothes in addition to attractive surface smoothness.

Still many people are good at making money with *gimmicks*!

Cosmetic engineering *jeopardizes* the success of any project to which it is applied and corrupts the intellectual integrity of the people in organizations that *foster* it. Just imagine a demonstrable project that has only one fault: it produces *erroneous* results.

gimmick — a trick or object which is used only to attract people's attention, especially in attempt to sell something, a gadget, a widget, or a gizmo
to jeopardize — to put at risk or in danger
to foster — to help to develop; to nurture
erroneous — incorrect, mistaken

ON CLASSIFYING

«There are people who make things happen, others who watch things happening, and yet others who don't know anything has happened.»
 (M. Papo).

Technical professionals sometimes take for granted their ease with electronic *marvels*. Unfortunately, though, *it seems* that there is an ever-widening *gap* between the «knows» and the «know-nots». Recent studies point out that while the hardware is becoming more sophisticated, the users may not be keeping pace. Some people may even be classified as technophobic, and some are *intimidated* by computers and are *afraid* they may damage a PC if they use it without assistance, or would not use a computer unless forced to. Based on these *findings*, Dell Computers has developed a new approach to the computer business: techno-typing. Techno-typing is the key to helping people understand what computers can do specifically for them and how to find their perfect PC match. Dell is using the data to develop computers targeted at specific techno-types:

* Techno-Wizard: generally a technology expert or hobbyist who wants the hottest technology for the lowest price. Greatest concern is losing the edge.

* Techno-To-Go: wants a computer that comes ready to go right out of the box. Interested in what a computer can do but not in how it works. Greatest *concern* is being left alone without service and support.

* Techno-Boomer: wants to look smart; researches and seeks recommendations before making a *purchase*. Greatest concern is making the wrong decision.

* Techno-Phobe: rejects technology or avoids it whenever possible.

* Techno-Teamer: uses a computer at work and as part of a network. Productivity is a primary concern for work that is largely team oriented. Greatest concern is network failure.

marvel — something (or someone) that causes wonder and admiration; wonderful thing укр. чудо, диво
it seems — укр. очевидно
gap — an empty space between two objects укр. розрив
to intimidate — to frighten укр. лякати
afraid — full of fear, frightened, scared укр. наляканий
findings — something learned as a result of an official inquiry укр. отримані дані

concern — a matter of interest, importance or worry to someone укр. важливість, турбота
purchase — укр. покупка

NOTE

CLASSIFYING is an important mental skill.

Usually classifications contain:

- 1) the name of the class
- 2) members of the class

3) basis for classification ***

According to Text B we have:

- 1) technology users;
- 2) Techno-Wizards, Techno-To-Gos, Techno-Boomers, Techno-Phobes, Techno-Teamers;
- 3) attitude toward and aptitude for technology.

While classifying, use the following words and phrases:

class, group, category, division;
to classify, to group, to categorize, to divide; to pigeonhole;
may be (generally/broadly) classified;
classification, grouping.

Here are some phrases for classifying in English:

There exist/are seven types of . . .

There exist/are three kinds of . . .

There exist/are two categories of . . .

We can divide (this) into five parts:

- 1)
- 2)
- 3)
- 4)
- 5)

This can be broken down into three sections.

They are:

- A)
- B)
- C)

X(s)	can be divided into	types
	belong(s) to	categories
	fall(s) into	groups

Exercise 13. Read the following text. Find all examples of classifying. Give the name of the class, members of the class, and basis for classification.

The earliest computing device was the abacus used by the ancient Greeks and Romans. Sliding scales date back almost two millennia. In 1642, French philosopher-mathematician Pascal built a mechanical adding machine, and in 1671, German philosopher-mathematician Gottfried Leibniz built a machine to perform multiplication. In 1835, British mathematician Charles Babbage designed the first mechanical computer. The work of another British mathematician Alan Turing, in the 1930s, marked the next major milestone: he developed the mathematical theory of computation (by the way, the name of the test for measuring the success of computer programs that are claimed to have «Artificial Intelligence» is Turing). In 1940s, American mathematician John van Neumann developed the basic design for today's electronic computers. Finally, with the development of the transistor in 1952 and the subsequent microelectronic revolution, the Computer Age started.

There are four «sizes», corresponding roughly to their memory capacity and processing speed. Microcomputers are the smallest, usually single-user machines often referred to as home computers, are used in small business, at home, and in schools. Minicomputers, also known as personal computers are generally larger, and may support up to 30 users at once. They will be found in medium-sized business and university departments. Mainframes, which can often service hundreds of users at once, are found in large organizations. Supercomputers are the most powerful of all. They are mostly used for special highly complex scientific tasks.

*** Sometimes they are not explicitly expressed, but implied.

Exercise 14. Choose the correct word and fill in the blanks.

(to) recognize recognition recognized

- John is a young author struggling for _____.
- Our city has changed so much you wouldn't _____ it.
- He is a _____ authority on materials science.

(to) alter(ed) alteration(s)

- There have been a few _____ to our proposal.
- This dress will have to be _____.

(to) add addition(s)

- We should _____ some more names to the list.
- I would like _____ something to what you've said.
- _____ are made to the project, of course.
- In _____ to giving a general introduction, the course also provides practical discussion.

Exercise 15. Read the passage and answer the questions that follow.

One needs to be careful in handling liquids heated in a microwave oven. On the occasion, liquids (e.g. water in a mug) may start bubbling violently as the mug is being removed from the microwave oven. The bubbling may be so violent that it could blow most of the water from the mug — obviously a dangerous situation.

Liquids heated in a microwave oven may not turn to steam, even though they are very hot. In this case, the boiling is hindered by a lack of nucleation sites needed to form bubbles. Moving these containers of hot liquids or putting a utensil or another object into them creates a «steam bubble» and the hot liquid may splash out. Water and other liquids (alone) should never be heated in a microwave oven. If water is heated in this manner, something should be placed in the cup to diffuse the energy such as a wooden stirrer stick/spoon, tea bag etc. to allow bubble formation. Stir the liquid thoroughly before heating in the microwave. Stir the liquid again at the end. Never overheat liquids. Always use a suitable sized container, at least one third larger, than the volume of liquid to be heated. The superheating will never happen if the correct heating time is chosen. It is however a much safer choice to use conventional methods, i.e. to boil the water in a kettle.

- The passage is mainly concerned with
 - Microwaveable food
 - Nucleation sites
 - Heating liquids in microwave ovens
 - Conventional methods of heating liquids
- According to the passage, overheating liquids in a microwave oven
 - is rather safe
 - can be very dangerous
 - will create steam bubbles
 - is impossible
- It can be inferred from the passage that
 - the container for heating liquids in a kettle should be one third larger, than the volume of liquid to be heated

-
- b. mugs are good water containers
c. it is necessary to stir liquids while heating them
d. some wooden object or a teabag should be placed into container before heating water in a microwave oven for safety reasons
4. We can conclude that
- a. the reasons for liquids overheating in microwave ovens are not clear
b. one should use kettle rather than microwave oven for boiling water
c. heating liquids in microwave ovens requires no experience
d. water heated in a microwave oven tastes differently
5. The underlined word e.g. could best be replaced by which of the following:
- a. as well
b. for example
c. that is
d. and so forth
6. The underlined word start could best be replaced by which of the following:
- a. follow
b. resume
c. finish
d. begin
7. The underlined word dangerous could best be replaced by which of the following:
- a. safe
b. surprising
c. unusual
d. unsafe
8. The underlined word even though could best be replaced by which of the following:
- a. although
b. also
c. eventually
d. so that
9. The underlined word to form could best be replaced by which of the following:
- a. to fill out
b. to create
c. to dissolve
d. to get rid of
10. The underlined word manner could best be replaced by which of the following:
- a. situation
b. place
c. way
d. space
11. The underlined word etc. could best be replaced by which of the following:
- a. so
b. as well
c. and so on
d. rather than
12. The underlined word again could best be replaced by which of the following:
- a. possibly
b. once more
c. occasionally
d. seldom

13. The underlined word happen could best be replaced by which of the following:

- a. occur
- b. continue
- c. end
- d. begin

14. The underlined word conventional could best be replaced by which of the following:

- a. ordinary
- b. extraordinary
- c. unusual
- d. exotic

15. The underlined word methods could best be replaced by which of the following:

- a. approach
- b. technologies
- c. containers
- d. techniques

16. The underlined word i.e. could best be replaced by which of the following:

- a. it is
- b. that is
- c. and also
- d. for instance

UNscientifically speaking...

A L C H E M Y

The alchemists tried to change base metals to gold. See how we can change BASE to GOLD in just 4 steps by changing one letter at a time:

BASE
baLe
baLD
bOld
GOLD

Change :

a) HATE

LOVE

b) TAKE

GIVE

c) MORE

LESS

Clues:

a) possess; bee's home; dwell.

b) body of water; be fond of, enjoy; dwell, have life.

c) female horse; German money; a cover to disguise the face; quantity; disorder or untidiness.

(after English Teaching Forum, Jan. 1994)

Noteworthy

To women who wish to become professional scientists I am also suggesting that they remember, ... «If you are not for yourself, who will be? And if not now, when?»

Fay Aizenberg-Selove (a professor of physics, USA)

*...Two roads diverged in a wood, and I –
 I took the one less traveled by,
 And that has made all the difference.*

Robert Frost

Poetry is the power of defining the indefinable in terms of the unforgettable.

Louis Untermeyer

Unit 6

The INTERNET and Multimedia

Expressing Probability

**Modal Verbs & Their Equivalents:
Scientific and Popular Senses**

Expressing Conditions

TEXT. Read the text and be ready the answer the questions that follow.

The terms INTERNET, World Wide Web (WWW), the information highway refer to a dynamic new way that people around the world are using for communication and accessing vast amounts of computer related information. Today, we are integrated in an electronic communications world that **spans** the globe and offers a myriad of services — some for payment, some free.

The Internet was born from roots of military secrecy and academic researchers engaged in **hush-hush** projects.

Electronic mail **evolved** spontaneously in mid-1960s. These early mail systems were written by a programmer or two, often as a weekend project, and had no uniformity. Then in 1969, the Advanced Research Project Agency Network (Arpanet) was begun by the U.S. government so that researchers at universities and other facilities might electronically **ship** computer data to each other and **remotely launch** computer programs. A year later, Raymond Tomlinson, a principal scientist at BBN, the main Arpanet contractor, wrote a program employing Arpanet's file transfer protocol. The software let BBN's local mail system communicate with independent mail systems at the other Arpanet sites. An additional influence came from the U.S. Department of Defense, which in 1978 **endorsed** the Transmission Control Protocol/ Internet Protocol (TCP/IP) as a data communications standard, and made it a requirement on Arpanet and Milnet (a government military network) in 1983. The result: e-mail quickly became a key means of communication among Arpanet users, as well as a **vehicle** for transmitting other information such as data files, packaged as e-mail messages. Today e-mail reaches many millions of people around the globe.

Obviously, e-mail has many elements present in other forms of communication — body language, monogrammed notes etc. that give paper mail a personal touch. Consider a few examples of «emoticons» or «smilies» that may be used in messages in a host of ways:

:~)	A joking comment
;-)	A flirtatious or sarcastic comment
:-{	A frown, the user is upset or depressed
:-D	A laugh
:-@	A scream
%-)	Confused
:-X	My lips are sealed
:*	A kiss

Improvements in electronic mail services are on their way. Portable notebook computers with built-in wireless modems will enable users to send and receive e-mail anywhere. The advantages of electronic mail are many. Besides the obvious **boon** of avoiding telephone time-zone dissonance, e-mail gives companies unprecedented **flexibility**. This flexibility may let companies

operate with a smaller workforce — a specialist may work part-time with several project teams many hundred kilometers away. When one runs into a problem, e-mail can broadcast «does anybody know» request throughout the network. A person can say «Help» to 10000 people (which a person cannot do on the telephone), and the next morning s/he may have 15 answers to the problem, of which 13 are wrong. But s/he has answers!

to span — to include in space or time укр. охоплювати
hush-hush (informal) — of plan, arrangement, etc. hidden from other people's knowledge, Synonyms: secret; top secret укр. таємний, секретний

to evolve — to develop gradually укр. розвиватися

to ship — to send to a distant place укр. транспортувати

remote — distant in space or time

укр. віддалений, далекий

to launch — 1) to send; 2) to begin, to start

укр. 1) посилати 2) починати

to endorse — to express approval or support укр. ухвалити

vehicle — something by means of which something else can be passed on укр. засіб

NOTE ALSO:

vehicle — укр. будь-який транспортний засіб

With e-mail, months or years no longer pass between a researcher's completion of experiments, and the **dissemination** of results. Now, scientific papers are «published» on the network, commented on, and often revised and «republished» several times before they appear in traditional journals or are delivered at conferences.

A drawback of electronic mail, though, is that the ability to move fast is not always positive. Anytime there is rush, there is less time to **contemplate** the results. We all make mistakes, and the increased rapidity in communications is **depriving** the scientist of the time to think, and talk to colleagues, and change things before they are made public. Electronic mail has some limitations. Everybody knows that it is very hard to reach a decision about something that is complex and multifaceted. Many scientists noticed that in

course of lengthy and deep technical discussions carried on by means of e-mail it is hard to summarize the data presented and guide the group toward a solution — a usual result of a face-to-face meeting. But e-mail is great for collecting information, for helping people have contacts with many other people.

to disseminate — to spread (news, ideas etc) widely укр. поширювати, розповсюджувати

to contemplate — to think about something deeply укр. обмірковувати

to deprive (of) (somebody of something) — to take away from, prevent from using or having укр. позбавляти

INTERNET GOPHER



Internet Gopher is a communications application designed by the University of Minnesota (this state is called the «Gopher state»), which allows users to access Gopher servers worldwide. With the vast popularity of the World Wide Web, Gopher is all but disused at present, with remaining sites being run by individual enthusiasts.

NOTE

Назва *Gopher* власне походить від:

«go fer» → «go for» («пiди принеси») → gopher (ховрах)

WORLD WIDE WEB

WWW is a **hypertext-based** system for accessing Internet resources. Though an efficient way to share information, the Internet had a drawback. There was no problem sharing text, because everyone could use **ASCII** format for text files. But no such commonly agreed format existed for graphical, video, or audio data. In 1989, a London-born physicist and computer scientist, Tim Berners-Lee solved these problems while working at CERN, the European Laboratory for Particle Physics near Geneva. To help the physicists throughout the facility share information, he **contrived** a simple means of transmitting all kinds of data — graphical, video, audio. Berners-Lee with his associates developed the Web by modifying and combining common software protocols. The fundamental Web protocols are the hypertext mark-up language (html) and the hypertext transport protocol (http, based on TCP/IP).

Berners-Lee described his creation as an Internet-based hypermedia initiative for global information sharing. For short, he called it the World Wide Web.

Now we have a lot of new technology with the potential to help us communicate widely, quickly, and efficiently.

hypertext: internally cross-referenced written information that allows a user to jump from topic to related topic

ASCII — American Standard Code for Interchange; a set of 128 letters, numbers etc. used for easy exchange of information between a computer and other data processing machinery (вимовляється «eскі»)

to contrive — to make or invent in a clever way, esp. because of a sudden need укр. винаходити, вигадувати, вимудрувати.

1. What is the subject of the passage?
2. What are the roots of the Internet?
3. What is specific about «smilies» or «emoticons»?
4. What are the obvious advantages of e-mail? Are there any limitations?
5. What is specific about the World Wide Web?

Exercise 1. Give English equivalents of:

світ електронних комунікацій; велика кількість послуг; безкоштовні послуги; секретний проект; програмне забезпечення; апаратне забезпечення; електронна пошта; засіб передачі інформації; ухвалити стандарт; портативні комп'ютери; запит; розповсюджувати результати; обмірковувати; багатогранна проблема; гіпертекст; вигадати простий засіб.

Exercise 2. Render the following passages into Ukrainian. Discuss the points with your colleagues.

A.

The age of the so-called information highway is beginning. This highway starts with computer operators in the 50s who began to communicate among themselves using specialized languages and protocols. Today we think that electronic communications world (since it is digital) must be accurate, reliable, and low cost. Perhaps. In some cases. At times. Yes, e-mail is transferred across the Internet in seconds. However, if it crosses a boundary between the Internet and a relatively restricted network there can be delays of seconds, minutes or hours — just like leaving a superhighway and encountering road construction or customs checkpoint.

Perhaps, your e-mail is delivered promptly. Who will read it? Maybe that person is busy, out of town, or simply doesn't know what is needed to answer you. We need to distinguish between our expectations of the communications technology and our expectations of the people we communicate with.

B.

Historians of technology often tell us how long it takes for technological innovations to enter widespread use. They say that 25 years is the expected interval. The telephone, television, and fax machine, for example, all took 25 years to reach popularity. But what about the Web? It became ubiquitous all of a sudden, and this ubiquity is growing, changing our view of information, society, and business. Is another Web-like thing on its way?

*all of a sudden = suddenly

EXPRESSING PROBABILITY (Scientific Sense)

MIND the specificity of linguistic devices denoting possibility:

IN UKRAINIAN:

MAX безперечно; безсумнівно; без сумніву; завжди; в усіх випадках; зазвичай;
напевне/напевно; можливо; імовірно/ймовірно; у деяких випадках; іноді;

MIN мабуть; видається; очевидно

IN ENGLISH:

%	↑		
100		always	<i>Sure(ly)/certain(ly)/truly/unquestionably/definitely/ indeed/undoubtedly/</i>
90		<i>should/ must</i>	<i>(There is) no (little) doubt / It's a safe bet</i>
70		almost always	<i>There is no question about...</i>
		<i>be going to</i>	<i>(It is) highly probable (that)/ (There is) a strong/high probability (that)</i>
		often/ oftentimes/ frequently/ periodically	<i>In all probability/There is a good chance</i>
		<i>may+well</i>	<i>(There is) every indication (that)/ (It is) more than likely</i>
50		sometimes/occasionally/ at times/ on occasion/ from time to time/intermittently	<i>(It is) very likely/(It is) most likely/ (There is) strong likelihood</i>
		<i>may</i>	<i>In all likelihood / In all probability/ (There is) a strong/definite probability (that)</i>
		seldom	<i>(It is) very possible (that)</i>
		<i>would</i>	<i>(There is) a definite possibility (that)/</i>
20		can	<i>(There is / It is) a serious possibility (that)</i>
			<i>(It is) probable (that) / probably / perhaps</i>
10		<i>could+well</i>	<i>(It is) likely (that) / X is likely to</i>
		<i>could</i>	<i>Perhaps/ possibly/probably /</i>
		<i>might+well / might as well</i>	<i>(It) may be/presumably /apparently /</i>
5		rarely	<i>(It) seems/appears (that) / (It) looks like/</i>
		<i>might</i>	<i>(It is) possible (that) / possibly / maybe / eventually</i>
		<i>not impossible</i>	<i>It seems possible/There is some possibility/</i>
0		must/may/could/ might + have + PARTICIPLE II	<i>By the look of things</i>
		<i>might not/ may not/ cannot</i>	<i>This (It) would likely (+Verb)... / It might seem ...</i>
		never	<i>As far as we/anyone can</i>
			<i>tell/foresee/forecast/predict/make a prognosis ...</i>
			<i>Hypothetically/tentatively/ In principle/potentially</i>
			<i>(It is) not very probable (that)</i>
			<i>(It is) not very likely (that)</i>
			<i>It is not impossible/improbable (that)/</i>
			<i>There is a remote possibility/small chance</i>
			<i>(It is) not unlikely (that)</i>
			<i>(There is) little evidence</i>
			<i>(It is) unlikely (that)</i>
			<i>(It is) improbable (that)</i>
			<i>(It is) impossible (that)/There is no chance</i>

I think («my viewpoint is...»)	VS.	(,) I think, / I guess, («perhaps»; «possibly»; «maybe»)
<i>I think this distinction between hierarchical or top-down coordination process versus nonhierarchical — bottom-up or emergent coordination process — is an important distinction.</i>		<i>When in a later era the computer became one of the dominant technologies in the world, then suddenly computational and information-processing models became much more prevalent in psychology. And, <u>I think</u>, the same thing is true in organizational theory. The old mechanical models of organizations are increasingly being replaced by information processing models.</i>

MODAL VERBS AND THEIR EQUIVALENTS (Scientific Sense)

CAN

theoretical possibility; paraphrasable by epistemic «It's possible»

Naturally, even specific elements can be defined in this way.

COULD

paraphrasable by epistemic «It's possible», «perhaps»

We could get regulated management.

COULD + (VERY) WELL
smaller degree of possibility than MAY + (VERY) WELL

The chances could very well be zero.

MAY 1

(factual possibility; smaller degree of possibility than CAN paraphrasable by «It is possible that»/«perhaps»

However, there may be a seasonal effect.

MAY 2

hypothetical possibility

MAY 3 + (VERY) WELL**BY FAR**

greater degree of possibility than MAY 1

In 10 years that may be the case.

There may very well be a place for pricing mechanisms.

Personal letters are by far the most complex genre, while written sermon notes are by far the least involved.

Questions like these may explain why some of the open-access experiments to date have taken years to get off the ground.

MAY 4 / MAY OR MAY NOT / TIME WILL TELL

explicit 50/50 possibility

Public policy may or may not be the problem.

Time will tell.

MIGHT / WOULD 1

paraphrasable by «It is possible that ...»

It might use a lot of CPU time.

MIGHT + WELL

paraphrasable by «It's rather highly likely that ...»

That might well have some real advantages for economic efficiency.

WOULD 1

tentative possibility

That would be a stupid waste of money.

Because all such pointers would have the same size, this would solve the problem.

WOULD 2

certainty

Water would boil at 100 degrees Celsius.

SHOULD 1**WOULD 3 / WILL**

hypothetic, tentative possibility; paraphrasable by «I think it's probable»/ «I assume»

Shouldn't the concentration of bones in the fossil record be, at very least, above average?

Would they go through this stage?

Will the least abundant model be imitated the most?

MUST/ SHOULD 2/ HAVE (GOT) TO / BOUND TO/ DESTINED TO/ (BE) GOING TO / WILL

high degree of certainty

It must work correctly on multiprocessor systems.

The present model should continue to prove useful.

The INTERNET is going to take over.

MAYBE

paraphrasable by «perhaps»,
«possibly»; often used in
informal exemplification

PERHAPS / ARGUABLY

uncertain possibility, smaller degree
than MAY;

MAY/MIGHT/COULD/

MUST + HAVE + PARTICIPLE II
hypothetical, theoretical possibility

(BE) LIKELY

paraphrasable by «may»

NOT IMPOSSIBLE

paraphrasable by MIGHT

TEND / (BE) PRONE TO

paraphrasable by «be likely (to do or
be something); do or be often or
usually»

(IT IS) PROBABLE/ PUTATIVE /
PROBABLY/SEEM / LOOK (LIKE) / APPEAR
SEEMINGLY / IT SEEMS/
PRESUMABLY / SUPPOSEDLY/
OSTENSIBLY

tentative possibility

When the door opens, some files are bound to come in.

For example, maybe a company wants to have the connectivity between two sites.

It still must compete for broadband subscribers satellite, and soon, perhaps, wireless. So, arguably, the cable company already has ample incentive to ensure consumers are well served.

It may have been the environment I was in.

They might not have been learning exactly what they needed to learn. It could have been used in counting. People who built Stonehenge must have had substantial astronomical knowledge.

Now the flat fee is likely to persist.

Thus, it is likely that such processes will become important channels for conversion in question.

It is not impossible nowadays.

Data parallelism tends to be «massive» because computations typically involve a large amount of data and a corresponding amount of time.

It is especially prone to the so-called wrong solutions.

It is probable that future processors will harvest significantly more parallelism.

This mechanism suggests a putative functional role for the transcription observed.

The principal driver is the seemingly inexhaustible human appetite for more bandwidth per user.

It seems to be progressing well.

About half the genes appear to be on seven operons, some seem to be organized in large patches on the genome.

And then foreign customers would presumably add the cryptographic capability.

They seem to be converging to a two-layer communication structure.

Happily, the planned additions to the capacity appear to put the industry right on track.

It looks like it will not prevail as the dominant global standard.

The authors use these findings to call into question the usefulness of pedagogical strategies that ostensibly encourage students to resist institutional structures.

(IT IS) POSSIBLE/ POSSIBLY/
POTENTIAL(LY)

paraphrasable by CAN / MAY

A/ AN/ ONE (OR MORE) /
ONE (POSSIBLE)/

A (ONE) SCENARIO /

/ INTERPRETATION/

TO INTERPRET

ALTERNATIVE(LY)/ ANOTHER

*possibility implying alternative
viewpoints*

PRESUME/ASSUME/ASSUMPTION
/SUPPOSITION/CONJECTURE

expressing confident belief

PREDICT/FORESEE/
FORECAST/PROJECTION/

MAKE A PROGNOSIS/

EXPECT/ ANTICIPATE/ ENVISAGE

/HYPOTHESIZE/

HYPOTHETICAL(LY)/

CRYSTAL BALL GAZING

hypothesizing

paraphrasable by

*«I (confidently) predict (that)»/ «It is
likely that ...»*

GUESS / THINK / SURMISE

SPECULATE/SPECULATION

CONJECTURE /

hypothesizing

*paraphrasable by «perhaps»/
«possibly»/«maybe»*

TENTATIVE(LY) /PRELIMINARY/
EARLY/ HUMBLE/ HUMBLY /
TACIT(LY)

expressing tentativeness

It's possible that the community is not well informed.

A potentially significant drawback is that no standard application programming interface will be defined.

It provides a way of separating the code.

One possible development could be a rigorous extension of FMS.

Alternatively, a process can be interrupted.

The server has one or more threads to receive such requests.

In this section, a scenario illustrated by Fig.7 is discussed to show how the various technologies described above may be deployed to enable new service offerings and business opportunities.

We interpret this to mean that interactions have a minor influence on residue associations.

Another option is to use a virtual environment.

The four factors we presumed were not real drivers at all. I'm assuming that the organizations we represent can make that happen.

Major increases are expected in this area.

We envisage an implicit admission control.

Projections by U.N. show that if populations continue to grow at 1990s rates, the world population will increase to 649 billion by the year 2150.

For the present study I hypothesized that the recognition of the idioms might be influenced by such factors as the context of the idiom, the meaning of a particular word in the idiomatic phrase, the experiences and background knowledge of the participant, or an expression in the native language.

The chapter has tried to undertake some crystal ball gazing with regard to the future of teacher education in Canada.

Most of his history of life is guess piled on conjecture, overlaid in speculation.

One might surmise that readers would construe any statement about the uncertain operation.

This heterogeneity is an opportunity for us, I think.

I can at this stage only suggest, very tentatively, some possibilities for applications in language teaching.

In an early test, users choose from America Online, CompuServe, and GTE.net. Others involved in the preliminary tests were CompuServe (an AOL subsidiary) and Road Runner.

Let me use a humble analogy to communicate what these spaces are.

It has always been tacitly assumed that narrative skill comes «naturally».

SUSPECT*belief (uncertain)*

**SUGGEST / SUBMIT / ARGUE/
INDICATE/ POINT TO /
INDICATION / SIGN /
IMPLY/INFER/
possibility**

**HOPEFULLY/ IT IS HOPED/
WITH LUCK/LUCKILY
tentative possibility**

**INTUITIVE(LY)/ HEURISTIC/
FEEL/FEELING/HUNCH/
INTUITION/ SERENDIPITY/
SERENDIPITOUS**

Nobody knows the number of computers that can reach the Internet now, in 1995, but we suspect something on the order of 20 to 30.

45 per thousand suggests a little over 11 million hosts. This implies that such containers must be passed by reference.

Both methods point to the existence of influence across long distances.

This may indicate that charge effects have been neutralized.

Only indirect indications exist.

I submit we were lucky.

A learner's competence would hopefully be gained through the insights of generative theory.

It is hoped that this presentation will serve to highlight the need for further research into this promising field.

With luck, those technical changes to the Internet can be implemented in a stable political environment.

Luckily, agents do not necessarily imply a loss of privacy.

My feeling is that they chose not to listen.

Thinking about the measures that we might take to provide such protection will help us find an intuitive basis for the concept.

My intuition is that the process will be much slower.

The decision to use Java was partially serendipitous.

NOTE.**Apparently**

APPARENTLY = *obvious + tentative*
Paraphrasable by «it seems»; «it seems (quite) obvious»; «possibly»
«мабуть, саме ...», «певно.../певне...»;
«як бачимо...»

The idea, apparently, is to make ready for the next year.

BUT MIND predicative use of «apparent»: It is/was apparent (that)... = It is/was (quite) clear that...
«цілком зрозуміло»

Eventually / Eventual

finally / final

possibly / possible
(hypothetical possibility —
paraphrasable by «possibly», «it is possible»)

What this will eventually mean for student learning?

BUT: sometimes EVENTUALLY can mean **only** FINALLY:

The problem with history mechanism is that it can grow without bounds, eventually exceeding the size of the original database.

Exercise 3. Render the following sentences into Ukrainian.

1. It is far from being impossible.
2. This methodology has been used intermittently.
3. Another possible hypothesis apparently is that it could protect the myocardium by regulating mitochondrial respiration.
4. Magmatic products are assumed to be derived from different regions of the mantle.
5. This does not mean, of course, that it is impossible to ask questions or make statements in those languages.
6. The theoretical models have been constructed to describe these cycles and how the cycles may have affected atmospheric O₂.
7. The invasion of the land by such plants should have brought about an accompanying rise in atmospheric O₂.
8. The answers to these and other questions might well change over time.
9. A system whose security cannot be managed is not secure, no matter what evaluators may tell you about its internal controls.
10. The exception-handling mechanism provides an alternative to the traditional techniques.
11. Metals are thought to be equally good guesses.
12. A possible interpretation is that only this unit is involved in interaction.
13. One prime suspect is volcanic activity.
14. One scenario says that all the craters were formed suddenly.
15. It is also possible that relative rotation occurs at a rate that is below current detection.
16. More progress can be made in the short term.
17. Their origin may be elucidated by broadening the base of comparative developmental biology.
18. Perhaps the toughest diplomatic engagements of the Cold war were on-again, off-again negotiations for a global ban on nuclear testing.
19. This would likely be a LAN.
20. He appears to mention this fact in his monograph.
21. She seems to know the company rules.
22. The data obtained appear to be quite correct.
23. The conclusion is sure to be of great interest.
24. My first guess, and that of the others I asked, is that when the conductor width is small, the edge singularities should disappear.
25. Their work also suggests that fossil evidence can be used productively to test ecological theories.
26. It would seem that they are consistently neglecting to do the obvious thing.
27. Only a few indirect indications exist.
28. As the information being navigated and collected by computers becomes increasingly complex, it may turn out that two dimensions are not enough.
29. Apparently, digital content protection is here to stay.
30. By the look of things, South Korea could have edge.
31. Would-be investors seem to like my business plan.
32. They seek to avoid potential risks.
33. Why were they created? These animals may well have been symbols standing for the processes of nature. The caves may also have been sanctuaries for mysterious magical rituals. Other theories hold that the paintings may have constituted a record of the seasonal animal migrations. Quite possibly, these amazing images may have been created simply for the sheer pleasure of making a living likeness of the world the artists saw around them.

Exercise 4. Fill in the blanks.

1. The work is ... to contribute to the solution of the problem.
 - a. unlikely
 - b. unlike
 - c. like
 - d. not

2. There may even ... living microfossils.
 - a. to be
 - b. be
 - c. have been
 - d. has been
3. This conversion tends ... to a translation error.
 - a. leading
 - b. lead
 - c. to lead
 - d. leads
4. Paleofires ... as a control on excessively high or low levels of O₂ .
 - a. could have acted
 - b. and acted
 - c. acts
 - d. to act
5. Our preliminary analysis shows that satisfactory levels of bit-error rate will be
 - a. possible
 - b. possibly
 - c. possibility
 - d. and possible
6. This ... with environmental performance standards.
 - a. can do
 - b. could be done
 - c. have done
 - d. could do
7. The result ... attributed to protein stability.
 - a. might be
 - b. might
 - c. be
 - d. have been
8. The new standards are likely ... in much more active Web pages.
 - a. resulting
 - b. to result
 - c. result
 - d. results
9. I do not ... to know the answer to that.
 - a. claimed
 - b. claims
 - c. claiming
 - d. claim
10. One problem that ... have been foreseen was the problem of Y2K.
 - a. was
 - b. could
 - c. will
 - d. can
11. All views must
 - a. be heard
 - b. hear
 - c. to hear
 - d. hears
12. They managed to attract the scientists who appear... world leaders in their fields.
 - a. to be
 - b. being
 - c. have been
 - d. be
13. We thank our colleagues for their strong support, without which this magazine
 - a. would not be possible
 - b. will not be possible
 - c. would be possible
 - d. be possible

14. It may ... soon.
 a. to happen
 b. will happen
 c. happened
 d. happen
15. Must you ... so soon?
 a. leave
 b. to leave
 c. leaving
 d. leaves
16. Most of the ads seem ... with engineering subjects.
 a. deal
 b. deals
 c. dealt
 d. to deal
17. We had to wait 10 years before we could ... this phenomenon experimentally.
 a. verify
 b. to verify
 c. verified
 d. verifying
18. The luminaries behind the report said the government ... other incentives.
 a. should implement
 b. implementing
 c. implement
 d. shall implement
19. Such research would likely ... us some preliminary data.
 a. to give
 b. give
 c. gives
 d. giving
20. I would like ... the readers about the International conferences and Symposiums in our region with world-class participation.
 a. tell
 b. telling
 c. tells
 d. to tell
21. Maybe we can ... sponsors and advertisers to pay some of the cost.
 a. find
 b. to find
 c. finds
 d. finding
22. The big picture ... pretty clear.
 a. seemingly
 b. seem
 c. to seem
 d. seems
23. The best things appear ... in small packages.
 a. to be coming
 b. come
 c. comes
 d. were coming

Exercise 5. Read the following texts and try to appreciate the humor.

UNscientifically speaking...

A.

You Might Be a Geologist If ...

1. You own more pieces of quartz than underwear.

2. Your rock collection weighs more than you do.
3. You can pronounce the word «molybdenite» correctly on the first try.
4. You're planning on using a pick and shovel while you're on vacation.
5. Your Internet home page has pictures of your rocks.
6. You never throw away anything.
7. You consider a «recent event» to be anything that has happened in the last hundred thousand years

B.

«Whenever anyone says, «theoretically», they really mean, «not really». (Dave Parnas)

A BRIEF GUIDE TO SCIENTIFIC LITERATURE

It has been long known	→	I haven't bothered to check the references
It is known	→	I believe
It is believed	→	I think
It is generally believed	→	My colleagues and I think
There has been some discussion	→	Nobody agrees with me
It can be shown	→	Take my word for it
Of great theoretical importance	→	I find it interesting
Of great practical importance	→	This justifies my employment
Of great historical importance	→	This ought to make me famous
Typical results are shown	→	The best results are shown
The values were obtained empirically	→	The values were obtained by accident
Additional work is required	→	Someone else can work out the details
The investigations proved rewarding	→	My grant has been renewed

(By: Chris Taylor)

C.**CREATIVE SERENDIPITY**

Serendipity is «the natural ability to make interesting and valuable discoveries by accident» (Longman Dictionary of English Language and Culture). Its origin probably refers to the title of Persian fairy tale «The Three Princes of Serendip», which is about well-educated and extremely intelligent heroes who regularly discovered pleasant things that they were not even searching for (another proof of an old adage, «fortune favors the prepared mind»).

TEXT. Read the text and be ready to answer the questions that follow.

Many scientists agree that the most important characteristics of the innovative mind are an open mind and **persistence** in the face of **discouragement**. The two are related. Great innovators intrinsically enjoy their work, and therefore keep an open mind. Not fearing failure, they have little **hesitancy** in trying something new, like fine artists who say, «You've got to draw it wrong before you draw it right». Even if an experiment fails, they learn from it. Another important thing is freedom that really **nurtures** discovery.

Successful innovators follow different patterns of inventions. A common characteristic, however, is the ability to step back and view a larger picture. For innovative process both mental and experimental models are equally important. Prior to synthesizing the invention, the innovator **compartmentalizes** experiential knowledge. Metaphorically speaking, one puts all the things one knows on cards and throws them into the air. As they hit the floor in interesting combinations, new insight may be revealed.

Inventors indeed do combine patience, skill and pragmatism with an intense, sometimes romantic refusal to give up.

to persist — to continue the course of action in spite of opposition or warning укр. уперто робити

persistence — укр. завзятість, наполегливість

to discourage — to take away courage, confidence or hope from укр. розчарувати, зневірятися

to hesitate — to pause before making a decision or taking an action укр. вагатися

hesitant — showing uncertainty about deciding to act укр. той, що вагається

to nurture — to give care to, to cause or encourage to develop укр. плекати

to compartmentalize — to divide into separate divisions; to categorize укр. розділяти, категоризувати

Pathbreakers usually **build on** the work of others before them; rarely does genius come without a **pedigree**. Consider the laser. Its origins go back to fundamental research on microwave spectroscopy, which, in 1954, led to the operation of the first maser (that is still in use in radio astronomy). But by the late 1950s the laser emerged (now applied in printing, telecommunications, optical scanning, the precision cutting of materials, the reproduction of music etc.) In other instances, curiosity plays a key role. Thus the question arises: «What is innovation?» As a matter of fact — how is innovation really defined? The answer is **anything but straightforward**. Anyway, some inventors are lucky, some are just doing their jobs — but all help define the essence of innovation on which technological progress ultimately depends.

A closely related issue is creativity. There is no doubt that many important engineering discoveries were the eagerly anticipated results of careful studies and calculations. Thomas Edison's light bulb was the culmination of many years of methodical research. However, careful planning does not rule out the possibility of spontaneous discovery. Some important innovations are the result of serendipity — accidental discoveries that have opened up unexpected fields of exploration. We CAN be more creative; the question is HOW to unlock your creativity to improve the quality of your ideas. How do you instill more creativity in the process? One trick is to try phrasing ideas in statements that begin with «What if...» and/or «I wish...» . Don't be afraid to let your imagination and intuition run free. One of the classical creativity-enhancing techniques is the so-called «brainstorming», which can be too messy, though. There is at least one better way. Called «synectics», this method combines brainstorming with a more disciplined harvesting of ideas that are organized into categories and reduced to a manageable number of options. The method, developed by William Gordon, states: «Trust things that are alien, and alienate things that are trusted.» This encourages, on the one hand, fundamental problem-analysis and, on the other hand, the alienation of the original problem through the creation of analogies. It is thus possible for new and surprising solutions to emerge. Another way of being more creative is to look at things from different perspectives. We tend to stick with the current paradigm — the way it's done today — so try to view the world (and your problem) differently. Try stirring up ideas by talking to people from different (sub)cultures and professions, and keep your eyes open when you're traveling (another rich source of ideas).

pathbreaker — укр. першовідкривач
to build on — to use as a base for further development укр. ґрунтуватися, базуватися
pedigree — ancestry укр. родовід
anything but — far from, not at all укр. все, що завгодно (будь-що), тільки не
straightforward — not difficult to understand or explain, simple; not hiding anything укр. простий, нескладний
anything but — far from, not at all укр. все, що завгодно (будь-що), тільки не
straightforward — not difficult to understand or explain, simple; not hiding anything укр. простий, прямий

1. What is the problem under discussion?
2. Does the author give a definition of innovation?
3. What qualities do we expect to find in an innovator?
4. What is usually disregarded by an innovator?
5. Why does the author mention «throwing cards»?
6. What example is given to illustrate the history of inventions?
7. What is specific about creativity?

8. Keeping up with changing times is a challenging task. Look around your work area. How many unread or «thumbed» magazines, journals, info packets, texts or papers are lurking around? Information ages so quickly now. The articles which someone worked very hard on sometimes become obsolete the moment they are published. Do you think it would be a worthwhile idea if they came with something like «best before» label on them?

Exercise 6. Translate the following table.



MODAL VERBS AND THEIR EQUIVALENTS (Popular Sense)

Modal verbs are used when we say that we expect things to happen, or that events are possible (necessary, improbable, impossible), or when we say that things did not happen, or when we are not sure whether they happened.

Modal verbs have no -s ending for the third person singular, they are followed by the infinitive WITHOUT to (except for *ought to*).

Modal verbs can be used **with perfect infinitives** to talk about things that did not happen, or which we are not sure about in the past.

Modal verbs make **questions** and **negative forms** WITHOUT using *do/did*.

Modal verbs are: **can, could, may, might, shall, should, will, would, must, ought to, dare**. In **British English** **need** can be both a modal verb and an ordinary verb. In **American English** it is NOT used as a modal.

MODAL VERBS

meaning	can; could; can't; couldn't; could have	equivalents (phrasal modals)
<u>present ability</u> теперішня можливість	<u>can</u> I <u>can</u> drive. Я можу (вмію) водити машину.	<u>to be able to</u> Ann is <u>able</u> to type. Енн може (вміє) друкувати.
<u>past ability</u> можливість у минулому	I <u>could</u> speak German when I was a child. У дитинстві я вмів розмовляти німецькою.	I <u>was able</u> to speak German when I was a child. У дитинстві я вмів розмовляти німецькою.
<u>future ability</u> можливість у майбутньому	—	He <u>will be able</u> to pass the exam. Він зможе скласти іспит.
<u>permission</u> дозвіл	You <u>can/could</u> use my phone. Можете скористатися моїм телефоном.	
<u>possibility</u> можливість	The dictionary <u>can</u> be on this shelf. Словник може бути на цій полиці. <u>Could</u> he be there? Може, він там? (напевне це невідомо)	
<u>past possibility</u> (uncertain if the action occurred) можливість у минулому (невідомо, чи дія відбулась)	They <u>could have written</u> the letter if they wanted to. Якби вони схотіли, то написали б листа (могли б написати). He <u>could have done</u> it. Можливо, він це і зробив (але напевне невідомо).	
<u>impossibility</u> неможливість	I <u>can't</u> understand. Я не можу зрозуміти. He <u>couldn't</u> speak. Він не міг говорити.	
<u>polite request</u> ввічливе прохання	<u>Could</u> you wait? Чи не могли б ви зачекати?	

meaning	may; might; might have	equivalents (phrasal modals)
<p><u>probability</u> ймовірність, можливість</p> <p><u>permission</u> дозвіл</p> <p><u>uncertain possibility</u> малоймовірна можливість</p> <p><u>past possibility</u> можливість у минулому про яку невідомо, чи вона відбулася</p>	<p>He <u>may/might</u> be in the library.</p> <p>You <u>may</u> ask any questions. Можете ставити будь-які запитання.</p> <p><u>May</u> I speak to professor Johnson? Чи можу я поговорити з професором Джонсоном?</p> <p>He <u>may</u> go to the library. Може, він піде до бібліотеки (але це не дуже ймовірно). He <u>might</u> go to the library. Можливо, він і піде до бібліотеки (але я особисто вважаю, що це не так).</p> <p>They <u>may/might have</u> arrived in the morning. I'm not quite sure. Можливо, вони приїхали вранці. Я не дуже впевнений у цьому.</p>	<p><u>to be allowed to</u> <u>to be permitted to</u></p> <p>You're <u>allowed to</u> bring dictionaries. Можете принести словники.</p>

meaning	must; must have; must not	equivalents (phrasal modals)
<p><u>necessity</u> <u>and</u> <u>obligation</u> необхідність та обов'язковість</p> <p><u>advisability</u> порада</p> <p><u>probability</u> ймовірність, можливість</p>	<p>All students <u>must</u> attend these classes. Усі студенти повинні відвідувати ці заняття</p> <p>You <u>must</u> read it. It's marvellous. Ви повинні прочитати — це чудова річ!</p> <p>John <u>must</u> be ill. Мабуть, Джон захворів. I <u>must have</u> lost my book somewhere. Мабуть, я десь загубив свою книгу.</p>	<p><u>to be to</u> <u>to have to</u> You <u>have to</u> (are to) come on time. Вам доведеться прийти вчасно.</p> <p><u>to have got to</u> I've <u>got to</u> go to the university. Мені треба (я повинен) йти до університету.</p> <p><u>to advise</u> <u>«it's a good idea»</u></p>

<u>absense of obligation</u> відсутність необхідності	You mustn't drive fast. There is a speed limit here. Ви не повинні їхати швидко. На цій дорозі обмеження швидкості.	
	<u>You must not = it is forbidden</u>	<u>You don't have to = it is not required</u>
	Cf.: You needn't drive fast. We've plenty of time. Не треба їхати швидко — у нас досить часу. Also: — Must I read? Я повинен читати? — No, you needn't . Ні, не треба. — No, you mustn't . Ні, не повинні.	

meaning	shall; should; should have; will; would; would have; ought to	equivalents (phrasal modals)
<u>necessity and obligation</u> необхідність та обов'язковість <u>advice</u> (порада) <u>advisable action (unfulfilled)</u> порада, що не була здійснена	Candidates should be prepared to answer questions. Кандидати повинні бути готові дати відповіді на запитання. You ought to study every day. Ви повинні вчитися щодня. MIND negative form for ought to: You ought to translate this article, but she shouldn't . This theory shall be referred to. На цю теорію треба (обов'язково) послатися. You should study harder. Було б непогано, якби ви вчилися більш наполегливо. Perhaps, you should have called him earlier. Можливо, треба було зателефонувати йому раніше. You ought to have given your phone number. Треба було дати свій номер телефону.	<u>to be supposed to</u> You are supposed to study every day. Ви повинні вчитися щодня. <u>to advise</u>

<p><u>logical conclusion</u> логічний висновок</p> <p><u>offer</u> пропозиція</p> <p><u>habitual action</u> звичайна дія</p> <p><u>wish</u> бажання</p> <p><u>polite request or refusal</u> ввічливе прохання або відмова</p>	<p>It <u>should</u> rain. Здається, зараз піде дощ (логічно припустити, що піде дощ).</p> <p><u>Shall</u> I help you? Вам допомогти?</p> <p>Ice <u>will/would</u> melt at 0° C. Льод тоне при нульовій температурі. This procedure <u>would</u> not be used in this case. У цьому випадку така методика зазвичай не використовується.</p> <p>I <u>would</u> like to comment it. Мені хотілося б це прокоментувати.</p> <p><u>Would</u> you wait? <u>Would you mind</u> waiting? Ви б не зачекали, будь ласка? He <u>would not</u> agree. Він не погодиться (не схоче погодитися).</p>	
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meaning	had better; would rather; dare	equivalents (phrasal modals)
<p><u>advisability</u> порада</p> <p><u>preference</u> надання переваги</p> <p><u>challenge</u> виклик</p>	<p>You're pressed for time, you <u>had better</u> go. У вас обмаль часу, краще вам зараз піти.</p> <p>I <u>would rather</u> not say what I think. Краще я не буду казати про те, що думаю.</p> <p>Did he <u>dare</u> (to) criticize the boss? І він насмілювався критикувати начальника?</p>	<p><u>to prefer</u></p>

NOTE.

* **a must** — something which is necessary or very important

Renovation of the laboratory is **a must**. Реконструкція лабораторії є конче необхідною.

* **able** — clever or skillful, competent

She is an **able** teacher. Вона — здібний вчитель.

Exercise 7.

What does it mean to be «a fluent speaker of a foreign language»? Decide what a person **must/should/can/may/might** be able to do. Then study the numerical rating system developed by one of the departments of U.S. State Department. How would you rate your own abilities in English? If you speak other languages, rate yourself as well.

1 — Elementary proficiency

- ✓ able to satisfy routine travel needs (hotels, prices etc.);
- ✓ able to ask, answer, and understand questions and statements about simple topics related to daily life;
- ✓ frequent errors in grammar and vocabulary.

2 — Limited working proficiency

- ✓ able to satisfy routine social demands and basic work requirements;
- ✓ able to speak with confidence, but not easily, on such topics as current events, personal information, daily job requirements;
- ✓ can understand the general meaning of most conversations and speak clearly enough to be understood by all native speakers;
- ✓ can use simple basic grammar accurately, but may require help to express more complex ideas.

3 — Minimum professional proficiency

- ✓ able to satisfy all normal social and work requirements with fluency and accuracy, as well as professional discussions in a special field;
- ✓ can understand all conversations at normal speed;
- ✓ vocabulary is broad enough;
- ✓ errors in grammar and vocabulary are infrequent and never interfere with understanding;

4 — Full professional proficiency

- ✓ can handle any conversation with a high degree of fluency and precision;
- ✓ errors in grammar and pronunciation are extremely rare, but still listeners would not assume one to be a native speaker;
- ✓ can do informal interpreting to and from the language;

5 — Bilingual proficiency

- ✓ complete fluency in the language equivalent to that of an educated native speaker.

Exercise 8. Choose the correct option.**1.**

A: Where's Ann?

B: I'm not sure. She ... at the meeting.

- a. is
- b. might be
- c. must be
- d. could have been

2.

A: How does Andy get to the University?

B: I don't really know. He ... the bus.

- a. might take
- b. takes
- c. must take
- d. will take

3.

A: It's really cold in here today.

B: Yes, somebody ... the window open.

- a. must leave
- b. might leave
- c. must have left
- d. will leave

4.

A: Have you heard the weather forecast?

B: No, but look at those clouds in the sky! I think it ... rain.

- a. could
- b. is going
- c. should
- d. ought to

5.

A: Did Mr. Brown call while I was out?

B: I'm not sure. He

- a. might have
- b. might
- c. did
- d. didn't

6.

A: Are you coming with us?

B: I'm not sure. I ... go to the library instead.

- a. must
- b. will
- c. might
- d. shall

7.

A: Can I speak to professor Johnson?

B: She's not in her office, and she doesn't have any more classes today, so she ... home.

- a. might go
- b. must have gone
- c. will probably go
- d. would probably go

TEXT. Read the text and be ready to answer the questions about it.

The computer is becoming more fun and more useful the less abstractly it can represent things. Television is becoming more entertaining and educational thanks to microprocessors and compact-discs (CD, CD-R, CD-RW, DVD etc.). Multimedia is another technology that is sure **to boost** personal computers. This technology combines the usual text and graphics with digitized voice and music. With multimedia programs computers are able **to handle** files of sound and full-motion video images as easily as they handle text. The computers play voice and music in high-fidelity digital audio stereo, and show movie-quality images. In a nutshell, multimedia is the perfect marriage of print and broadcast news. What makes it possible is rapidly evolving digital technology, and the efficiency it offers in manipulating, **storing**, and **retrieving** information.

Multimedia can mean various things. It can be an encyclopedia on a disc, a multimedia electronic mail sent over the Internet. Standard reference books on computer are becoming more accessible and **livelier**: dictionaries pronounce words, and historical figures deliver quotes. Multimedia **repository** — the library of the future exists at the Library of Congress in Washington, D.C. This «library without walls» collections are the original multimedia. The library keeps the largest **stockpile** of knowledge in the world, the nearest thing to the library of Alexandria, which held the knowledge of the time in antiquity. Among the library's millions of items there are books in 470 languages, movies, television shows, maps, cartoons, and software. The library has foreign offices around the world, and document exchange with all foreign countries that have diplomatic relations with United States.

Some believe that text may become a more important force because of many multimedia applications. Although no **comprehensive** study exists on the effect of interactive multimedia on learning, some **claim** that interactive technologies speed up learning, and often test scores rise, too. The reasons may be self-paced personalized instruction, immediate interaction and **feedback**. One-on-one instruction can mean that a student is not **embarrassed** about asking questions. Or consider built-in tests — when a user makes a mistake, s/he is taken directly back to the passage involved (all the mistakes can be monitored, too). Some studies **suggest** that multimedia can improve learning. The history of educational reform, though, has shown that «innovative» technologies that use other than paper medium, have done little to benefit learning. Critics claim that such **fads** include radio in the 1940s, TV and audio tapes in the 1960s, and computer-assisted instruction in the late 1970s and early 1980s. The **content** of

to boost — to help to advance or improve

укр. удосконалювати, покращувати, підтримувати

to handle — to deal with, control

укр. поводитися з, керувати (управляти), маніпулювати

to store — to put or keep something while not in use for future use

укр. зберігати, накопичувати

to retrieve — to find and bring back, to regain

укр. шукати, поновлювати

lively — full of activity

укр. жвавий

repository — a place where things are stored

укр. сховище

stockpile — a large store of something

укр. запас, резерв

comprehensive — thorough, broad, including a lot of everything

укр. вичерпний, всебічний, всеосяжний

to claim — to declare to be true, to maintain

укр. заявляти, стверджувати, твердити, впевнено висловлювати що-небудь

feedback — remarks about or an answer to an action, process, etc.

укр. зворотній зв'язок, відгук

to embarrass — to cause to feel anxious and uncomfortable

укр. непокоїти, бентежити

to suggest — to indicate, to make clear (perhaps indirectly)

укр. наводити на думку

fad — an interest or activity that is followed very keenly but usually only for a short time

укр. швидкоплинне захоплення

NOTE.

Also: to suggest — to propose, to mention as possibility, state as an idea for consideration.

укр. пропонувати

Any suggestions? Чи є ще пропозиції?

instruction, not the means of its **conveyance**, such researchers claim, is what influences performance results. The study performed at Massachusetts Institute of Technology (MIT) demonstrated that the medium — computer or paper — did not significantly influence overall **aptitude** scores, although those students who used computers had significantly higher scores in such area as analogical reasoning. Women and **novices** who used the computer got somewhat higher overall scores than their counterparts who used text. For men and experienced students, text or computer was not a significant factor. In a post-test questionnaire, however, the majority of students reported they preferred the computer medium to paper. Although interactive multimedia may teach certain portion of a **curriculum** well and others poorly, it might help us solve some educational problems. We should keep one thing in mind: to be **appreciated**, interactive multimedia must be experienced.

content(s) — the subject matter укр. зміст
to convey — to make (ideas, thoughts) known укр. передавати, повідомляти; виражати
aptitude — natural ability or skill, especially in learning укр. здібність, обдарованість
novice — a person with no experience in a skill or subject, beginner укр. початківець, новачок
curriculum — a course of study offered in a school, college, etc. укр. навчальний курс, навчальний план
to appreciate — to recognize and enjoy the good qualities or worth of укр. оцінювати, цінувати

1. What is the subject of this passage?
2. What is specific about interactive multimedia?
3. Why are multimedia applications important?
4. Why is multimedia repository called «library without walls»? How many items could it possibly house?
5. What are the obvious merits of interactive multimedia as far as learning is concerned?
6. Would you like to have access to various multimedia resources? State the reasons why.

Exercise 9. Give English equivalents of:

розвага; управляти; поєднувати графічне зображення та звук; технологія, що швидко розвивається; довідники; бібліотека майбутнього; сховище; мультфільм; покращувати; всебічне дослідження; зворотній зв'язок; бентежити; деякі дослідження наводять на думку; приносити користь; пропозиція; так звані новаторські технології; швидкоплинне захоплення; впливати на загальні результати тестування; початківці; анкета; надавати перевагу комп'ютеру над іншими засобами; навчальний план; навчальні плани.

Exercise 10.

Sometimes the words **to solve** and **to decide** are misused.

To solve means to find a solution to; укр. розв'язувати (вирішувати).

To decide means to reach a decision about; укр. вирішувати.

Translate Ukrainian sentences, then match the two columns:

1. Ви можете розв'язати це рівняння?
2. Ми вирішили погодитися з вами.
3. Цю проблему буде нелегко вирішити (розв'язати).
4. Вони вирішили перенести збори.
5. Ось вирішення усіх наших проблем.
6. Це наше остаточне рішення.

A It will be no easy matter to solve this problem.

B They've decided to postpone the meeting.

C This is the solution to all our problems.

D Can you solve this equation?

E This is our final decision.

F We've decided to agree with you.

EXPRESSING CONDITIONS

<i>If ...</i>	якщо
<i>Even if</i>	навіть якщо
<i>Only if</i>	тільки якщо
<i>*Should...</i>	якщо (так трапиться, що)

<i>On condition (that)</i>		за умови
<i>In case / in the event (that)</i>		
<i>Provided/ Providing</i>		

**Suppose/ imagine / assuming / granted* припустімо

**Unless ...* якщо не; крім випадку

**But for* якби не

**Unless otherwise stated,* якщо немає інших застережень

**As long as / until / till* допоки

If being the case, якщо це саме той випадок,

If so, ... якщо так

If not, ... якщо ні

If any, / If at all якщо взагалі

NOTE.

**Whether (or not)* **If ... or not* чи

USE *whether* (RATHER THAN *if*)

BEFORE the infinitives, and AFTER nouns and prepositions

NOTE.

DO NOT use Future Tense in a sentence where there are two clauses, one of which is time clause beginning with **when; before; until; after/as soon as; unless; should** (as equivalent of **if**).

I will do it		if/should		you come.
		unless		
		when		
		before		
		after/as soon as		

Unless it rains, the meeting will be held outside.

Якщо не буде дощу, збори будуть проведені надворі.

Should you come, I will meet you.

Якщо ти прийдеш, я тебе зустріню.

UNREAL CONDITIONS

Present	Past
<p>If you studied hard, you would pass the exam. Якби ви наполегливо вчилися, то склали б іспит. (зміст: ви не вчитеся наполегливо, тобто нині умова є нереальною).</p>	<p>If you had studied hard, you would have passed the exam. Якби ви наполегливо вчилися, то склали б іспит. (зміст: ви не вчилися наполегливо раніше, тобто умова була нереальною у минулому).</p>
<p>If only I knew it! Якби я тільки знав про це! (тепер) (зміст: я не знаю про це)</p>	<p>If only I had known it! Якби я тільки знав про це! (раніше, колись, у минулому) (зміст: я не знав про це)</p>

I wish I were there.

Як би я хотів бути там (зміст: шкода, що мене там немає).

I wish I had been there.

Як би я хотів бути там (зміст: я шкодую, що мене там не було).

Also: * It's a pity / I regret

Even if he **were** here, **he wouldn't help** us.
Навіть якщо б він був тут (тепер) він би нам не допоміг.

Even if I had a dictionary, I **wouldn't use** it.
Навіть якщо б у мене був словник, я б не скористався ним.

Also:

*If I were in your place (shoes) =
*Were I in your place (shoes)
(Якщо б я був на вашому місці ...)
If I had this book ... = Had I this book ...
(Якби у мене була ця книжка ...)

*but for якби не
transforms into «if it were not for»
(Present Unreal)
and «if it had not been for» (Past Unreal)

Even if he **had been** here, **he wouldn't have helped** us.

Навіть якщо б він був тут (тоді), він би нам не допоміг.

Even if I **had had** a dictionary, I **wouldn't have used** it.
Навіть якщо б у мене був словник (тоді), я б не скористався ним.

But for your help, I'd fail.

Якби не ваша допомога, я б не досяг успіху.

MIND:

*If anything, якщо взагалі; мабуть, навіть; скоріше навпаки

*After all, зрештою

*In any case / In any event / *Come rain or come shine / *Come what may/

*At any rate, / Anyway, / Anyhow, у будь-якому випадку

Whatever happens/ *Whatever betides (me) що б не трапилося

Given... якщо дано / є

Seen / Viewed... якщо розглядати

* Let's take it for granted давайте вважати, що це доведено (зрозуміла річ)

*It being so, .../ This being the case, якщо так,

*Putting it another way, інакше кажучи,

*Taken in that light .../ on this evidence у такому ракурсі

Conditions permitting, ... якщо дозволяють умови

Considering... Беручи го увагу...

What if...? А якщо... ?

Structurally, у структурному плані; якщо розглядати структуру...

MIND:

Archaic Subjunctive phrases:

(the infinitive WITHOUT to)

Звороту туну

It is necessary (important/essential; desirable etc.) that she do (realize) it / be there.

Необхідно (важливо; бажано), щоб/аби вона це зробила (усвідомила)/була там.

*If truth **be** told, правду кажучи,*

*If need **be**, якщо треба,*

*So **be** it. Нехай буде так.*

*Far **be** it from me to... Я далекий від...*

*So **help** me God. Боже, допоможи.*

Exercise 11. Render the following sentences into Ukrainian.

1. Viewed from this perspective, it is not an isolated development.
2. She wondered (asked) whether the assistant provided all the necessary handouts.
3. It depends on whether they pre-register or register at the conference.
4. It's your decision whether you choose to continue the experiment or to stop.
5. Safe drinking water is often taken for granted in the modern world.
6. The flexibility also makes it possible (if suitable licenses are available) to move ahead.
7. Unless Chinese authorities can be persuaded, the new standard could take on the force of law at the end of this year, if the Ministry of Information Industries manages to push it through.
8. If just one signal were employed, it would be straightforward to optimize the process.
9. Taken in that light, it is a compelling reading.
10. If an invention is made by an engineer, should such an invention be rejected because it was made not a by a licensed engineer, regardless of how useful, imaginative or safe it is? Following this logic, all inventions made by Thomas Edison should not be patented, manufactured and sold because he was thrown out of school after three months.
11. If they are involved, they are going to stay and contribute.
12. What if you take the INTERNET as an organizational model for how to manage a business?
13. Conceptually, the two devices resemble each other.
14. Metaphysics aside, that question became harder and harder to answer.
15. If he or she were a recent graduate, I just hoped he or she would become competent in time.
16. If you are not interested in asking questions, you are not interested in having answers.
17. Unless otherwise stated, follow the usual procedure.
18. If completed, the experiment will make it possible to draw definite conclusions.
19. Given certain conditions, such experiments could be carried out by almost everyone.
20. When being pure, water is a colorless liquid.
21. Stated in a simple form, the hypothesis runs as follows.
22. Provided certain basic requirements are met, the work may be completed in time.
23. These trends would be taking place, presumably, if only a handful of countries were talking to each other.
24. Granted, this doesn't represent the world at large, and yes, there's plenty of inequity with respect to access.
25. If anything, technical support workers are more popular than ever.
26. Once perfected — technically and economically — GPS will offer a key to remote-control vehicles.
27. May the group succeed, as well as all other engineers.
28. «Come rain or come shine» it another English idiom featuring the so-called Archaic Subjunctive.
29. However, if proper attention is paid to the question of language learning, the problem of disadvantage dramatically diminishes. If a global language is taught early enough, from the time that children begin their full-time education, and if it is maintained continuously and resourced well, the kind of linguistic competence which emerges in due course is a real and powerful bilingualism, indistinguishable from that found in any speaker who has encountered the language since birth. These are enormous «ifs»...
30. Whatever betides, trust in God.

Exercise 12. Fill in the blanks.

1. If inertia and gravity ... like other manifestations of electromagnetic phenomena, it might someday be possible to manipulate them by advanced engineering techniques.
 - a. will be
 - b. are
 - c. is
 - d. was
2. Conditions ..., we will return tomorrow.
 - a. permit
 - b. to permit
 - c. permitting
 - d. permits
3. If Java is the answer, what...?
 - a. was the question
 - b. the question was
 - c. the question had been
 - d. has been the question
4. If, in a given design, the fabrication processing ... in circuits that are faster than expected the modulator parameter in question could actually decrease.
 - a. results
 - b. result
 - c. will result
 - d. to result
5. If breakthroughs ..., the prospects for bringing down greenhouse gas emissions will improve.
 - a. occur
 - b. occurs
 - c. will occur
 - d. occurring
6. If she ... tomorrow, we will set a new appointment for her.
 - a. will call
 - b. call
 - c. calls
 - d. called
7. Suppose you ... to deposit your latest research article.
 - a. will decide
 - b. deciding
 - c. decide
 - d. decision
8. If she ... here now, she would help us a lot.
 - a. was
 - b. is
 - c. will be
 - d. were
9. ... the fundamental factors change, I will not change my conclusions.
 - a. Unless
 - b. Another
 - c. When asked
 - d. In order to
10. Will it ... to today's technology?
 - a. to tie
 - b. be tied
 - c. ties
 - d. tied
11. Before you ... compiling information for your proposal, you should consider the guidelines of the Foundation.
 - a. will continue
 - b. continue

- c. continues
d. continued
12. ... that you are right about this, what shall we do?
a. What if
b. After all
c. In any case
d. Assuming
13. When a company ... to replace mainframes with network servers, it sets the new system up in parallel and shuts down the old system only after a safe period.
a. will decide
b. decide
c. decides
d. deciding
14. Don't apply for the job ... you qualify.
a. unless
b. lest
c. of course
d. but for
15. ... anything go wrong, the whole project would fail.
a. Providing
b. Should
c. As long as
d. Given
16. ... there is no opposition, we'll hold the meeting tomorrow.
a. Provision
b. Provide
c. That
d. Provided that
17. If ... the authors for clarification/further information, it is probable that a different outcome would have resulted.
a. contacted
b. they contacted
c. had they contacted
d. they had contacted

Exercise 13. Choose the correct option.

1. I wish you would have called.
a. You called.
b. You didn't call.
2. If I have money, I buy English books.
a. I always do this.
b. I do this when I have money.
3. If she had studied for her test, I'm sure she would have done quite well.
a. She didn't study.
b. She studied.
4. If Mary had been at the office, she would have helped you.
a. Mary helped you.
b. Mary didn't help you.
5. You could have gotten a higher score.
a. You didn't get a high score because you didn't study.
b. You got a high score because you studied.
6. They could have finished the project on time.
a. They had the ability to be quicker.
b. They finished the project on time.
7. Let's pretend that we have this opportunity.
a. We have the opportunity.
b. We don't have the opportunity.

8. I wish you had come back.
 - a. You did not come.
 - b. You came.
9. If you had done your homework, you would have gotten an excellent mark.
 - a. You didn't get an excellent mark because you didn't do your homework.
 - b. You did your homework, and so you got an excellent mark.
10. You could have brought a friend to the party.
 - a. You came alone.
 - b. You came with a friend.
11. I wish that you liked the meeting.
 - a. You didn't like the meeting.
 - b. You liked the meeting.
12. I hope that you enjoyed the party.
 - a. You didn't enjoy the party.
 - b. There is actual possibility that you liked the party.

Exercise 14. Make up microdialogues with your colleagues. Work in pairs.

What would you do if you were

10 years old (young) again
a writer
a millionaire
head of your department

Example:

A. I wonder, what would you do if you were a millionaire?

B. If I were a millionaire, I would give all my money to my teacher!

Exercise 15. Translate Ukrainian sentences. Then match the two columns.

1. Якби тут був мій науковий керівник, він би, безсумнівно, усе пояснив.
2. Без води не було б життя.
3. Бажано, аби результати було опубліковано.
4. Якби був використаний цей новий метод, ми отримали б кращі результати.
5. Життя не могло б існувати на Землі, якби не тепло та світло, яке вона отримує від сонця.
6. Головна вимога — щоб наш експеримент закінчився вчасно.
7. Більшість сучасних винаходів була б неможливою без наукового прогресу.
8. Важливо, аби він ретельно виконав свою роботу.
9. Якби у мене була ця книга, я б дав її вам.
10. Необхідно, аби вони зазначили методи, які б можна було використати надалі.
11. Якби він знав теорію, він би пояснив цей феномен.
12. Я хотів би сказати декілька слів.
13. Якби тоді у нього був час, він би прийшов.

- A** The main requirement is that our experiment be finished in time.
- B** There would be no life without water.
- C** Most of the present-day discoveries would not have been possible without science progress.
- D** If I had this book, I would give it to you.
- E** Were my research advisor here, he would undoubtedly explain everything.
- F** It is necessary that they indicate methods that might be developed further.
- G** He would have come, if he had had time then.
- H** Had he known the theory, he would have explained this phenomenon.
- I** It is desirable that the results be published.
- J** Life could not exist on the Earth but for the heat and light which it receives from the Sun.
- K** If this new method were applied, we would obtain better results.
- L** It is essential that he perform his work carefully.
- M** I would like to say a couple of words.

Exercise 16. Read the passage and answer the questions that follow.

Born in Montreal, Oscar Peterson is recognized the world over as one of the greatest pianists in the history of jazz music. Combining classical mastery with jazz improvisation, he has redefined his art, giving the world a new style of jazz. In the course of a career that began in 1942, Oscar Peterson has worked with all the greats, including Ella Fitzgerald, Dizzy Gillespie, Count Basie, Nat King Cole, Louis Armstrong, Duke Ellington, and Stan Getz. Oscar Peterson has received countless honours and awards, including numerous Grammys and Junos. Oscar Peterson is a giant among jazz musicians. Vitality and dedication are the hallmarks of his stellar career as soloist, accompanist, leader and sideman, composer and arranger, teacher and spokesman. Oscar Peterson is a giant in every sense of the word. His dazzling technique combined with his swinging style have made him, as one critic remarked, «the best jazz pianist in the whole world».

1. The passage is about
 - a. Montreal festivals
 - b. History of jazz
 - c. Jazz celebrity
 - d. Jazz musicians
2. According to the passage, Oscar Peterson created a new
 - a. musical instrument
 - b. style in spoken language
 - c. musical manner
 - d. teaching methodology
3. It can be inferred from the passage that Oscar Peterson's career was
 - a. very versatile
 - b. dedicated solely to teaching
 - c. dedicated to classical music only
 - d. judged by one critic
4. In the last sentence, the word technique refers to
 - a. technology expert
 - b. highly skilled worker
 - c. method of doing something that needs skill
 - d. small detail or rule that needs special knowledge in order to be understood
5. It can be concluded that Oscar Peterson is a great
 - a. critic
 - b. poet
 - c. painter
 - d. musician
6. The underlined word recognized could best be replaced by which of the following:
 - a. known
 - b. recalled
 - c. remembered
 - d. criticized
7. The underlined word Combining could best be replaced by which of the following:
 - a. Doing away with
 - b. Telling apart
 - c. Dealing with
 - d. Joining together
8. The underlined word redefined could best be replaced by which of the following:
 - a. characterized in detail
 - b. clearly showed
 - c. exactly explained
 - d. gave the new meaning
9. The underlined phrase In the course of could best be replaced by which of the following:

- a. After
- b. In the end of
- c. During
- d. Prior to

10. The underlined word countless could best be replaced by which of the following:

- a. a few
- b. few
- c. a couple of
- d. very many

11. The underlined word awards could best be replaced by which of the following:

- a. prizes
- b. notifications
- c. papers
- d. invitations

12. The underlined word Vitality could best be replaced by which of the following:

- a. Spirit
- b. Ardor
- c. Movement
- d. Necessity

13. The underlined word dedication could best be replaced by which of the following:

- a. commitment
- b. talent
- c. force
- d. cheerfulness

14. The underlined word hallmarks could best be replaced by which of the following:

- a. great ideas
- b. some ramifications
- c. new approaches
- d. typical qualities

15. The underlined word sense could best be replaced by which of the following:

- a. letter
- b. meaning
- c. representation
- d. sound

Exercise 17. Render the passage into Ukrainian.

What is jazz? It's the music that celebrates the individual, but at the same time is extremely democratic: it's built on improvisation, but not at the expense of group cooperation. It is also an extremely emotional music, but one which requires a lot of thought and concentration to play well, and a music which celebrates rhythmic diversity without neglecting harmonic richness and melodic beauty. It's primarily an instrumental music, although some of its greatest artist — Bessie Smith, Nina Simone, Etta James and others are the vocalists. The word «jazz» itself is really very hard to define.

It is impossible to say exactly how and when jazz was born, but it's clear that the music is primarily the product of African Americans. Sold into slavery, and separated from their culture, these people proved remarkably resourceful in their ability to take the sounds and rhythms with which they grew up and adapt them to the music of their new home. The earliest forms of such music, i.e. spirituals, represented a fusion of African and American musical ideas, and introduced a new level of expressiveness and rhythmic complexity to American music. Out of this fusion came an emotionally rich style known as the blues, which first took shape around the time of the Civil War, and has remained one of the cornerstones of American music to this day. Another basis of an early jazz was ragtime, a piano-based, strictly composed style of music, with its own highly developed structure. Actually, the blues and ragtime were two sides of the same coin, and it was

when musicians began experimenting with ways to combine them that the music known as jazz began to take shape. That phenomenon happened early in last century in several different places, but especially in New Orleans. It would be an oversimplification to say, as it has so often been said, that jazz was «born» there, but it's certainly true that New Orleans, a cosmopolitan city with a unique mix of races and cultures, was the first great center of this music. New Orleans was the home of Louis Armstrong, the music's first great artist, and its first international star. It was Armstrong who turned jazz into a soloist's art, but he came out of a tradition which prized collective improvisation with the lead instruments (usually trumpet, clarinet, trombone) improvising simultaneously, with each instrument stepping forward occasionally to play a brief solo «break». This sort of music survived as Dixieland. But once Armstrong, a trumpet virtuoso and a brilliant improviser, came on the scene, the nature of the music changed dramatically. He almost single-handedly transformed it from music of collective improvisation to a music built around individual solos.

Lately, the definition of jazz has been stretched so far in so many directions that the word has virtually lost its meaning. It may not always be easy to figure out what is and what isn't jazz today, but one thing is for sure: we are listening to a lot of it in many different forms.

Noteworthy

Discovery consists of seeing what everybody has seen and thinking what nobody has thought.

Albert Szent-Gyorgyi

Unit 7

DOs and DON'Ts for Young Scientists

A Checklist for Information Age

Emphasis

TEXT. Read the text and be ready to answer the questions that follow.

DOs and DON'Ts may be defined as the rules of behavior. They are meant to emphasize certain points that might be useful.

1. DO relate what you are doing to the overall system or project objective.

Make it your business to understand how your part of a project fits into the system being designed and what mission or objective that system is trying *to accomplish*. Putting it another way, try to understand the big picture.

There are two reasons for doing this. It makes your job more interesting and exciting and it may suggest a simpler, better approach to your part of work. There are hundreds of

cases where someone completed the assigned part of a larger system, and, after learning the overall objective, pointed out a much better way to accomplish the same objective. If the people around you are too busy, try asking the boss at a lunchtime to tell you «a little more about how you fit into overall program». Thus, DON'T be afraid to challenge the planned way of doing something or to propose a new way.

to accomplish — to succeed in doing something; to finish successfully **Synonym:** to achieve
укр. здійснювати, завершувати

2. DO give credit to others for their ideas and contributions.

It's the right, ethical and professional thing to do. Your listeners or readers will be more comfortable and impressed knowing you have explored the field. They will also assume that the work not credited to others is yours. Furthermore, the persons receiving the credit will respect you and be more likely to share their other new thoughts with you. Within a group, such behavior is often *crucial* to effective cooperation. To give emphasis and add a bit of fun, identify a particularly original idea with the originator's name: «Johnson's Chart», «Harris Technique».

crucial (to, for) — of deciding importance
укр. вирішальний

3. DO keep learning.

DO join professional society. DO read articles and books, use the library, and attend professional meetings. Set up a requirement of reading at least one scientific paper a week. Select difficult ones. If you don't understand the paper, ask others. DON'T give up.

DO write papers. It's hard and takes time and discipline, but it's important for you and your profession. DO document your work. Write it down. In his book on computers and hackers, «The Cuckoo's Egg», Cliff Stoll quotes the Astronomer's *Rule of Thumb*: «If you didn't write it down, it didn't happen».

rule of thumb — укр. емпіричне правило

DO become a «local» expert in some area, even if it's a fairly narrow one.

4. DO plan and schedule your work.

Make a detailed plan of all you must do to finish the job. As someone said: «Plan the work, then work the plan».

Assume complete responsibility for your own career. Develop and maintain a strategic plan from Day One. This plan is mandatory for judging your career progress.

5. DO develop a thorough understanding of entrepreneurship and practical business knowledge.

Get yourself involved in seeking solutions to some problems of real importance (education, health care etc.). DO try to understand the user and his or her needs.

6. DO learn to express yourself clearly in speech and writing.

1. What is meant by DOs and DON'Ts?
2. What is the role of emphatic **do** in this text?
3. Indicate the elements of the text that show the author's recommendations, as well as the most categorical statements.
4. What is the purpose of citing in this passage?
5. What is specific about each piece of advice? Why is it important to follow them?

Exercise 1. Give English equivalents of:

завершувати проект; кращий шлях; посилатися на праці; бути вирішальним для ефективної співпраці; бути спеціалістом у досить вузькій галузі; планувати роботу; розробляти стратегічний план; розв'язувати справді важливі проблеми; підприємництво.

Exercise 2. Give Ukrainian equivalents of:

to emphasize the point; to fit into overall project (system); to challenge the planned way of doing something; to explore the field; to share thoughts and ideas; crucial factor; to assume responsibility; to judge the progress; entrepreneurship.

Exercise 3. Render the following passage into Ukrainian.

How to Speak in Public

Be prepared

- ✓ Find out why you are there, what is expected of you, how much time you have.
- ✓ Note down the points you want to make. Don't try to memorize a whole speech — key words on index cards are often useful.
- ✓ Check and double-check technical equipment (microphones, computers, visual presenters etc.). Make sure you know where the power switch is.

What you say

- ✓ Say what you need to say as clearly as possible. Repeat key phrases/points at the end.
- ✓ Any new information you can incorporate into your speech such as recent statistics, will help to keep your audience interested. However, be careful not to base your whole talk on statistics and/or background information. Tell them something they don't already know. At the end of your talk ask if there are any questions. You can be sure that if you speak effectively, people will remember you.

Coping with nerves

- ✓ Take a couple of deep breaths before starting. Think of professional achievements you are proud of and keep it at the back of your mind.
- ✓ Speak clearly and smile. Keep your body relaxed and use controlled gestures and pauses for emphasis.

EMPHASIS

Emphasis (intensification) may be signaled in various ways including special stress, intonation, grammar patterns, choice of words etc.

Emphatic DO

дієслово — підсилювач
(«справді») I (really) do think so.
Я справді так думаю/вважаю.

Reflexive pronoun after noun

зворотний займенник
після іменника

Double negation

подвійне заперечення
(яке не стосується
передачі вірогідності)

It was not until... that...

лише у ...

It is/was... that/who...
same...

NOTE.

Важливо **відізнати** цю
конструкцію від безособових
зворотів типу
It is believed Вважають, (що)
It is known Відомо, (що)
It is interesting Цікаво, (що)
It is (not) surprising/
It comes as no (great) surprise
Не дивно, (що)

This theory **does hold**.

Ця теорія є **дійсно** справедливою.

It **did seem** strange.

Це **справді** видавалося дивним.

Science **itself** proceeds from the known (dull) to the
unknown (interesting).

Власне наука йде від відомого (нецікавого)
до невідомого (цікавого).

It's **not** that they **don't** qualify.

Неправда, що вони не відповідають кваліфікаційним
вимогам. Вони відповідають кваліфікаційним вимогам.

It was professor Johnson **who** delivered
a lecture last week.

Саме професор Джонсон прочитав лекцію
минулого тижня.

It is this theory **that** is of interest to us.

Саме ця теорія цікавить нас.

It was not until 1895 **that** Popov invented radio.

І лише у 1895 р. Попов винайшов радіо.

IS or ARE?

It **was** the student

who helped us.

It **was** the students

Inversion

Інверсія —
непрямий порядок слів

I will never go there (прямий порядок слів)

Never will I go there (непрямий порядок слів).

Я ніколи туди не піду.

Not once did they try.

Вони не спробували жодного разу.

Little do we know!

Як же мало ми знаємо!

He can't do it. **Neither can I.**

Він не може цього зробити. Я також.

They didn't inform us about the conference.

Nor did they send the invitations.

Вони не повідомили нас про конференцію.

А також не надіслали запрошень.

Isn't it interesting!

Як цікаво! Хіба ж це не цікаво?

Double inversion

Подвійна інверсія (на початку речення — складний присудок, виражений дієприкметником I або II, іменником з прийменником або прикметником)

Emphatic words

емфатичні слова (слова-підсилювачі)

Presented in a picture is a scheme.

На малюнку наведено схему.

Confirming this theory is another fact.

Цю теорію стверджує ще один факт.

Of importance is his point of view.

Його точка зору має важливе значення.

well over/above значно більше

gazillion / bazillion / a plethora (of) / myriad / legion / astronomical number/ hundreds of millions/ / awesome amount / a whole bunch of / a wealth of / a host of/ tsunami (of) велика кількість

gigantic (humongous)/ gargantuan / incredibly huge величезний

as many as/as much as/as long as цілком...

as wide as завширшки

(with) this many з такою (великою) кількістю

remarkably / extremely / overwhelmingly / definitely / entirely / considerably / significantly/ immensely / severely / dramatically значно

very/ever so/very much/greatly/highly/intensely дуже
overly надто

totally/entirely/completely/wholly/altogether повністю

above all перш за все

after all зрештою

again знову, ще раз

only / solely /alone/ merely / just / simply лише, лишень, суто, тільки, виключно

even навіть

more than just більш ніж (як)

yet another ще один

such (a/an)/so такий

in fact/actually/in reality/in actuality/in effect/in truth насправді, власне

really / indeed справді

at least принаймні

literally буквально

practically / virtually практично, майже

importantly важливо

to emphasize / to stress / to highlight наголошувати, підкреслювати

clearly / obviously / of course / certainly / sure(ly)/ to be sure /to be confident/ unquestionably/ undoubtedly / without doubt / doubtless/ definitely/ безперечно

notably / especially / particularly особливо; а надто

absolutely / at all / whatsoever зовсім; абсолютно

**a crying need* нагальна потреба

**sorely* нагально

**ever since* (ще) з того часу як

**to be of (the) utmost importance* бути дуже важливим

**It is worth + Gerund / *It is worthy of* варто

noteworthy вартий уваги

**It is noteworthy* варто/слід звернути увагу (на)

**what a... !* який ... !

**Period. / *Full stop. / *The end.* І крапка. І все.

So much work, and so little time!

Such an interesting idea!

The task is too difficult.

Imagine the very idea!

It's just a matter of time.

I really want to help you.

You may well agree with them.

The discovery was made as early as XVIII century.

He alone can help us. Only she can do it.

Even under such conditions will the reaction proceed.

Again, let us emphasize that.

The number of items is astronomical.

The Y2K problem has captured an awesome amount of public attention.

The threshold varies over an immense range,

The function may, in isolated cases, take a small or even zero value.

Environmentalism, above all, links the past with the future.

They have a whole bunch of security functions.

Here we highlight several new possible findings.

But there is yet another level of meaning.

The substance itself will not undergo the desired reaction.

Noteworthy in the above analysis is the implicit assumption that the output voltage swing is maximum for all values.

Phenomenological experiences are, after all, only one aspect of our mental activity.

Undoubtedly, a review of this nature leaves many questions unanswered.

In truth, every part of business is being influenced by the Net.

However, it could take as long as 18 months before this new requirement is applied.

It is also worth reiterating that this is very important.

It goes without saying that the research projects must be carried out with well-known scientific methodology.

Of particular importance are the methods by which one abstract theory may be embedded by translation or interpretation of another theory at a lower level of abstraction.

Does it work? The answer has to be an emphatic yes.

Not all experiences are equivalent, and experience alone is insufficient.

It's uncommon to get such level of detail with this many subjects.

Some say that basic research is getting one thing to work. Period.

Most projections have been overly optimistic so far.

These improvements are sorely needed.

MIND also:

- repetitions (повтору)

No, no, no, no. We don't want this.

Many, many managers have the centralized mindset.

- «fake negation» for the sake of emphasis (удаване заперечення)

IMPLICATION: the author wants to preclude jumping to conclusions by the reader, asserts or emphasizes something by pointedly seeming to pass over, ignore or deny it.

I do not mean to suggest...
I don't mean to imply...
I will not even mention...
I pass over...
No one would suggest...
This is not to deny...
Of course, I do not need to mention that...
It is unnecessary to bring up...
We can forget about...
X is not in any sense...

This is not to deny that there are other sources.

I am not saying that we should not study this problem.

The book is not in any sense an authorized biography.

- split infinitive (розщеплений інфінітив, перекладається як звичайний інфінітив)

I want to finally know it.

- metaphors (метафори)

Their intent was to push forward the frontier in the area of security, but not necessarily with all the «bells and whistles» of a complete product.

We discussed the two models under a single umbrella.

A piece of indium is «sandwiched» between the plates.

There also needs to be more cross-pollination in the industry between environmental managers and engineers.

Chapter 5 is the heart of the book.

- idioms (фразеологічні звороти)

He can catch lightning in a bottle. Він вміє захопити вогка за вухо.

First and foremost, the bottom line is that the difference between good and bad writing has to be like chalk and cheese. Bear in mind that it is a question of custom and practice. Last but not least, to err is human, but you still need to make as certain as day that your mistakes are few and far between.

- humor (гумор)

Nanotechnology will make us healthy and wealthy, though not necessarily wise.

The general rule of «out of sight, out of mind» (or never in the mind, as the case may be) may be generalized to other activities.

As that eminent theoretician, Yogi Berra, once said, «The future ain't what it used to be».

Kim Maxwell is president of Independent Editions, a firm studying the Information superhighway. He is also a chairman of ADSL forum. All in all, he would rather be reading Homer.

- occasionalisms, neologisms (оказіоналізми, неологізми) e.g. hard-to-affordware, the weapon of mass detraction etc.)

The four C's for the future of education are: Community, Collaboration, Curriculum, and Creativity.

Do the right (write) thing.

- borrowings (запозичення)

de facto; de jure; a priori; a posteriori; per diem;

ibidem/ibid. /ib. (in the same place — used in bibliographic citations); *Op. cit.* (in the work cited — used in textual annotations); *ad hoc* (for this); *per se* (by itself, in itself); *sine qua non* (essential), *terra incognita* (unknown land); *bona fide* (sincere, genuine, authentic); *vice versa* (conversely); *cf.* (compare); *et al.* (and others); *Zeitgeist* (spirit of the times); *verboten* (prohibited or forbidden); *Festschrift* (a collection of papers (a book) prepared by colleagues to honour a scholar); *Ansatz* (basic approach), *Leitmotiv* (a recurring theme); *Ding an sich* (thing in itself); *Bbermensch* (superman); *Grand Prix; carte blanche* (unlimited authority); *fin de siecle* (the period

from 1890 to 1910 with a connotation of decadence); *oeuvre* (work); *milieu* (setting, social environment); *silhouette*; *soubriquet* (nickname); *creme de la creme* (best of the best — used to describe highly skilled people); *rapprochement* («coming together», mutual understanding); **Noun + *extraordinaire*** (extraordinary in a particular capacity); *deja vu*; *beige* etc.

Standards remain the sine qua non in virtually all fields of technology.

Per diem, or «per day», is a Latin phrase meaning specific amount of money an organization allows an individual to spend per day (daily allowance). Typically, though not exclusively, per diems cover travel and subsistence expenses.

C'est magnifique!

Voilà!

Eureka!

• **rhetorical questions** (риторичні запитання)

To compress or not to compress?

What if there is no such thing as mass?

How did we get here? How might we move forward?

Exercise 4. Render the following sentences into Ukrainian. If necessary, consult dictionaries and/or other sources.

1. Neuroeconomics is yet another new term.
2. Get a wealth of computing information at your fingertips.
3. This is the first book to directly address such communications problems. It does indeed work.
4. This could be used for a plethora of services.
5. Nowhere is this more apparent than in technology.
6. It's a superb example of how too many cooks spoiled the broth.
7. There is a crying need for more paleophysical studies.
8. China has emerged as a producer — often the major producer — of consumer goods.
9. Everything in China, visitors are often told, is measured in «reverse dog years» — what takes seven years anywhere else takes just one here.
10. Virtually all receivers used in radio astronomy employ this technique.
11. No doubt there are lessons to be learned here.
12. This city is not unique. Nor is this town. In some ways, it's not that different from AOL.
13. It simply is — it just exists.
14. The new thinking has to be a wholly different attitude.
15. The incident really did happen.
16. There are two bridges to cross.
17. A liquid-crystal television is, in effect, a sandwich with many ingredients.
18. One proverb — an old wise phrase (a.k.a. adage) says, «the darkest hour is that before the dawn».
19. One just can't pigeonhole this sort of job.
20. Ever since they were discovered by early settlers, kangaroos have fascinated biologists.
21. However, there is a silver lining to this inconvenience.
22. The book offers a reader a sea of information.
23. This had no effect whatsoever.
24. I don't like it at all — not a bit.
25. I can follow your train of thought.
26. What is the network bottleneck?
27. His isolation from the major academic and industrial R&D communities proved a blessing in disguise.
28. It's simply the perfect technique. FULL STOP. THE END. PERIOD.
29. Besides a knack for empathy, tech support types are also united in their thirst for knowledge.
30. *Esprit de l'escalier* — a witty remark made a posteriori (first used by Denis Diderot) literally means «staircase wit» (when one leaves a room and is halfway down the stairs before s/he suddenly thinks of a witty comment one could have made).
31. One of famed science-fiction authors Arthur Clarke's tongue-in-cheek laws states that «any sufficiently advanced technology is indistinguishable from magic».
32. «The English-speaking world may be divided into (1) those who neither know nor care what a split infinitive is; (2) those who do not know, but care very much; (3) those who know and

condemn; (4) those who know and distinguish. Those who neither know nor care are the vast majority, and are a happy folk, to be envied by most of the minority classes.» (H. W. Fowler, «Modern English Usage», 1926).

33. And how does one get to this promised land? Well, perhaps we should follow Thomas Jefferson's advice, given in a 1787 letter: «A little rebellion now and then is a good thing.»

34. There are no quick fixes, no silver bullets.

35. The information tsunami hasn't been helped one bit by the Internet.

36. One country's brain drain is another's brain gain.

37. The symptoms sounded all too familiar.

38. «Conditio sine qua non» is a Latin expression denoting a required, indispensable condition.

39. The vast majority of blogs are nothing more than online diaries that record the daily trials and tribulations of the blogger.

40. Some people prefer the word «moniker» when talking about various nicknames; others would say «soubriquet».

41. RSVP means «please reply», of course.

42. This is strictly verboten.

43. A digital silhouette is a profile generated by a software program that monitors a user's surfing habits.

44. This article advocates a mutually beneficial rapprochement between the disciplines.

45. A specialist application may be used by a handful of callers for a matter of days.

46. It will obviously require technologies that are now only in their incipient stages.

47. We need real out-of-the-box thinking.

48. It's worth at least a little wow.

49. The old Raman amplifier idea has been dusted off and given a new life.

50. What drives evolution? Does it proceed smoothly or by sudden jumps?

51. «Nippon» is Japanese for «the country under the sun» or «the country where the sun rises». This name came to be used diplomatically early in the 17th century when the prince who was then at the helm of the state personally called his country «the land where the sun rises» in a message addressed to the Emperor of China, because Japan is located to the east of China.

52. Among current popular German borrowings is «Fachidiot», literally «subject idiot» (refers to a person who has become such an academic specialist, so deeply immersed in the subject, that s/he has lost all interest in or understanding of what is going on in the real world).

53. In terms of size and splendor, the Bergdorf boutique certainly doesn't hold a candle to the original tri-level La Maison Guerlain in Paris, but it does offer all the same luxuries.

54. She is a computer science extraordinaire.

55. And look on the bright side!

Exercise 5. Fill in the blanks.

1. Of concern ... that must be put in place to support nomadicity.

a. those capabilities are

b. are those capabilities

c. those capabilities

d. and those capabilities

2. It is ... of note that the volume can have a profound influence on the numerical value.

a. worthy

b. worth

c. noteworthy

d. and worthy

3. This approach could ... improve the commercial viability of next generation systems.

a. substantial

b. substance

c. substantially

d. to substantially

4. It is of the utmost ... that professionals in English-language recognize the great variety of users and uses of English today.

a. importance

b. important

- c. importantly
d. import
5. Future discoveries are ... to yield an increasingly precise view of the history of dinosaurs and the major factors influencing their evolution.
- a. certainly
b. certainty
c. to be certain
d. certain
6. The constant interaction of law and education arises from their common concerns on ... many questions.
- a. so
b. such
c. such a
d. such as
7. This project is ... of myriad indications that photovoltaic electricity is coming of age.
- a. just one
b. one just
c. just
d. ones
8. The phrases ... not literally true.
- a. is, of course,
b. of course
c. ,of course, is
d. are, of course,
9. ... the students who brought the journals.
- a. Is it
b. It was
c. It were
d. Was it
10. It may have taken three years to plan, but it has certainly been worth
- a. to do
b. when done
c. doing
d. done
11. It was our research ... helped them improve their device.
- a. when
b. so
c. that
d. and
12. I ... hope that you will be able to come.
- a. certain
b. to be certain
c. certainly
d. be certain
13. I found it very ... and cutting-edge.
- a. information
b. inform
c. to inform
d. informative
14. It should come as ... surprise that the place of machine computation is explicit or implicit in almost every section.
- a. not
b. never
c. not only
d. no
15. This technology is ... fundamental.
- a. so
b. such

- c. as
d. one
16. What happened, why, and what ... imply?
a. it is
b. is it
c. does it
d. it
17. I was impressed ... the new look of the journal.
a. in
b. at
c. with
d. for
18. It was towards this «great and common world» ... Comenius, following Bacon, wanted to lead his pupils.
a. that
b. since
c. however
d. due to
19. Not a great deal ... about the life of Joseph Webbe.
a. known
b. did know
c. knowledge
d. is known
20. It is worth ... the point in full.
a. quoting
b. quote
c. quotes
d. to quote
21. It was one of the major ... in the history of IEEE.
a. event
b. and events
c. and event
d. events
22. ... is lacking is a solution for mass market.
a. That
b. When
c. Then
d. What
23. But cellphones ... already have an identifier.
a. itself
b. himself
c. ourselves
d. themselves
24. Only then ... tell you about it.
a. I will
b. if I will
c. that I
d. will I
25. She is concerned ... for his future.
a. solitary
b. so
c. somehow
d. solely
26. ... clever idea!
a. What
b. What a
c. How
d. Such as

Exercise 6. Complete the following statements with information about yourself.

1. Not once (Never)
2. Under no circumstances
3. Not for all money in the world (Not for anything)
4. Not until next year

Exercise 7.

This survey will help you identify some of your personality traits, that will help you discover some occupations in which you would have the most interest.

Step One:

Circle the number of any item — subject, activity, or type of person — that is appealing to you. Leave all others blank.

- | | |
|---|----------------------------------|
| 1. Farming | 25. Driving a truck |
| 2. Advanced math | 26. Working in a lab |
| 3. Being in a play | 27. Musicians |
| 4. Studying people in other lands | 28. Making new friends |
| 5. Talking to people at a party | 29. Leaders |
| 6. Word processing | 30. Following a budget |
| 7. Auto mechanics | 31. Fixing electrical appliances |
| 8. Astronomy | 32. Building rocket models |
| 9. Drawing or painting | 33. Creative writing |
| 10. Going to church | 34. Attending sports events |
| 11. Work on a sales campaign | 35. Being class President |
| 12. Using a cash register | 36. Using OT (office technology) |
| 13. Carpentry (working with wood) | 37. Building things |
| 14. Physics | 38. Doing puzzles |
| 15. Foreign language | 39. Fashion design |
| 16. Teaching students | 40. Belonging to a club |
| 17. Buying clothes for a store | 41. Giving speeches |
| 18. Working from 9:00 am to 5:00 pm | 42. Keeping detailed records |
| 19. Setting type for a print shop | 43. Wildlife biology |
| 20. Using a chemistry set | 44. Being in a science fair |
| 21. Reading art and music magazines | 45. Going to concerts |
| 22. Helping people with personal problems | 46. Working with older people |
| 23. Selling life insurance | 47. Salespeople |
| 24. Typing reports | 48. File letters & reports |

Step Two:

On the chart below, again circle the numbers of the items which appealed to you. After you've finished, count the numbers circled on each line. Write the two highest categories on the lines below. These are the clusters in which you have the most interest. For example, if you scored highest in Social, and second highest in Artistic, your Code would be «SA». You would want to concentrate your career exploration efforts in those two categories.

R — Realistic	1	7	13	19	25	31	37	43
I — Investigative	2	8	14	20	26	32	38	44
A — Artistic	3	9	15	21	27	33	39	45
S — Social	4	10	16	22	28	34	40	46
E — Enterprising	5	11	17	23	29	35	41	47
C — Conventional	6	12	18	24	30	36	42	48

I scored highest in _____

I scored second highest in _____

My Code is _____

OCCUPATIONAL CATEGORIES

REALISTIC OCCUPATIONS

Realistic people prefer physical activities and hands-on projects. They prefer working alone, and are often found out of doors and in jobs such as forestry, farm management, construction, geology, auto repair, manufacturing, and natural gas exploring.

INVESTIGATIVE OCCUPATIONS

Investigative people have science and mathematical abilities, and tend to be problem solvers. They prefer working on their own, and enjoy occupations such as lab technology, chemistry, engineering.

ARTISTIC OCCUPATIONS

Artistic people tend to seek opportunities to use their talents to create beauty in art, music, or literature. They usually show emotions more easily than other people, and are found in occupations like musician, artist, writer, and actor. They prefer situations that provide opportunities for creative expression. Artistic people often enjoy working alone.

SOCIAL OCCUPATIONS

Social people like being with other people, helping others and working in jobs that directly affect other people. They socialize well, and go into occupations such as teaching, psychology, and religious service.

ENTERPRISING OCCUPATIONS

Enterprising people tend to be leaders. They have speaking, sales and managerial skills, and enjoy having prestige and high status. They like to influence others, and like occupations such as salesperson, financial manager, travel agent, hotel manager, and real estate.

CONVENTIONAL OCCUPATIONS

Conventional people like to keep things neat and organized. They enjoy doing computations, keeping records, and are interested in using office skills. They enjoy working with charts, and writing reports. They are self-controlled and enjoy status and authority. They prefer occupations like secretary, accountant.

Exercise 8.

Read the passage and try to appreciate its humor. How does the author produce humorous effect?

The Ax Story

The story of two lumberjacks has meaning for all of us. The young man was anxious to prove that he was a better woodcutter than his older friend. One day he challenged the older woodcutter to a contest to determine who could cut the largest number of trees in a single day.

Daylight found the young man at work chopping his way through a number of trees and never stopping to take a break. He was a very hard worker. Meanwhile, the veteran would chop for two hours and then leave only to return an hour later.

At the end of the day the young man was sure he had won the contest since he took no breaks and chopped all day. However, when the logs were counted, the veteran had won. «This can't be», cried the young man. «I worked all day without stopping, but you took frequent breaks». The veteran replied, «It's really very simple. I wasn't taking a break, I was sharpening my ax».

TEXT. Read the passage. Give your opinion on the subject. What else would you add to the list? Give the reasons why.

A CHECKLIST FOR INFORMATION AGE

Take charge of your career

- ◇ Lean to type, because time is money.
- ◇ Learn to use a laser printer, a fax, and software that includes a word processor and spreadsheet.
- ◇ Learn to use a what-you-see-is-what-you-get (WYSIWYG) word processor on a personal computer.
- ◇ Get a personal computer mail account with Internet access and learn how to use e-mail.
- ◇ Learn how information is disseminated electronically.
- ◇ Learn how to protect your privacy and trade secrets.
- ◇ Work on your communications skills not only across all media but also in person.

Many career opportunities exist with companies across a spectrum of industries. Knowing how to market oneself effectively, and make educated choices about career opportunities, is a constant challenge for top-notch professionals. The emergence of the «global economy» presents incredible business opportunities for companies and individuals who have the courage, vision, and leadership to seize the moment.

Employers want very specific types of people — allies and colleagues, thinkers and doers. They want more than just good employees, they want exceptional ones. The following is a list of key skills that are in demand by corporations today, and will be tomorrow:

- ◇ Highly energized and confident individuals who thrive in a high change environment.
- ◇ Innovators who never stop asking, «Is there a better way?» and who have the intellectual curiosity to find it.
- ◇ Listeners, doers, communicators, problem solvers.
- ◇ Team players who understand shared vision and accept full responsibility for making it happen.
- ◇ Leaders who are brave enough to take risks, smart enough to use sound judgement, and want to be rewarded for the value they create.
- ◇ Perennial leaders and people with initiative to keep abreast of changes, people who believe

that constant learning, updating, upgrading and expanding skills is their responsibility and part of their jobs.

◊ Entrepreneurs with the passion and energy to fuel their ideas. People who demonstrate enthusiasm positively affect the morale and the work environment of the company.

◊ Motivators who can mobilize and energize teams to produce quality results.

◊ People who can unleash the creativity in themselves and others.

Employers know what they want. They want people who communicate clearly. Being able to communicate means being able to convey information, ideas, and attitudes lucidly and persuasively. Employers want employees to write and speak with clarity and precision about all job-related issues. They want goal-oriented team-players, which is no surprise. They want people who are honest and willing to work hard. They value integrity. Because rapid and constant change has become so intrinsic to doing business today, flexibility itself is regarded as core competency. Leading edge companies — those that consistently outperform the competition and which tend to be the most selective in their recruiting process — place a premium on job candidates having a wide range of experience. It is for these reasons that particularly early in one's career, it is advisable to obtain international experience and, still more important, cross-functional experience. There is a growing need for people who think laterally and creatively, who can think and see outside the box, and are aware of the bigger picture.

Interviewing Tips and Techniques

◊ Research the company.

◊ Read any available promotional material such as annual reports or computer-based information. Talk to employees within the company.

◊ Plan the approach.

◊ Assess your strengths (skills, abilities and accomplishments) and transfer them onto job-related terms. Put yourself in the shoes of the interviewer. Focus on what you can bring to the company. Be totally familiar with the contents of your resume prior to the interview.

◊ Other pre-interview considerations.

◊ Try to concentrate on making the best possible first and last impression on the interviewer. Dress appropriately in clothes that reflect the understanding of the job. Look confident and look your best. Be prompt and treat everyone encountered in the company as if they were the interviewer.

The interview process.

◊ Be honest about your areas of weakness or need for personal development. You should have some ready answers. One of the classic (and maybe best) responses to «What are your weaknesses?» is «I am impatient». You are being honest about a weakness, but in a diplomatic way.

◊ Try to feel at ease (self-confidence and self-assuredness). Use effective communication skills to «sell» yourself. The first five minutes of the interview are the most important. Use your listening skills to properly assess the questions in order to answer them sincerely and articulately. Be aware of eye contact, tone of voice, rate of speech, and avoid bad habits.

References.

◊ Be selective in your references and be sure to get permission for the use of an individual as a reference.

Follow-up.

◊ Keep up notes on your interview in the event you are called back for a second interview. It is a good idea to send a thank you letter after the interview.

Assessment and evaluation.

◊ Personally evaluate your performance on every interview. Note the things that went right and the things that went wrong. Learn from your experiences and your mistakes.

Exercise 9.

Render the following passages into Ukrainian. Discuss the points with your colleagues.

A.

While humor can be an effective device to carry a message, the humor in these essays is awkward, unnatural, and distracting. A tutorial about video display standards, apparently a satire about their complexity, repeats tired old horses, such as NTSC standing for Never The Same Color. There is, of course, a role for humor in our technical publications. Humor can be a powerful communications tool if used naturally and skillfully. Unfortunately, in too many of these essays, the humor is not well conceived, and the ideas are too well hidden. (IEEE Spectrum, 1996, #8, pp. 11–12).

B.

Ayto, John. **Twentieth Century Words.** — Oxford University Press, 1999. ISBN 0-19-860230-8

It is argued that approximately 90,000 new terms (and new meanings of old terms) have been added to dictionaries as a result of the cultural, technological, and economic upheavals of the twentieth century. As a result, English is about 25 percent richer in words than it was in 1900. John Ayto has put together a browsable compendium of about 5,000 of the more significant and widely used of these words. His book is arranged by decade, with words in alphabetic order within each section. Each word has the date it was first recorded, and one or two example citations. An alphabetical index lets you pinpoint a particular term. There is a foreword, and each decade is opened by a mini essay. Words are often much older than we might expect, often predating by decades widespread knowledge or use of the idea described, and this collection gives some good examples. For example, «tabloid journalism» was first recorded in 1901, «television» is from 1907, «iron curtain» from 1920, «greenhouse effect» from 1929, «miniskirt» first appeared in 1964, «sell-by date» in 1973.

C.

Paul McFedries. **Word Spy: The Word Lover's Guide to Modern Culture.** — Broadway, 2004. ISBN: 076791466X

Paul McFedries is the author of more than 40 books on language that include many titles in the Complete Idiot's Guide series, including *The Complete Idiot's Guide to a Smart Vocabulary*, and the creator of Logophilia Limited. He asserts that new words (neologisms) are one of the best ways of understanding a changing world and culture. He argues that there are three essential factors related to why and how a new word is formed: the word is easy to pronounce and understand, is short, and fills a gap in the language.

Thanks to the Internet, new words are being coined and disseminated at lightning speed. Like Eric Raymond's *New Hacker's Dictionary*, *Word Spy* is living proof that to invent a language is to invent a way of life. In *Word Spy*, McFedries demonstrates how new words both reflect and illuminate not only the subcultures that coin them but also the larger culture in which these groups exist. Each chapter of *Word Spy* is a cultural snapshot, a slice of the zeitgeist that focuses on a specific idea or sociological phenomenon, with an emphasis on the words and phrases that it has generated. *Word Spy* is an exciting and informative travelogue through the evolving landscape of our language and, consequently, the cultures and subcultures that continually mold and shape not just the language but all of us who speak it.

«The brain of every person on the planet is a miniature word factory, and new coinages appear spontaneously:

«Did you read MacWhoozit's column today?»

«Yeah, the man is a master at stating the obvious.»

«I know. I counted no less than four, uh, obviosities.»

«Obviosities? Is that a word?»

«Well, it is now!»

Paul McFedries, *Word Spy: the Word Lover's Guide to Modern Culture* (2004).

D.

Grothe, Mardy. **Never Let a Fool Kiss You, or a Kiss Fool You.** Published in hardback by Viking in July 1999. ISBN 0-670-87827-0.

«Chiasmus» is a figure of speech in which the order of words in two successive phrases is reversed. The title of this book is itself an example of chiasmus, as is its subtitle: «A world of quotations that say what they mean and mean what they say». Chiasmus is a literary device in which word order is reversed — and you get a powerful, often humorous effect, like Richard Nixon's remark «The conservative leader often has to choose between those who are loyal and not bright and those who are bright but not loyal». The wisdom of the ages shines in gems such as «Your manuscript is both good and original; but the part that is good is not original, and the part that is original is not good» (Dr. Johnson) or «The one who talks does not know, the one knows does not talk» (Lao-Tzu). The most famous example of chiasmus must be that from the inaugural speech of President John F. Kennedy: «Ask not what your country can do for you — ask what you can do for your country».

E.

A paradox is an improbable combination of opposing qualities, ideas etc. A concept can appear to be a paradox due to our lack of understanding or the inadequacies of language.

Double Liar's Paradox, as presented by an English mathematician P.E.B. Jourdan in 1913: The following inscriptions are on paper:

Back side:

Inscription on the other side is true

Face side:

Inscription on the other side is not true

Also, consider the following:

◇ What is better — eternal bliss or a simple bread?

What is better than eternal bliss? Nothing. But a slice of bread is better than nothing. So slice of bread is better than eternal bliss.

◇ If you get this message, call me, and if you don't get it, don't call.

◇ The person who wrote such a stupid sentence cannot write at all.

◇ Nobody goes to that restaurant because it's too crowded.

◇ «Nothing is so simple that it cannot be misunderstood» (Teague's Paradox).

◇ Albert Einstein: «The most incomprehensible thing about the world is that it is comprehensible.»

◇ George Bernard Shaw: «The golden rule is that there are no golden rules.»

◇ Niels Bohr: «The opposite of a correct statement is a false statement. But the opposite of a profound truth may well be another profound truth.»

◇ Henry Louis Mencken: «For every problem, there is one solution which is simple, neat and wrong.»

◇ Winston Churchill: «Success is the ability to go from one failure to another with no loss of enthusiasm.»

Exercise 10. Render the titles of classical music masterpieces into Ukrainian.

Leontovych: Shchedryk.

Mussorgsky: Pictures at an Exhibition, A Night on Bald Mountain, and Other Russian Showpieces.

Richard Strauss: Also sprach Zarathustra; Ein Heldenleben.

Rimsky-Korsakov: Scheherazade.
 Rossini-Respighi: La boutique fantasque.
 Brahms: Piano Concerto No. 1.
 Tchaikovsky: Pathetique Symphony.
 Bartok: Concerto for Orchestra.
 Ravel: Bolero; La Valse; Rapsodie Espagnole.
 Puccini: La Boheme.
 Bizet: The Pearl Fishers.

Exercise 11. Study some terms from «The New Hacker's Dictionary», and try to appreciate the humor.

angry fruit salad: n. A bad interface design that uses too many colors.

baud barf: n. The garbage one sometimes gets on the monitor when encountering *spurious* data, caused, for example, by an incorrect protocol setting.

spurious — wrong, false

beige toaster: n. A Macintosh PC.

bit rot: n. The hypothetical disease of unused programs or features that stop working after enough time has passed, even if «nothing has changed».

bletcherous: adj. Disgusting in design or function; (a)esthetically unappealing.

bulletproof: adj. Descriptive of an algorithm or implementation considered extremely *robust* and capable of correctly recovering from any imaginable exception condition. This is a rare and valued quality.

robust — strong, effective

chrome: n. Showy features contributing little or nothing to the power of a system.

glork: interj. Term of surprise, uttered when, say, trying to save the results of two hours of editing, you find that the system has crashed.

guru: n. An expert, implying not only the possession of wizardly skill but a history of being a knowledge resource for others.

demigod: n. Hacker with a national reputation and a major role in the development of a design, tool, or game known to over half of the hacker community.

face time: n. Time spent interacting with somebody face-to-face (as opposed to over an electronic link).

programming: n. 1. Classically, the art of *debugging* a blank sheet of paper. 2. A pastime akin to banging one's head against a wall, but less rewarding.

softy: n. Hardware hackers' term for a software expert ignorant of hardware.

spaghetti code: n. Code with a complex and *tangled* control structure, especially one using many GOTO's, exceptions, or other unstructured branching constructs.

tense: adj. Of programs, very clever and efficient.

troglydte mode: n. Programming with the lights turned off, sunglasses on, and the terminal inverted (black on white).

vaporware: Products announced far in advance of any release (which may or may not actually take place).

wedged: adj. Stuck, incapable of proceeding without help (whereas crashing describes total nonfunctioning). The system may be capable of doing a few things, but is not fully operational.

WIMP environment: [acronym of Window, Icon, Menu, Pointing device] n. A graphical user—interface-based environment, as described by a hacker who prefers command-line interfaces for their superior flexibility and extensibility. Macintoshes and Microsoft Windows use WIMP interfaces.

wizard: n. A person who knows how a complex piece of software or hardware works and can find and fix bugs quickly in an emergency.

to debug — to search for or remove bugs (faults) in a computer program
a bug — (informal) a fault or difficulty in a machine, system, computer program
tangle — confused, disordered mass/state

wizard — a person with unusual, almost magical abilities

Exercise 12. Choose the correct word and fill in the blanks.

(to) create creation creativity creative

1. His designs are always _____.
2. You should use your _____.
3. The project will _____ a sensation.
4. The report proposed is the _____ of an independent committee.

(to be) capable of capability

5. We are not _____ improving it.
6. They will not doubt her _____ for the job.

(to) modify modification(s)

7. A few _____ to the plan will _____ it.
8. The design has been _____.
9. Scientists _____ their views in (the) light of new evidence.

Exercise 13. Read the passage and answer the questions that follow.

Linguists argue that when a new word is becoming established, its derivatives are readily formed and used. For example, the term «blog», the shortened form of «weblog» has spawned terms like «videoblog» and «litblog». «Blook» is a blend of «blog» and «book», i.e. a blook is a blog turned into a book. However, in actuality, a blook can also refer to either an object manufactured to imitate a bound book, an online book published via a blog, or a printed book that contains or is based on some content from a blog. Originally, the term «blook» has been actively used since the 1990s, by a librarian Mindell Dubansky, to describe the objects that are made in imitation of a bound book or several bound books standing together. In this sense, a blook is a replica of a book and has no text (the term «blook» is a shortening of «looks like a book»). The word «blook» has become popular lately because of the inaugural award in the genre, sponsored by the publisher Lulu who inaugurated the Lulu Blooker Prize for blooks «blauthors» (using the definition of a book deriving from blog content), which was first awarded in 2006.

(after Wikipedia)

1. The passage is about
 - a. modern linguistics
 - b. specific types of publications
 - c. Booker prize
 - d. lexicography issues
2. It can be inferred from the passage that the word «blog»
 - a. is being widely used nowadays
 - b. has been introduced only recently
 - c. has already become obsolete
 - d. is likely to disappear in the near future
3. The term «blauthors» used in the passage most likely refers to
 - a. Blog authors
 - b. Blog reviewers
 - c. Blog critics
 - d. Blog fans
4. According to the passage, a «blook» could refer to
 - a. an imitation of bound book(s)
 - b. an online book published via a blog
 - c. a printed book
 - d. all of the above
5. The passage will most likely be followed by discussing

- a. online book catalogs
 - b. dictionary compiling
 - c. the winners and the losers of the contest
 - d. wireless communications
6. The underlined word readily could best be replaced by which of the following:
- a. really
 - b. literally
 - c. randomly
 - d. quickly, with no difficulty
7. The underlined word used could best be replaced by which of the following:
- a. employed
 - b. supported
 - c. introduced
 - d. developed
8. The underlined word shortened could best be replaced by which of the following:
- a. adapted
 - b. approved
 - c. suggested
 - d. abbreviated
9. The underlined word spawned could best be replaced by which of the following:
- a. included
 - b. encompassed
 - c. brought into existence
 - d. involved
10. The underlined word blend could best be replaced by which of the following:
- a. bond
 - b. link
 - c. use
 - d. mix
11. The underlined word turned into could best be replaced by which of the following:
- a. transformed into
 - b. brought about
 - c. agreed upon
 - d. approved by
12. The underlined word several could best be replaced by which of the following:
- a. seven
 - b. a couple of
 - c. quite a few
 - d. average
13. The underlined word because of could best be replaced by which of the following:
- a. since
 - b. as a result of
 - c. because
 - d. instead of
14. The underlined word inaugural could best be replaced by which of the following:
- a. regular
 - b. closing
 - c. routine
 - d. newly introduced
15. The underlined word award could best be replaced by which of the following:
- a. souvenir
 - b. prize
 - c. approval
 - d. mandate

Exercise 14.

Discuss the point with your colleagues. Think about adding more points to the list.

On E-mail Courtesies (Netiquette)

E-mail is an alternative to (and in some ways a blend of) the telephone or postal service. For all e-mail users — novice, experts or in-between — there are a number of ways we can make the use of e-mail more friendly, and more effective. Let me share some thoughts with you about do's and don'ts of e-mail and on how we should be using it.

- First, do not ignore the common courtesy of correcting obvious mistakes in spelling.
- Second, the use of CAPITALS in e-mail is called SHOUTING and is considered impolite. Why? Because capitalized text on a screen looks awful — end of story.
- Third, it is good manners to use the appropriate degree of formality and informality in e-mail letters depending on how well or in what way you know the addressee. Choose an adequate subject line, and do not forget to conclude the message with your name.
- Fourth, keep it short — half a screen of text is ideal. Post large quantities of information in attachment(s).
- And, finally, don't spam. If you receive junk mail (chain letters etc.), report it to your service provider.

Exercise 15.

According to Aristotle, an effective speaker should employ *ethos* — an appeal to authority (showing the audience that speaker is knowledgeable on the topic, and appealing to a person's ethics), *pathos* — an appeal to the audience's emotions, and *logos* — logical appeal, appeal to logic and reasoning. When all three modes of persuasion are used together, a speaker (or a writer) can create very strong arguments. Identify which of the elements listed below belong to *ethos*, *pathos*, or *logos*. Then discuss various verbal and non-verbal elements of persuasion with your colleagues. Share your own relevant experiences with them.

Persuasive Presentations: More Tips

- Keep your communication mission simple: express no more than two (maximum three) ideas at one time, and preview your talk by using «First,...»/«We begin by...», «Second,...» «Finally, ...», «Now, suppose ...», «We now turn to the next question» etc.
- Repeat key ideas three times. Always provide a brief summary.
- To keep your audience interested, you should enjoy your topic yourself, and be excited about the subject matter you are talking about.
- Keep it short — promise to speak for 15 minutes, speak for approximately 7—10. Remember: the shorter, the better!
- Offer the audience only the latest information.
- Make links among various parts of your talk, structure your talk accordingly. Provide a brief conclusion.
- Pause after you ask a question.
- Listen actively — provide non-verbal feedback (your gestures, posture, facial expression etc. should convey positive attitude).
- If you don't know an answer to the question posed, admit it, promise to find out.
- Use visuals — make the attendees literally «see» what you mean. In PowerPoint presentations, do not use more than 5 (plus/minus) 2 lines per page. Use red only as accent color.
- Speak calmly and naturally, don't read your talk. It's a good idea to memorize the first minute(s) of your presentation.
- Don't use fillers like «um», «er», «you know» etc.
- Vary tone, tempo repeatedly, offer pictorial and entertaining examples.
- Move around the room.
- Handle any presentational product with care, but don't let presentational materials and other visuals (handouts, brochures, booklets, books etc.) upstage you.
- Don't upstage your co-presenters (if any).
- If you are asked an obnoxious question, relax and do not show fear. Simply restate the question on a more «watered-down» version, and give a moderate but meaningful answer. You may also say something like «we have (an)other question(s)».

Exercise 16. Render the following sentences into Ukrainian. Pay special attention to the boldfaced elements. If necessary, consult dictionaries and/or other sources.

1. I **look forward to** seeing you soon.
2. He's a very good engineer — he knows all the **tricks of the trade**.
3. The company is at the **cutting edge** of telecommunications.
4. I'm sure you will **sail through** your dissertation defense.
5. She **pointed out** an important aspect of the theory.
6. We **have to be** more innovative if we are to stay **ahead of the pack**.
7. The problem **boils down to** a lack of resources.
8. **After all**, this meeting **is going to be** an opportunity to **iron out** difficulties. We can **work it out!**
9. **If anything**, it's really about basic common sense. Believe me, **it's not rocket science!**
10. **Even** the weatherman can't predict — **with one hundred percent certainty** — **whether** it will rain or not.
11. A successful educator **keeps the finger on the pulse** of teaching methodology.
12. After **exploring all avenues**, they finally **got** the project **off the ground**.
13. Everything **runs like clockwork** at their department.
14. Don't worry about Martha — she always **lands on her feet!**
15. **You scratch my back and I'll scratch yours!**
16. Both projects were **given green light**.
17. **At any rate**, I've performed the task. He **lent me a hand (with it)**.
18. This country used to **lag far behind** the rest of the world.
19. Something that happens **out of the blue** is sudden and unexpected.
20. Let's consider several ideas to **bridge the gap** between industry and academia.
21. It's **not even** on the list.
22. «**In the end** the true test is not the speeches a president delivers, it's **whether** the president delivers on the speeches.» (Hillary Clinton).
23. The idiom «**in lieu of**» tends to be used more in written English and sounds more **formal** than «instead of» or «in place of».
24. Does this conference center **fit the bill** for the symposium?
25. Until we **accomplish** that **goal, back up** your hard disk, and maybe **print out** your most important documents, **just in case**.
26. She is **very good at** (doing) research.
27. This product is a real **cash cow**. It is the result of their **foray into** nanomaterials.
28. I'd like to **clear the air** on new details and ideas.
29. If you **scratch the surface** of a subject or a problem, you only discover or deal with a very small part of it.
30. She is an example of excellence — a **class act**.
31. Try to **steer clear of** easily misspelled words.
32. If you want to succeed, **get your act together**.
33. «**The buck stops here**» is a phrase that was popularized by U.S. President Harry S. Truman, who kept a sign with that phrase on his desk in the Oval Office. The phrase refers to **passing the buck** (as in the game of poker), i.e., handing responsibility (or delegating authority) to someone else.
34. — Could you **hand over** the papers, please?
— **Here you go. / Here you are.**
35. It wasn't an **overnight success**. In fact, **things like this** never come **overnight**.
36. — Does it **make any difference** (to you) if we leave (on) Friday or (on) Saturday?
— It really **doesn't matter**. Actually, it **makes no difference** to me.

Noteworthy

Never apologize for showing feeling. When you do so, you apologize for truth.

Benjamin Disraeli

Unit 8

**Evolution of Manufacturing
Green Products & Other
Environmental Issues
Linguistic Trendiness
Humor**

TEXT. Read the text and be ready to answer the questions that follow.

Manufacturing technology is the technology of process control. It is machines, human labor, and the organization of work brought together to control a manufacturing process. Whenever the approach to process control **shifts** significantly, many parameters change. These shifts suggest six epochs in manufacturing. The new technology dictates changes in the nature and organization of manufacturing, and in the machines used to effect those changes.

The English system of manufacture originated in the late 18th century with the invention of general-purpose machine tools, such as **lathes**, that could be used to fabricate a variety of workpieces. The American system of manufacture that emerged in the mid-1800s emphasized precision and interchangeability of parts.

The era of scientific management began in the late 1800s with the works of Frederick Winslow Taylor, a U.S. mechanical engineer whose principles of manufacturing management are known as Taylorism. Recognizing that the workers themselves were limiting the speed and efficiency of machines, Taylor claimed that these activities could be measured, analyzed, and controlled with techniques analogous to those applicable to physical objects. Using job analysis and time study, he determined a standard rate of output for each job. This approach placed control in the hands of management, which could monitor a worker's productivity by comparing his or her output against a standard.

Next came the era of process improvement, in the mid-20th century, based on statistical process control (SPC). Invented in the U.S. in the 1930s, SPC assumes that machines are **intrinsically** imprecise, since the identical procedure will produce different results on the same machine at different times. It emphasized «outliers» (out-of-control) situations rather than **mean** performance; directed management's attention away from the worker toward machines. Whereas scientific management is concerned with manufacturing problems in essentially static forms, SPC is concerned with the dynamism of the processes.

Numerical control (NC) arrived in the 1970s with the microprocessor. NC combines the **versatility** of general-purpose machines with the precision and control of special-purpose machines. It emphasized adaptability above stability. It also implies experimentation, learning, place and nature of work.

Manufacturing entered the computer-integrated era in the late 1980s. Computer-integrated manufacturing (CIM) is based on information about, and models of functional expertise that make it possible to examine and systematize the interactions among functions. Recognizing these interactions and predicting their consequences constitutes system **intelligence**. The systems enabled by CIM are extraordinary, to say nothing of versatility in the form of new products and processes.

Each of six manufacturing epochs focused on a particular aspect of process control — from accuracy, precision, and reproducibility to stability, adaptability, and versatility.

The first three epochs embraced mechanization, with manufacturing conceived **in terms of** increasing efficiency and control. The engineering focus was on machines, and labor was required to adapt to machines and, ultimately, to become yet another machine. Now the emphasis is on versatility and intelligence. Machines have come to be viewed as **extensions** of the mind that can enhance cognitive abilities of human beings. This shift, based on information technology, suggests new managerial imperatives (like building small **cohesive** teams), broadens the role of engineering management, and starts treating manufacturing as a service.

to shift — to change (in position or direction), move from one place to another укр. змінювати; переміщати

lathe — укр. верстат

intrinsic — being part of the nature or character of someone or something; **Synonym**: inherent укр. внутрішньо властивий, притаманний за природою

mean — average укр. середній; звичайний; пересічний

numerical control — укр. числове програмне управління

versatile — having many different uses укр. універсальний, багатоцільовий, різнобічний,

intelligence — укр. інтелект, розвинені логіко-інформаційні можливості

extension — укр. продовження

cohesive — укр. згуртований

in terms of — укр. на підставі; виходячи з; у вигляді/через/у функції; у термінах; в аспекті

Evolution of Manufacturing

	1800	1850	1900	'30	'40	'50	1970	1985	2000	
	→		→			→		→		→
	The English system of manufacture	The American system of manufacture	Scientific management (Taylorism)	Process improvement (statistical process control)			Numerical control	Computer-integrated manufacturing		
Productivity increase over previous epoch	4:1	3:1	3:1	3:1			3:1	3:1		
Process focus	Accuracy	Repeatability	Reproducibility	Stability			Adaptability	Versatility		
Work philosophy	«Perfect»	«Satisfy»	«Reproduce»	«Monitor»			«Control»	«Develop»		
Skills required (machine operator)	Mechanical craft	Repetitive skill	Repetitive skill	Diagnostic ability			Experimentation	Learning generalizing, abstracting		

1. What is the subject of this passage?
2. What is manufacturing technology?
3. How can we classify epochs in manufacturing?
4. What is specific about each epoch?
5. What is meant by CIM? Why are interactions among functions so important?

Exercise 1. Give English equivalents of:

велика кількість параметрів; наприкінці 18 сторіччя; верстат; виробляти різноманітні речі; епоха наукового менеджменту; обмежувати ефективність; стандарти результативності; відволікати увагу; універсальні системи; комп'ютерне інтегроване виробництво; людська праця; невеликий згуртований колектив.

Exercise 2. Give Ukrainian equivalents to:

to dictate changes; nature and organization of manufacturing; to effect changes; the system originated in early (late) XIX century; to fabricate a variety of workpieces; to emphasize precision and interchangeability of parts; the workers themselves; to place control in the hands of management; to monitor productivity; different results at different times; adaptability vs. stability; to focus on a particular aspect.

TEXT. Read the text and be ready to answer the questions that follow.

Manufacturing is a prime generator of wealth and is critical in establishing a sound basis for economic growth. Manufacturing is a cornerstone of all economic activities, and efforts to continuously **advance** manufacturing technology are therefore **vital** to a richer and more stable future. Scientists undertake **feasibility studies** to develop next-generation advanced manufacturing technologies related to the following phenomena:

- the globalization of **corporate** activities;
- greater sophistication in manufacturing operations;
- changes in market requirements (e.g. more **diversified** needs);
- changes in human factors, including **shortage** of skilled labor;
- problems due to the need to preserve natural resources and the environment;
- increased investments required for manufacturing systems and R&D.

Globalization presents particular problem because, depending upon the nature and purpose of its activities, a company may have various facilities located around the world. To manage those facilities effectively, and to handle its policy making and production planning, a company needs a communications network that interconnects its multiple plants and other facilities. Setting up such a network is essential for exchanging data through an internationally **compatible** communications system. Increasingly, companies feel they need a common intercompany communications system that enables different firms to exchange information.

Future plants based on the intelligent manufacturing system concept are expected to include such autonomous and intelligent systems as industrial robots, numerically controlled machine tools and interacting with an intelligent production management system. Computer-aided design, manufacturing and engineering at an R&D center will help in the rapid development of new products matched to customers needs. A global communications network with standardized interfaces will link the head office to the manufacturing plants, sales agents, and subcontractors.

to advance — to move forward in development, to improve укр. розвивати, покращувати

vital (to, for) — very necessary, of the greatest importance укр. нагально потрібний, надзвичайно важливий

feasible — able to be carried out or done, possible and reasonable укр. здійснимий

feasibility study — укр. техніко-економічне обґрунтування

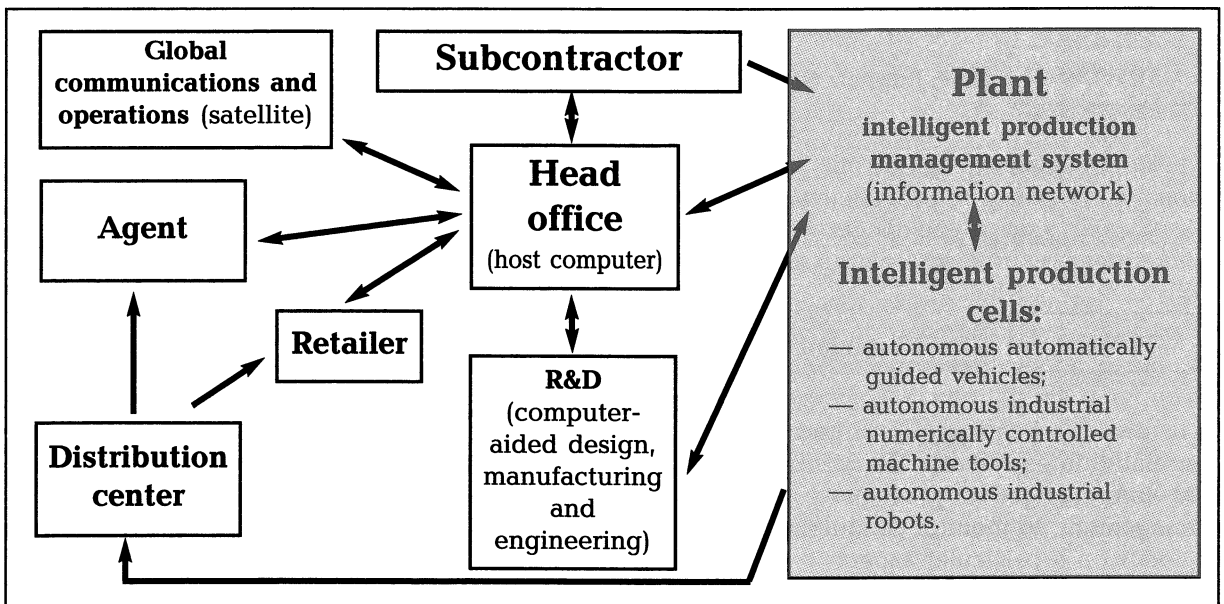
corporate — of, belonging to or shared by all the members of a group/corporation **Synonym:** collective

to diversify — to make or become different in form, quality, aims, or activities; vary укр. урізноманітнювати

shortage (of) — a condition of having less than needed; lacking укр. нестача, брак

compatible (with) — able to exist together, or be used together with another thing укр. сумісний, той, що сполучується (поєднується)

Intelligent manufacturing system



1. What is the problem under discussion?
2. What is a prime generator of wealth and basis for economic growth?
3. What is meant by a feasibility study?
4. What phenomena should be taken into account by all manufacturers?
5. What is specific about future plants and manufacturing systems?

Exercise 3. Discuss the following point with your colleagues.

The goal of manufacturing at companies throughout the world is processing orders sooner and faster. The **buzzwords** are «lean», to describe efficient, un wasteful, less costly manufacturing; «agile», said of manufacturing system's speed in reconfiguring itself to meet changing demands; and «flexible», meaning the system's ability to adjust to customers preferences. Customer satisfaction is usually first on the list of priorities.

buzzword — a word or phrase especially related to a specialized subject, which is thought to express something important but is often hard to understand

Exercise 4. Render the following passage into Ukrainian.

The workplace has changed. Today's employers are asking workers to do more. Now workers have to manage their workstations, schedule their time, think about quality, solve problems, and apply their skills to new technologies.

Manufacturing, too, has changed. Factory employees no longer necessarily perform routine, repetitive tasks. Because of the use of flexible automated manufacturing systems and electronically controlled (rather than mechanical) equipment, they must process information symbolically. Instead of manufacturing parts of a machine, for example, workers must now interact with symbols on a computer. The workers are supposed to use complex diagnostic equipment for **troubleshooting**.

to troubleshoot — to discover and remove cause of trouble in machines, organizations, etc.

Exercise 5. Choose the correct word and fill in the blanks.

(to) manufacture manufacturer(s) manufacturing

1. This firm _____ computers.
2. The _____ of these components is very expensive.
3. Our microwave oven didn't work, so we sent it to the _____.
4. They promise new job openings in the _____ sector.

(to) organize organization organized

5. They support a charity _____.
6. You should _____ a conference next year.
7. You have to _____ your facts first in order to make a good speech.
8. What a well- _____ structure it is!

precise precision precisely

9. The train is supposed to come at about 11 a.m., 11.05, to be _____.
10. _____ instruments are widely used nowadays.
11. Tell me _____ what you want.
12. — You advise me to wait a little?
— _____.

TEXT. Read the following passages and paraphrase them.

Green Products

Recent polls of citizens of both developing and industrialized countries found that a majority considered environmental protection more important than economic growth. Many European countries already have environmental product-labeling initiatives. In the United States, the U.S. Environmental Protection Agency (EPA) has been working with industry to define environmental goals and **facilitate** cooperation in achieving them. One result is a labeling program for energy-efficient computers. Design-for-the-environment initiatives are growing.

Design-for-environment (DFE) programs call for careful inclusion of environmentally safe attributes in the early design stages of new products, as opposed to re-engineering them later in the product cycle. Implementing DFE is increasingly critical if companies want to be globally competitive. These programs are also proving to be economically **sound**, emphasizing consideration for materials and energy, and, as a result, enhance profit potential. Recycling efforts can reduce the volume of **raw materials**. Maximizing the use of recyclable materials opens up **revenue** possibilities at the end of a product life cycle. Component reliability, a fundamental design goal in the electronics industry, supports the re-use of such parts in new or **refurbished** equipment, again saving raw materials, manufacturing costs, and time. Manufacturing innovations contribute to environmental soundness while boosting manufacturing efficiency. Xerox corporation estimates that its environmental programs already save the company more than \$100 million annually. One initiative at Xerox seeks such complete reuse of recycling of business equipment products that no materials need to be taken to a **landfill**. Another approach is manufacturing involving disassembling a machine, replacing worn-out parts with new, remanufactured or used components. Then the machine is cleaned and tested to ensure it meets quality and reliability criteria for a newly manufactured machine.

to facilitate — to make easy or easier; help

укр. полегшувати, допомагати, сприяти

sound — showing good sense **Synonyms:** reasonable, sensible

укр. із здоровим глуздом (розумом), тверезий, розсудливий, розумний

raw material — not yet treated for use, in a natural state укр. сировина

revenue — income укр. доход

to refurbish — to make clean and fresh again. **Synonyms:** to renovate, to overhaul укр. оновлювати

to retrofit; retrofitting — refers to the addition of new technology or features to older systems, various construction or renovation projects укр. модернізувати, модернізація

landfill — укр. звалище, смітник

to environmental soundness while boosting manufacturing efficiency. Xerox corporation estimates that its environmental programs already save the company more than \$100 million annually. One initiative at Xerox seeks such complete reuse of recycling of business equipment products that no materials need to be taken to a **landfill**. Another approach is manufacturing involving disassembling a machine, replacing worn-out parts with new, remanufactured or used components. Then the machine is cleaned and tested to ensure it meets quality and reliability criteria for a newly manufactured machine.

To meet the challenge of zero waste material, the following issues should be addressed:

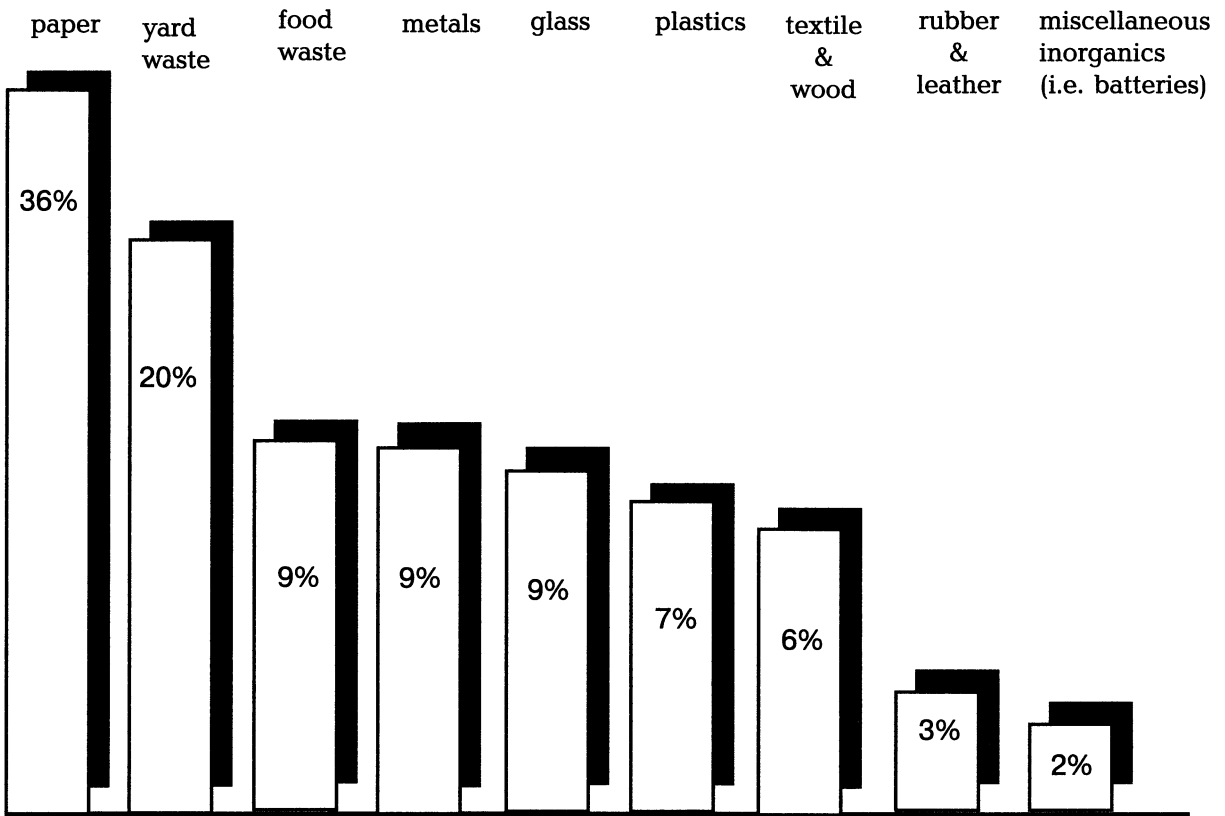
- Product simplification.
- Design for disassembly rather than merely assembly.
- Incorporating recyclable materials.

Some labels for environmentally preferred products

Governments and nonprofit organizations are promoting the use of ecolabels to identify environmentally preferred products for consumers.



What's in a Landfill?



Modeling the World's Climate

Will global warming turn green fields into desert? Will the hole in the atmosphere's ozone layer repair itself? These are among the problems **tackled** by simulations on supercomputers. Climate modelers use numerical simulations and complex calculations. At the **core** of today's simulations of climate are the General Circulation Models (GCM). Used by scientists around the world, this method of modeling the earth's climate is based on a set of fundamental equations. The method involves dividing the atmosphere into a series of three-dimensional boxes (grid-cells or grid-points), and then solving these equations for each box.

Perhaps one of the most far-reaching questions that climate modelers today are addressing is the **greenhouse** effect and its influence on global warming. The greenhouse effect is the tendency of certain gases in the atmosphere, **notably** carbon dioxide, to trap heat below them in the same way that glass traps heat in a greenhouse. This is a key question because it can dramatically affect environment and society.

Climate modeling has its sister science, numerical forecasting of the weather in terms of temperatures, winds, and **precipitation**. Most of the basic formulae derive from Newton's laws, and a simple climatic model can be created from just a few equations: e.g. the second law of motion, conservation of mass, the first law of thermodynamics etc. These equations were first used to model the atmosphere in the 1920s by a British scientist, Lewis F. Richardson. He developed «computing forms» to solve them for different locations on the globe. He **envisioned** a large amphitheater representing the world, locations around the hall

to tackle — to take action in order to deal with
укр. працювати над розв'язанням (вирішенням)
core (of) — the most important and central part of anything
укр. стрижень, сутність, суть, ядро

greenhouse — укр. парник
notably — especially, particularly
укр. особливо ж, а надто

precipitation — укр. опади (метеорол.)
to envision — to see in the mind as a future possibility
Synonyms: to foresee; to forecast; to make a prognosis
укр. передбачати

representing different geographic regions. A sort of «computing amphitheater» came into existence in the 1950s with the birth of the Eniac computer at Princeton University in New Jersey. Weather simulation was one of the first major problems run on this early computer and ever since then climate and weather modeling have been among the first applications transported to the «supercomputer» of each era. A primitive climate model was developed in 1956, and in the early 1960s, the first **full-scale** GCMs were developed. Today, there are well over two dozen of these general circulation models in the world. Researchers would like **to couple** other earth systems with GCM. Topography, ground and surface water hydrology, **terrestrial** ecosystems, **marine** biochemistry are all being modeled separately today and could, if coupled with today's GCMs, improve them greatly.

full-scale — укр. повномасштабний
to couple — to join together, connect
 укр. з'єднувати
terrestrial — укр. наземний
marine — укр. морський

Exercise 6. Discuss the following point. Give your opinion.

Concern about the way people are damaging the environment is not new. In the USA, for instance, one of the first environmentalists was Henry David Thoreau, who spent several years living in a small hut on the shore of an isolated pond. He wrote a famous book, *Walden*, about his experience. In his book, Thoreau recommended that men and women learn to live more simply. While Thoreau's book was praised by many people, few actually followed his advice.

Another man named John Muir helped launch the first major conservation movement. He urged that Americans set aside some parts of the country so that they would never be farmed. One of such places was one of the first national parks in the U.S. — the Yosemite Valley.

Exercise 7.

One result of the U.S. Environmental Protection agency (EPA) activities is labeling all products made with chlorofluorocarbon (CFC). Do you think such warning labeling is necessary for our country? Do you think special return and recycle programs (e.g for batteries) are a must? Discuss these points with your colleagues.

Exercise 8. Organize a round-table discussion «Put the Earth First». Use the materials provided below as possible guidelines for your discussion.

A.

Scientists are ethically obligated to make sure that his or her work is environmentally sound. It is not possible for a scientist to hide behind the claim that scientists only create things, and others determine when and how they are used. If they can damage our environment, someone may use them to the misfortune of us all. Thus, the scientists have the obligation not to create things that are harmful to the environment.

B.

Every scientist is the «end user» of some other scientist's work. Sooner or later, we all are going to realize that «we» are «they». Why not begin at the environment in the design phase of the project?

C.

We not only have a responsibility to protect the environment but to attempt to improve the world we live in through technology development. We should contribute to society in a beneficial way, and take responsibility for what we create.

D.

Scientists have a very strong ethical obligation to make sure that their work, at the very least, minimizes damage on the environment, and, if possible, helps protect the environment.

E.

It seems that each design or product a scientist makes can be characterized as safe or not safe. However, impacts on environment are extremely varied. For example, wind and hydropower are supposed to be environmentally benign, but we now know that they may be dangerous to birds and fish.

F.

Why stop at scientists? Everyone has an obligation to protect our environment. We all use it, we all live in it. However, scientists tend to be more educated than the average populace and therefore must consider how our creations will benefit not only humanity, but the environment as well.

G.

We should talk not of human AGAINST nature, but of human AND nature.

Exercise 9. Choose the correct word and fill in the blanks.

importance important

1. He is one of the _____ people in our company.
2. The real _____ of this invention is hard to overestimate.
3. It's _____ to learn foreign languages.

(to) recycle recycled recyclable

4. This bag is made of _____ paper.
5. It's possible _____ glass.
6. This plastic is _____.

reliable reliably (un)reliability

7. He may forget about it, he is not very _____.
8. I'm _____ informed of it.
9. You can depend only on _____ source of information.
10. _____ is opposite to reliability.

possible possibility possibly

11. They have many _____ to improve the system.
12. This is only one of many _____ answers.
13. Please, do it as soon as _____.
14. It's _____ that the store is still open.
15. Could you _____ lend me 20 dollars?
16. There is strong _____ that they won't come.
17. Let's consider another _____.

responsible responsibility

18. Who is _____ for this work?
19. He is very _____.
20. I take full _____ for this work.

Linguistic Trendiness

The famous writer Isaac Asimov used to say that he could tell everybody's academic background by asking them to say the word «unionised». The chemist would utter it as «un-ion-ised», everybody else would pronounce it as «union-ised».

«When you live on the cutting edge of technology, there are, literally, no words to describe it. Instead we have acronyms. Lots and lots of acronyms.»
(Brian R. Santo)

The vast majority of what we commonly call acronyms are really a type of abbreviations: initialisms. Scientists have found ways to pronounce ostensibly unpronounceable acronyms, e.g. **SCSI** — «small computer system interface» as «scuzzy» and **WMAN** (wireless metropolitan area network) as «woman».

Today we observe constant capitalization: **RQ** — research question

MP — Member of Parliament

VIP — very important person

CEO — chief executive officer (висока посадова особа)

UN — United Nations (Organization)

PLA — prior learning assessment (and recognition) (екстернат)

LIFO — last in, first out

FIFO — first in, first out

SOI — silicon on insulator

SOS — silicon on sapphire

SOA — silicon on anything

SON — silicon on nothing

UTOPIA — universal test and operations physical interface for asynchronous transfer mode.

As Paul McFedries once put it, «the tech sector is a marvellous linguistic factory that ships out truckloads of new words and phrases every year». And yes, there exist a lot of so called telescopic, portmanteau or matryoshka (Russian nest dolls) acronyms like «**webinar**» (a blend of «web» and «seminar» — an online seminar run across the World Wide Web using teleconferencing systems) or **STRIFE** — stress plus life (testing).

Savvy investors put their money behind companies that specialize in **eco-tech**, technology designed to alleviate environmental problems and reduce the use of natural resources. This is also called **greentech**. The end goal is **enlibra**, the process of bringing something into balance, particularly an environmental issue. Technology seen or marketed as being cute, friendly or just plain cuddly is called **cuddletech**. Certain segments of the population have always been gadget-driven: audiophiles, car junkies, to name just a few. But nowadays the technology industry seems to generate a real gotta-have-it mania. Personal digital assistants have been the fetish objects of choice over the past few years. Proof that iPod obsession has gone from fad to phenomenon is the abundance of new words and phrases, for example, **iPoddors** or **pod people**, **iPodaholics**, **iPod addiction**, **iPod fatigue**, **post-iPod life**.

Have you noticed that there is a lot of «factors»? These days, for example, we hear people talk about **wife acceptance factor** or **WAF**. In an object, especially an electronic device that normally appeals only to men, this refers to the features added to the object that allegedly make it acceptable to women. Such devices also come under the influence of **nag factor**, which is the degree to which parents' purchasing decisions are based on being nagged by their children. This is also called **kidfluence**. The so-called human factor is indeed often reflected in new words and phrases, for instance: **TRA** — technology related anxiety, **IFS** — information fatigue syndrome. A **Web log**, or **blog** is a kind of a digital diary, a Web page to which a writer posts chronological entries on a particular topic. The main difference between a blog and a regular Web site is that the blog's information is updated frequently, often several times a day. The collection of blogs is called variously: **blogistan**, **blogverse**, or, most often, the **blogosphere**. Bloggers tend to be passionate about their hobby, and the best among them — genuine stars with dedicated followers — are called **blogerati** or **blognoscenti**.

Speaking of **nerds**, there is a term **nerdistan** (or **Nerdistan**), an upscale and largely self-contained suburb or town with large population of high-tech workers employed in nearby office parks dominated by high-tech industries. Similar to Nerdistan is **technoburb** — an **exurb** (or edge city, located just outside the suburbs), a **post-urban city**, **urban village**, **suburban downtown**, **technopolis** or **ideopolis**.

«Nerdistan» was first used as a descriptor for regions like Silicon Valley. These Silicon Valley-like areas have «Silicon Something» names. Here are some US and out of US ones:

Silicon Valley (Fairfield, Iowa)
 Silicon Alley (New York City)
 Silicon Bayou (New Orleans, Louisiana)
 Silicon Desert (Phoenix, Arizona)
 Silicon Dominion (Fairfax, Virginia)
 Silicon Mesa (North Albuquerque, New Mexico)
 Silicon Mountain (Colorado Springs, Colorado)
 Silicon Alps (Austria)
 Silicon Isle (Ireland)
 Silicon Fen (Cambridge, England)
 Silicon Glen (Glasgow, Edinburgh, and Dundee, Scotland)
 Silicon City (Bangalore, India, also called Silicon Plateau)
 Silicon Saxony (Germany)

And, of course one can brand other «Silicon Whatever» nicknames!

By learning the prefixes you will understand the meaning of words.

Prefix	Meaning
a - , ab -	not having
ambi -	both
anti - , contra-	against
mono -, uni -	single, one
bi -	having or involving two, coming or occurring twice
tri -	having or involving three, coming or occurring three times
by -	secondary
co -, com -, col -, con -, cor -	together with
dis -, de -, mis -, mal -	not, bad, wrong
ex-	out, from
extra -	beyond, outside
fore - , pre -, ante -	before (in time or order); prior (to)
post -	after
e-, cyber-, net-	electronic
in -, im -, ir -, il -, un -	not
inter -	between
micro -	small
multi -, poly -	more than one or two, many
octo -, octa -	eight
out -	to do better than
pseudo -	not real, false
quadra -	four, one-fourth
retro -	backward
semi -, hemi -, demi -	half
deca-	ten

sub -	under, below, beneath, underneath, lower
syn -	same, together
trans -	across
over -	too much
under -	too little
super -, ultra -, hyper -, extra -, mega -, über-	very (much)
mini-, micro -, pico -, nano -	very small
re -	to do again

Exercise 10. Match the two columns:

- | | |
|-------------------|---|
| 1. to coexist | A speaking two languages |
| 2. to postpone | B a period of ten years |
| 3. overpopulation | C not logical |
| 4. illogical | D having two meanings |
| 5. miscalculation | E to make later |
| 6. to underpay | F not typically |
| 7. trilingual | G to exist together at the same time |
| 8. to rewrite | H wrong calculation |
| 9. unfair | I too many people |
| 10. ambiguous | J speaking three languages |
| 11. bilingual | K not fair |
| 12. atypically | L to write again in a better way |
| 13. decade | M to perform better than somebody |
| 14. to outperform | N to pay too little |
| 15. malfunction | O someone greater than a human but less than God |
| 16. demigod | P a small ad hoc network created when several Bluetooth-compatible devices recognize each other and communicate |
| 17. piconet | Q a fault in operation |

Exercise 11. Try to guess the meaning of the following words. If necessary, consult the dictionary or other source(s).

co-sponsorship, contradict, uniform, combine, decade, antecedent, byproduct, international, foresee, impossible, ambivalent, unknown, collaborate, transportation, disorder, monologue, unilateral, bimonthly, semiannual, microscope, subterranean, cooperate, unusual, monopoly, synthesis, bicycle, antipathy, polyglot, reaffirm, demigod, triangle, intermediate, predict, dislike, overestimate, multimillionaire, illegal, infinity, misinform, bilateral, retrospect, preview, hemisphere, outplay, undervalue, multidisciplinary, ultrareliable, redo, super megagadget, megaisssue, extrasecretive, mislead, nanofont, nanosundae, deemphasize, überengineer, e-commerce, e-business, e-mail, cyberspace.

ENGLISH SUFFIXES

A suffix is a combination of letters added at the end of a word. Suffixes help us recognize the function of words:

ADJECTIVE SUFFIXES

-able, -ible,	verifiable, compatible
-ant, -ent	important, fluent
-ish	childish
-ary, -ory	auxiliary, obligatory
-like	sunlike
-some	awesome
-ous	harmonious
-ly	lively
-y	steady
-worthy	noteworthy
-ful	careful
-less	careless
-proof	waterproof
-free	royalty-free
-ware	software
-friendly	user-friendly

VERB SUFFIXES

-ate	translate
-en	thicken
-ize	theorize
-fy, -ify	magnify

NOUN SUFFIXES

-er, -eer	teacher, engineer
-or	professor
-ee	employee
-ist	scientist
-ian	historian
-ant	registrant
-ista	fashionista
-y	ubiquity, normalcy
-age	storage
-ance, -ence	acceptance, difference
-ism	realism
-ity	simplicity
-ment	development
-ness	softness
-ion, -tion, -sion	division, hibernation, conclusion
-ship	friendship, readership, professorship
-dom	freedom
-hood	neighborhood
-vore	informatvore, herbivore
-ate	professorate

The suffix **-aholic** has been applied to many things recently. The original word **alcoholic** was used to describe a person addicted to alcohol. Now we use such words as **workaholics** (people who love their jobs, «addicted» to them), **shopaholics** (addicted to shopping), **sportaholics** (addicted to sports), **TVaholics** (addicted to watching television), and other **somethingaholics**.

Exercise 12. Translate the following words into Ukrainian. If necessary, consult the dictionary or other source(s).

autonomous, tireless, periodicity, criticize, optimism, physician, criticism, thankworthy, foliage, nominate, yellowish, reformer, justify, courage, satisfactory, verifiable, advantage, simplicity, shortage, probability, darken, classify, mandatory, believable, heritage, integrate, trustee, rechargeable, amendment, friendlike, boredom, provable, quoteworthy, geographer, simplify, fellowship, competent, grantee, girlhood, resistant, vendor, workaholic, astronomer, relationship, visible, disputable, parenthood, volunteer, memorize, memorable, spammer, spammees, nominee, herbivore.

Exercise 13.

1. Make nouns from these words:

occur, leader, fit, absent, report, design, develop, free, tender, select, depend, agree, require, read.

2. Make verbs from these words:

symbol, false, strength, active, soft, normal, fresh, valid, signal, legal, individual.

3. Make adjectives from these words:

praise, afford, present, wash, reuse, luxury, noise, use, trust, faith, salt, adjust, flaw.

Exercise 14. What is the difference?

classic — classical

economic — economical — economics

academic (*noun/adjective*) — academical — academician

location — locale

population — populace

cooperation — collaboration

Exercise 15.

Each of fifty United States has postal abbreviations for addresses in correspondence, and characteristic creeds. Study them and answer the following questions:

1. Are there any states that share a common motto?
2. What state is known as «Gopher State»?

Alabama	AL	Heart of Dixie
Alaska	AK	Great Land
Arizona	AZ	Grand Canyon State
Arkansas	AR	Land of Opportunity
California	CA	Golden State
Colorado	CO	Centennial State
Connecticut	CT	Constitution State
Delaware	DE	First State
Florida	FL	Sunshine State
Georgia	GA	Empire State of the South
Hawaii	HI	Aloha State
Idaho	ID	Gem State
Illinois	IL	Land of Lincoln
Indiana	IN	Hoosier State

Iowa	IA	Hawkeye State
Kansas	KS	Sunflower State
Kentucky	KY	Bluegrass State
Louisiana	LA	Pelican State
Maine	ME	Pine Tree State
Maryland	MD	Old Line State
Massachusetts	MA	Bay State
Michigan	MI	Great Lakes State
Minnesota	MN	Gopher State
Mississippi	MS	Magnolia State
Missouri	MO	Show Me State
Montana	MT	Treasure State
Nebraska	NE	Cornhusker State
Nevada	NV	Silver State
New Hampshire	NH	Granite State
New Jersey	NJ	Garden State
New Mexico	NM	Land of Enchantment
New York	NY	Empire State
North Carolina	NC	Tar Heel State
North Dakota	ND	Flickertail State
Ohio	OH	Buckeye State
Oklahoma	OK	Sooner State
Oregon	OR	Beaver State
Pennsylvania	PA	Keystone State
Rhode Island	RI	Ocean State
South Carolina	SC	Palmetto State
South Dakota	SD	Sunshine State
Tennessee	TN	Volunteer State
Texas	TX	Lone Star State
Utah	UT	Beehive State
Vermont	VT	Green Mountain State
Virginia	VA	Old Dominion
Washington	WA	Evergreen State
West Virginia	WV	Mountain State
Wisconsin	WI	Badger State

Wyoming	WY	Equality State
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DC — District of Columbia (Washington, DC)

Exercise 16. Match the two columns.

- Sometimes natural phenomena are reported as UFO.
- Many students used BASIC when they first began to learn programming.
- Most personal computers are now DOS-based.
- TGIF is an expression of gratitude that the work week is almost over and that the weekend is about to begin.
- The PLA process helps you identify learning gained from life and work, and may enable you to receive a diploma or certificate in less time, and with less cost.
- TBA
- TBD
- P+P
- S&H
- The official DVD specification documents have never defined DVD.

- disk operating system
- thank God it's Friday
- prior learning assessment
- unidentified flying object
- beginner's all-purpose symbolic instruction code
- to be defined
- to be announced
- digital video disc / digital versatile disc
- shipping and handling
- postage and packaging

Exercise 17. Verbalize the following abbreviations:

7:00 am; 5:30 pm; No. 6; \$5.99; \$10 billion; DC; JFK; MIT; CMU; NATO; NASA; TBA; TBD; Sep. 13; Montgomery Ave.; Apt. 72; e.g.; cf.; et al.; i.e.; etc.; Ms. Ilona Green; Dr. Deborah Smith; Prof. Campbell; James Booker, Sr.; James Booker, Jr.; James Booker, II; Tucson, Az.; Lexington Park, MD.

Exercise 18. Render the following sentences into Ukrainian.

- «Cyborg» means «cybernetic organism».
- A «simputer» is a simple computer.
- «Tweenager» stands for a currently fashionable marketing term for pre-teens, girls in particular, aged between 7 and 11, a group having substantial purchasing power.
- «Webucation», obviously enough, is education provided over the World Wide Web, a concept also sometimes called «e-education».
- The word «artilect» is used as a term for devices that exhibit autonomous learning behavior: a mix of «artificial intellect».
- Moletronics is a blend of «molecular electronics», the idea that individual elements of computer circuits could be formed using single molecules of substances.
- An ideopolis is literally a city of ideas — a metropolis in which a large proportion of the workforce is engaged in what the report calls «knowledge industries», which include healthcare, teaching, architecture, the media, artistic creation, research and development, and computing.
- Just guess what can «Yahooligan» possibly mean.
- «Blobitecture» («blob architecture») is curvy architecture that completely redefines what a building ought to look like. Apparently, it was coined in 1995 by the architect Greg Lynn who based it on «binary large object», or «BLOB», a technical term for a computer representation of an object.
- We are increasingly susceptible to dataveillance (or consumer espionage), the ability to monitor people's activities by studying their data shadows.
- Today, people are informavores, or consumers of information.
- The Japanese are information-aholics.
- «Commentariat» is a jokey journalists' term for that group of people whose job is to

comment on the news (encompassing experts, pundits and pollsters who analyse political events and discuss their implications). The word is a blend of «commentator» with the suffix «-ariat», an ending derived from French (cf. the English suffix «-ate», as in «directorate» or «professorate»).

14. «Technosexual» is a term for a male with a strong aesthetic sense and love of technology, obviously derived from the ubiquitous «metrosexual»— an urban male with a strong aesthetic sense who spends a great deal of time and money on his appearance and lifestyle.

15. «Feminazi» (also spelled femme-nazi) is an invective neologism used predominantly in the United States political rhetoric to characterize women having an irrational and extreme hatred of men. The word is a blend derived from «feminist» and «Nazi».

16. «S/he» is used nowadays as a gender-neutral alternative to he or she.

17. Doug Ferrel and Don Christian of San Jose, Calif., coined a new word: prossification. They define it as: (n) The long-term effect on an organization that has adopted too much procedural standardization. Combination of the terms «process» and «ossification» (fossilization). Symptoms include low reaction time and lack of flexibility.

18. Linguistic proof of the cultural impact of spyware is the large number of synonyms that have popped up in the past year or so: snoopware, stealthware, trackware, or, tellingly, thiefware.

19. Metro(-) stands for metropolitan, of course.

20. The prefix «zetta» denotes one sextillion, and is used in the term «zettatechnology».

21. Nanosundae is a really small icecream treat on an edible spoon.

22. Pico- (one-trillionth) is one of the «very small» prefixes.

23. Femto- means «one-quadrillionth». Now that is small!

24. McJob denotes a low-paid job with few prospects.

25. Nano- is about the implications of nanotechnology, a new field in which scientists are learning to manipulate matter pretty much atom by atom.

26. «Wiki» is an acronym for «what I know is ...» (hence Wikipedia). According to other sources, «wiki» is a Hawaiian word that means «quick».

27. The German prefix über-, (super), has become übertrendy in the last few years.

28. If I am going to webify this tool, do I have the right architecture?

29. It's the latest product devised by a man with a passion for «gadgeteering», as he calls it.

30. Let me list some examples of the so called Newglish (New English): technopreneur — an entrepreneur in the technology fields; automagically — something that is done automatically in an ingenious or inexplicable way, as if by magic; hacktivist — a hacker with a social or political message to propagate.

31. Chindia is a portmanteau term for China and India considered together; the blend of the two names suggests that they are becoming a powerful economic force whose global influence may change the pattern of the world's trade over the next couple of decades.

32. «Wallah» is a Hindi suffix denoting «a doer», the lunchboxes are named «dabbas», the meal is often called «tiffin», so dabbawallahs or tiffinwallahs are persons delivering meals to offices.

33. Fashionista is a gently sarcastic term for a person who is an enthusiast for fashion.

34. Compare WYSIWYG («what you see is what you get») and of YDKEWYGUYGI («you don't know exactly what you get until you get it»), trying things without knowing what the results will be.

35. Words ending in «-ati» tend to be mildly pejorative: glitterati — the fashionable set of people engaged in show business or some other glamorous activity; fasherati — the set of people concerned with fashion; digerati — people with expertise or professional involvement in information technology (sometimes used neutrally); illuminati — people who claim to possess special enlightenment or knowledge of something (it was originally the name of a Bavarian secret society founded in 1776, and of a sect of 16th-century Spanish heretics).

36. Words ending in -zilla refer to the term «Godzilla» commonly used as a synonym for a giant monster (its trademark owner is Toho Co. Ltd. of Japan).

37. The abbreviations XO and XOXO mean «kisses and hugs».

38. <http://www.newyorkology.com/>

- Arrivology
- Drinkology
- Foodology
- Hotelology

- Shopology
- Sightsology
- Transportology
- Etceterology

UNscientifically speaking...

Some reasons why English is hard to learn:

His two sons live in Tucson.
 I did not object to the object.
 I had to subject the subject to a series of tests.
 How can I intimate this to my most intimate friend?
 I was too close to the door to close it.
 She thought it was OK to present the present.

A string of letters that reads the same backwards as forwards is a **palindrome** («Madam, I'm Adam»; «A man, a plan, a canal: Panama!»; «Was it a car or a cat I saw?»).

A **semordnilap** is closely related, but the reversed text must be different. For example, if you reverse «diaper» you get «repaid», and if you invert «desserts» the word «stressed» appears.

William Archibald Spooner is believed to have invented verbal (and conceptual) inversions. Such wordplay is called Spoonerisms, e.g. «You have hissed my mystery lectures», «Which of us has not felt in his heart a half-warmed fish?».

HUMOR

Professor Haldane has described the normal process of acceptance of a scientific idea in four stages:

- i. This is worthless nonsense.
- ii. This is quite an interesting point of view.
- iii. This is true but quite unimportant.
- iv. I always said so.

(«Acceptance of Scientific Idea», from Journal of Genetics, 1963)

«Writing a book is an adventure: it begins as an amusement, then it becomes a mistress, then a master, and finally a tyrant.»

Winston Churchill

«The moment one learns English, complications set in.»

Felipe Alfau

«You do not really understand something unless you can explain it to your grandmother.»

Albert Einstein

«An expert is a man who has made all the mistakes which can be made, in a very narrow field.»

Niels Bohr

«When a body is immersed in water — the telephone rings.»

Archimedes' Other Law

«Two things are infinite: the universe and human stupidity; and I'm not sure about the universe.»

Albert Einstein

«Very few people do anything creative after the age of thirty-five. The reason is that very few people do anything creative before the age of thirty-five.»

Joel Hildebrand

«I cannot give you a formula for success, but I can give you a formula for failure: try to please everybody.»

Herbert Swope

THEOREM:

It doesn't matter if something I buy turns out to be a mistake and unreturnable,
because three years ago I found fifty dollars on the street,
so THAT BALANCES EVERYTHING OUT!

How to Write a Clear Research Report

by Caroline, Eric, and Emily
Alexandria, Virginia

Abstract

We had some fun with a stacking rings toy and learned something about how the perceptions of adults are different from those of babies.

Introduction

Almost everyone has played with stacking ring toys at one time or another. Most households with small children have them, and they are simple yet fun playthings for babies, children, and adults. Many of them have five rings of different colors (in our case blue, green, yellow, orange, and red) and often the largest ring is blue and the smallest red (this is true for our toy).

Caroline and Eric are PhD scientists, Emily is an 11-month-old baby, and the three of us would like to share with you some things we learned by playing with this neat toy.

What is the toy like?

Our toy is a yellow tower with five rings: blue, green, yellow, orange, and red. The rings are different sizes and the tower is tapered so that the only way you can fit all the rings on the tower is to put the biggest one on the bottom and so on up to the smallest one on top. This puts the rings in rainbow order with blue at the bottom, then green, yellow, and orange, and finally red on top. You can see the stacking rings toy in the picture below.

Caroline and Eric play with the toy

Caroline and Eric played with the toy for a while, and always ended up leaving the rings stacked in rainbow order with blue at the bottom and red at the top. We've written this order in the table below.

Emily plays with the toy

Emily took all the rings off, and then put them back on in different orders. She was happy with all the different arrangements she found. We've written some examples in the table. She found that she could put a ring on top of the top ring and it would be pretty stable since the tower pokes its head a little above the top of the red ring. This is the «Level 6» listed below.

Table: Different ring orders

	Caroline & Eric's order	Emily put the rings in all these ways					
		a	b	c	d	e	f
Level 6		yellow	green	red	green	orange	red
Level 5	red	orange	red	green	red	red	yellow
Level 4	orange			orange	orange		orange
Level 3	yellow	blue	yellow	yellow			
Level 2	green	green				green	green
Level 1	blue			blue		blue	

What we learned

Caroline and Eric always found the same ring order, but Emily had a lot of fun with all sorts of different arrangements. Maybe Caroline and Eric were too quick put the rings in the order they knew was right. Do we know that their arrangement is «better» than any of Emily's arrangements? Perhaps adults shouldn't jump to conclusions so quickly.

Conclusions

We had a good time playing with the toy and Caroline and Eric learned that their preconceived ideas are not necessarily true.

How to Write a Scientific Research Report

*E. Robert Schulman , C. Virginia Cox , and E. Anne Schulman
Alexandria, Virginia*

Abstract

The stacking properties of toroids that reflect radiation in the 1.8 to 2.8 eV energy range is investigated. Preliminary results indicate that in the optimal configuration the toroids are oriented vertically with those reflecting lower energy photons having larger gravitational potential energies for toroids of equal mass. The ambiguousness of this solution is tested by experiments performed by a relatively inexperienced researcher ($t = 0.9167$ yr). These experiments indicate that alternate solutions can be found.

1. Introduction

The significance of toroidal stacking properties in the present society should not be underestimated. A plurality of localities in which dwell immature Homo sapiens contain educational implements consisting of conic surfaces that can be combined with multiple toroids to produce coherent structures. The number of toroids per conic surface is usually five, and there is often an anticorrelation between toroidal radius and the mean energy of photons reflected by each torus.

In this paper, we report on the results of a study of toroidal stacking properties by independent groups. Two of us (ERS and CVC) are experienced researchers, while one of us (EAS) is a relatively inexperienced researcher, having an age of 0.9167 yr at the time the study was performed.

2. Description of Experimental Apparatus

The experimental apparatus consists of six components: A solid with a circular base and a plane curve tapering uniformly towards a vertex, which has a mean reflected photon energy of 2.18 eV, and five toroids of different radii having mean reflected photon energies of 2.76, 2.43, 2.18, 1.97, and 1.80 eV. The experimental apparatus is shown in Figure 1:

3. Description of Experiment 1

In the first experiment, two of us (ERS and CVC) together attempted to determine the optimal toroidal stacking configuration. It was found that in the most advantageous mode the toroids are arranged in a vertical orientation with those reflecting lower energy photons having larger gravitational potential energies for toroids of equal mass. This solution is listed in column 2 of Table 1.

4. Description of Experiment 2

In the second experiment, one of us (EAS) independently attempted to determine the optimal stacking configuration. A large number of acceptable solutions were found, although interestingly these did not include the solution described in section 3. Columns 3 to 8 of Table 1 list six solutions that were found using this method:

Table 1. Toroidal Stacking Solutions

	Solution Number						
	1	2a	2b	2c	2d	2e	2f
Level 6		2.18	2.43	1.80	2.43	1.97	1.80
Level 5	1.80	1.97	1.80	2.43	1.80	1.80	2.18
Level 4	1.97			1.97	1.97		1.97
Level 3	2.18	2.76	2.18	2.18			
Level 2	2.43	2.43				2.43	2.43
Level 1	2.76			2.76		2.76	

5. Discussion

Although the experienced researchers consistently found only one optimal toroidal stacking solution, the relatively inexperienced researcher found a multiplicity of acceptable solutions. These results can be understood in the context of a model that predicts a strong correlation between acceptance of the current scientific paradigm and research experience.

The verisimilitude of solution one is brought into question by its absence in the multiple

trials of experiment two; despite the abstract plausibility and possible pedagogic utility of the concept of orienting toroids vertically with those reflecting lower energy photons having larger gravitational potential energies for toroids of equal mass, it is possible that this and similar concepts limit the phase space explorations of experienced researchers.

6. Conclusions

The stacking properties of toroids that reflect radiation in the 1.8 to 2.8 eV range was investigated. Preliminary results indicated that in the optimal configuration the toroids are oriented vertically with those reflecting lower energy photons having larger gravitational potential energies for toroids of equal mass.

The ambiguousness of this solution was tested by experiments performed by a relatively inexperienced researcher ($t = 0.9167$ yr), which indicated that alternate solutions can be found. In fact, the inexperienced researcher failed to find the original solution, suggesting that the phase space explorations of the experienced researchers were limited by their adherence to the currently accepted scientific paradigm.

Web User Reactions to Bearded Men

Eric Schulman
Alexandria, Virginia

Abstract

Web users were exposed to images of bearded, non-bearded, and indeterminately bearded men. The web users estimated the temperature of each man, on a scale from 10 (HOT) to 1 (NOT). These ratings were recorded and analyzed.

1. Introduction

Lichtblau et al. (1991) and Maloney et al. (1999) concluded that, basically, cats are indifferent to photographs of bearded men. All other research on the topic has confirmed this conclusion. There is, however, much more controversy on the reactions of human beings to photographs of bearded men (Kaswell 1999).

For example, Muscarella and Cunningham (1996) studied 204 college students and concluded that they perceived men with facial hair as «more aggressive, less appeasing, less attractive, older, and lower on social maturity» than men with clean shaven faces. This is consistent with the conclusions of Wogalter and Hosie (1991): «Clean-shaven faces were regarded more favorably than bearded faces; they appeared younger, more attractive, and more sociable.»

On the other hand, Pancer and Meindl (1978) concluded that «the bearded male was regarded more positively than the clean-shaven male.» And Pellegrini (1973) found that bearded men are perceived as «masculine, mature, good-looking, dominant, self-confident, courageous, liberal, nonconforming, industrious, and older.»

Because of this controversy — and in an attempt to obtain one more publication before an impending tenure decision — we set out to analyze web user reactions to images of bearded men.

2. Materials

Three images were used in the study. The images, reproduced here, display the same man bearded (Figure 1), non-bearded (Figure 2), and indeterminately bearded (Figure 3):

The test subjects were approximately 540 male and female web users (180 web users viewed each image). As far as we know, no web users were harmed during the study.

3. Methods

Each web user was exposed to one of the three images through an Internet research service (www.HOTorNOT.com). The image was visible to the web user for as long as he or she cared to look at it. Each web user estimated the temperature of the man in the image on a scale from 10 (HOT) to 1 (NOT), after which a new image (unrelated to this study) was presented to them.

4. Results

The results are shown in Figure 4.

5. Conclusions

The significance of the difference in perceived temperature between the bearded and beardless man is only 0.3 sigma. The significance of the difference in perceived temperature between the beardless and indeterminately bearded man is larger, but is still only 0.9 sigma. We therefore conclude that, basically, web users are indifferent to beards on men.

Acknowledgments

The author wishes to thank the anonymous subject of Figures 1 to 3. The subject declined to be paid for this work, but requested that his favorite book (Schulman 1999) be mentioned here. Thanks also to Jim Young and James Hong for providing their inovative Internet research resource free to the academic community.

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Chronology of a test

- 8:30 a.m. The student writes down the name and hopes for logical answers in the test.
- 8:35 a.m. After reading the first problem, curses himself or herself for having skipped that drill exercise the night before.
- 8:40 a.m. Mental block. The hallucinations begin.
- 8:43 a.m. Phrases like: «That isn't coming in the test!» start tormenting the student.
- 8:47 a.m. Something tells him or her how to answer the questions; takes the pencil out of the mouth and starts hopelessly filling out an answer sheet.
- 9:00 a.m. Those were 10 easy points, s/he proudly pats herself/himself on the back.
- 9:06 a.m. Reality check. Cold sweat. Hallucinations.
- 9:10 a.m. Only 5 minutes left, the last problem has the most dreadful word one has yet to encounter in a test.
- 9:13 a.m. Shamelessly starts guessing the answers to the questions.
- Uses the last minutes to review the known answers, the rest is pointless.
Recognizes it's never too late to pray.

Mini-Quiz

- The prefix giga (G) for 10^9 (as in GHz):
 - is pronounced with a hard g (as the g in goat)
 - is pronounced with a soft g (as the g in gelatin)
 - is derived from a humorous verse by Christian Morgenstern
 - all of the above
- The American engineer Al Gross is credited with the invention of:
 - paggers
 - microwave ovens
 - modems
 - none of the above

(Answers: 1-d; 2-a)

Exercise 19. Read the passage and answer the questions that follow.

The Nobel prizes are announced each October and later awarded at a formal ceremony in Stockholm. Also each October, at Harvard University, the somewhat lesser-known American version of the Nobels, the Ig Nobels, are announced and awarded in the August Sanders Theater. The very first year that Ig Nobel Prizes were awarded is 1991. The «Ig Nobels» are a tongue-in-cheek alternative to the real Nobel Prizes, which celebrate «all that is bizarre, weird and improbable in real-life scientific research» and which honour those whose achievements «cannot or should not be reproduced». Another difference is that the Ig Nobel doesn't give cash prizes to winners. The winners get to the ceremony at their own expense to talk for just a minute. The awards are an eclectic bunch that have commemorated the Norwegian biologists who studied the effects of ale, garlic and sour cream on the appetite of leeches, the man who founded the Apostrophe Protection Society, The British Standards Institution for its six-page specification of the proper way to make a cup of tea, the researcher who demonstrated that toast often falls on the buttered side.

The Ig Nobels were created by Marc Abrams, the editor of a magazine called *The Annals of Improbable Research*. Marc Abrams keeps things lively on awards night with things like a nano-opera called «Atom and Eve: Eve a beautiful scientist and Atom — an oxygen atom.»

- The passage is about
 - The Nobel Prizes
 - Harvard University
 - Stockholm ceremony
 - The Ig Nobels
- According to the passage, the Ig Nobel winners
 - always receive cash prizes
 - sometimes receive cash prizes
 - never receive cash prizes
 - may or may not receive cash prizes
- It can be inferred from the passage that Marc Abrams
 - is a musician
 - was trained as a physicist
 - is a chemist
 - has a great sense of humor
- At the ceremony, the Ig Nobel winners
 - talk for more than one minute
 - talk for only one minute
 - talk for several minutes
 - talk for ten minutes
- It can be concluded that Ig Nobels
 - are awarded every other year
 - were awarded prior to 1991

- c. are awarded for genuine achievements
d. are awarded for apocryphal achievements
6. The underlined word tongue-in-cheek could best be replaced by which of the following:
a. not serious
b. very serious
c. somewhat serious
d. state-of-the-art
7. The underlined word real could best be replaced by which of the following:
a. traditional
b. annual
c. usual
d. actual
8. The underlined word improbable could best be replaced by which of the following:
a. trustworthy
b. possible
c. impossible
d. true
9. The underlined word which could best be replaced by which of the following:
a. those
b. whose
c. that
d. who
10. The underlined word achievements could best be replaced by which of the following:
a. accomplishments
b. accidents
c. incidents
d. approaches
11. The underlined word reproduced could best be replaced by which of the following:
a. done away with
b. put aside
c. done again
d. put together
12. The underlined word another could best be replaced by which of the following:
a. the second
b. the other
c. other
d. a second
13. The underlined word eclectic could best be replaced by which of the following:
a. unified
b. evolving
c. ordinary
d. unsystematic
14. The underlined word effects could best be replaced by which of the following:
a. composition
b. influence
c. structure
d. condition
15. The underlined word lively could best be replaced by which of the following:
a. real-life
b. cheerful and active
c. short and sweet
d. well organized

II. Complete the following sentences

16. It's technology of the future ... today.

- a. test
 - b. is testing
 - c. tests
 - d. being tested
17. ... of these methods are based on an experimental paradigm.
- a. The most
 - b. More than
 - c. Most
 - d. More than that
18. Such testing came to be ... used in other countries.
- a. widely
 - b. wider
 - c. wide
 - d. width
19. In a manifesto ... last fall a group of intellectuals and advocates of clean energy called for the technological transformation of the transportation sector.
- a. issues
 - b. being issued
 - c. issue
 - d. issued
20. Galileo proposed the hypothesis that all falling bodies ... at the same constant speed.
- a. drop
 - b. dropped
 - c. will drop
 - d. would drop
21. I encourage you to join me in ... in the Awards program by nominating one of your distinguished colleagues.
- a. participating
 - b. to participate
 - c. participate
 - d. participation
22. Laptops, cellphones, and other products will likely continue to use them for the ... future.
- a. foreseeable
 - b. foresee
 - c. foresaw
 - d. to foresee
23. Please indicate your interest in ... this material.
- a. receiving
 - b. receive
 - c. received
 - d. receives
24. That's why ... manufacturers resort to a thin layer of thermal paste.
- a. the most
 - b. almost
 - c. and most
 - d. most
25. I have a particular pleasure of ... you that Dr. Green will be a keynote speaker for the next Annual Conference.
- a. inform
 - b. did inform
 - c. informed
 - d. informing
26. Over the past 35 years he ... with some of the largest commercial organizations of the world.
- a. works
 - b. worked
 - c. has worked
 - d. is to work
27. She is one of the world's ... experts in management.

- a. leaded
 - b. leading
 - c. leads
 - d. to lead
28. Alerts are sent if there ... a problem.
- a. was
 - b. are
 - c. is
 - d. were
29. In ... standard surveillance systems images are stored from a week to a month.
- a. the most
 - b. less than
 - c. most
 - d. less
30. Programming is done
- a. remote
 - b. remoted
 - c. and remote
 - d. remotely
31. To do so, ... special diodes.
- a. to use
 - b. used
 - c. using
 - d. use
32. The program has spawned organizations that ... expertise and support for practitioners.
- a. provide
 - b. provides
 - c. providing
 - d. and provided
33. There is no one right way ... digital content.
- a. to preserve
 - b. preserving
 - c. preserved
 - d. preserve
34. MIT is ... closely with the University of Cambridge.
- a. and work
 - b. work
 - c. worked
 - d. working
35. Does this also ... to hard drives?
- a. applies
 - b. applied
 - c. apply
 - d. will apply
36. All these important activities ... consume our time over the next 10 years at least.
- a. will
 - b. was
 - c. were
 - d. are
37. I ... the member of IEEE for over 20 years.
- a. was
 - b. to be
 - c. has been
 - d. have been
38. These issues require extensive knowledge ... science and technology.
- a. in
 - b. of
 - c. on
 - d. for

39. Are you interested in ... this point?

- a. discussion
- b. discussed
- c. discussing
- d. when discussed

40 Irrespective ... the outcome of these arguments, engineers, and scientists should continue to do what they've always done.

- a. to
- b. at
- c. of
- d. for

41. ... these deep questions, biology now needs to be able to work in sophisticated ways with the huge mass of quantitative data.

- a. Tackle
- b. To tackle
- c. When tackled
- d. But tackle

42. I recommend that the decision ... abrogated.

- a. to be
- b. being
- c. is being
- d. be

43. There ... two major categories of organized research: exploratory and mission-oriented research.

- a. is
- b. be
- c. are
- d. to be

44. The interdisciplinary approach is essential ... the investigation.

- a. at
- b. to
- c. from
- d. into

45. Please contact us ... potential contributions.

- a. regard
- b. regarded
- c. regarding
- d. regards

46. Professor Rogers will be our society president for the ... year.

- a. come
- b. comes
- c. came
- d. coming

47. He ... the editor and chief of the newsletter from 1996 to 1998.

- a. is
- b. has been
- c. was
- d. will be

48. This research resulted ... several publications.

- a. in
- b. at
- c. on
- d. of

49. ... energy production and distribution systems should continue to be improved.

- a. Existed
- b. Existing
- c. Existence of
- d. Exist

50. It is essential that technical activities ... carried out within an appropriate management framework.
- be
 - will be
 - were
 - to be
51. It is difficult ... the contribution he made.
- to assess
 - assess
 - assessed
 - assessment
52. Please remember this exception ... the rule.
- to
 - from
 - in
 - at
53. The illustration (Fig. 14) ... how this principle was actually used.
- show
 - shows
 - to show
 - showing
54. The last major principle ... of novel methods.
- the importance
 - important
 - was the importance
 - and the importance
55. In the past, literacy was restricted ... a minority.
- to
 - in
 - by
 - of
56. It is important ... the methodology to its conclusion.
- follow
 - followed
 - to follow
 - follows
57. It must ... that so far this estimate is a theoretical prediction.
- stressed
 - to be stressed
 - was stressed
 - be stressed
58. Power is the economic lifeblood of the 21 ... city.
- centuries
 - century
 - center
 - centers
59. ... General Motors all-electric plug-in vehicle?
- To remember
 - Remember
 - Remembering
 - Remembers
60. This paper should ... in a free online journal.
- to be published
 - be published
 - publishing
 - publish
61. With ..., the thesis will be completed on time.
- luckily

- b. lucky
 - c. luck
 - d. and luck
62. The results are not easy
- a. to generalize
 - b. generalized
 - c. generalizing
 - d. generalize
63. That ... well for Moore's law.
- a. bodes
 - b. bode
 - c. to bode
 - d. boding
64. ... more information, visit www.ieee.org
- a. On
 - b. For
 - c. At
 - d. To
65. So why not ... the clock faster?
- a. push
 - b. to push
 - c. pushing
 - d. pushed
66. But it can be subjected to a number of... .
- a. testing
 - b. tests
 - c. test
 - d. tested
67. He expressed his philosophy very
- a. simply
 - b. simple
 - c. more simply
 - d. with simplicity
68. They include, but are not limited ... the medieval period.
- a. to
 - b. by
 - c. at
 - d. in
69. She recommended three major changes to the ... system.
- a. existing
 - b. exist
 - c. to exist
 - d. exists
70. It was during the last few years ... he wrote his two major works.
- a. that
 - b. how
 - c. because
 - d. and
71. The volumes of the dictionary ... a wealth of information.
- a. contain
 - b. contains
 - c. when contain
 - d. now contains
72. The problem here ... this process is very inefficient.
- a. is that
 - b. that is
 - c. this is
 - d. is this
73. This survey took me ... surprise.

- a. by
- b. at
- c. for
- d. on

74. ..., companies would build all-new network.

- a. Ideal
- b. Ideally
- c. Idealist
- d. Idealism

75. Our colleagues have already discussed it in full

- a. detail
- b. details
- c. detailed
- d. and detail

76. If the Grants Committee ... that the Preliminary Proposal Abstract falls within the guidelines, the applicant will be invited to submit a Full Proposal.

- a. will decide
- b. decide
- c. decides
- d. decided

77. Submissions should be made according ... the approval process.

- a. to
- b. by
- c. on
- d. with

78. ... upon the organizational process, this phase was the only one that went promptly.

- a. Look back
- b. Looked back
- c. Looking back
- d. Looks back

79. We are unlikely ... an investment in fiber.

- a. seen
- b. to see
- c. seeing
- d. see

80. It is almost impossible ... us to think of it.

- a. for
- b. when
- c. and
- d. to

81. The method of ... whether a device is to get power was a major challenge.

- a. detect
- b. to detect
- c. detected
- d. detecting

82. This software is the leading edge of both unparalleled convenience ... breakdowns in barriers to piracy.

- a. but also
- b. as well
- c. and
- d. also

83. ... a few statistics.

- a. Considers
- b. Consider
- c. Consideration
- d. Considered

84. Currently, it works with ... three players.

- a. less
- b. at least

- c. at last
d. and least
85. Designers are ... with conflicting requirements.
a. face
b. faced
c. faces
d. will face
86. The problem is to figure out which technology ... in what application.
a. use
b. to use
c. usage
d. using
87. The rules were published in minute
a. details
b. detail
c. detailed
d. detailing
88. This museum houses a magnificent art
a. collective
b. collecting
c. collect
d. collection
89. Such changes can occur without any ... external cause.
a. known
b. knows
c. knowing
d. know
90. I read the column ... it's so good.
a. since
b. and
c. although
d. while
91. Money could be held in the smart card
a. itself
b. oneself
c. herself
d. himself
92. ... such changes can occur is of great concern.
a. It is
b. That
c. Also,
d. Thus
93. But ... really the way it works?
a. that is
b. is that
c. are
d. they are
94. I would like ... the staff on it.
a. congratulate
b. congratulation
c. to congratulate
d. congratulated
95. S&T stands ... «Science and Technology», of course.
a. at
b. in
c. for
d. on

96. The good news ... that salaries tend to be generous.
- are
 - were
 - is
 - have been
97. Make sure to get everything in
- written
 - write
 - writes
 - writing
98. Theoretical description will be presented in a style easily ... by a diverse readership.
- comprehend
 - comprehended
 - comprehending
 - to comprehend
99. The theory provides the foundation for an in-depth discussion ... the novel design.
- include
 - that include
 - included
 - that includes
100. IEEE Microwave Magazine ... by IEEE.
- publishes
 - publish
 - published
 - is published
101. If nothing ... , about 1/3 of our reserve will be depleted in a few years.
- will change
 - change
 - changes
 - not changes
102. After much ... they understood the nature of the phenomenon.
- experiments
 - experimental
 - experimentation
 - experiment
103. Our colleagues are sure ... it.
- of
 - in
 - at
 - as to
104. Breathing is essential ... life.
- at
 - to
 - from
 - into
105. Perhaps one of Long Beach's greatest assets is its ethnic
- diverse
 - diversity
 - and diverse
 - or diversity
106. ..., they gather here.
- Order
 - Ordering
 - Ordinarily
 - Ordinary
107. ... , two companies still supply the subways with the relays.
- Surprise
 - Surprised

- c. Surprises
 - d. Surprisingly
108. ... electricity from wave power is an old idea.
- a. Generates
 - b. Generation
 - c. Generating
 - d. Generate
109. This call may ... monitored for quality assurance purposes.
- a. be
 - b. to be
 - c. been
 - d. being
110. We would ... welcome them into our program.
- a. certain
 - b. and certain
 - c. and certainly
 - d. certainly
111. It is within ... distance of the large hotels.
- a. walking
 - b. walked
 - c. walk
 - d. to walk
112. We will be asked to provide our vision of the applications that this field ... impact.
- a. is most likely
 - b. is most likely to
 - c. most likely
 - d. are most likely
113. It is ... in a grand Art Deco building.
- a. housing
 - b. houses
 - c. housed
 - d. house
114. Please ... all inquiries and communications regarding the Forum to its organizer.
- a. to direct
 - b. directing
 - c. direct
 - d. and direct
115. Panelists from the USA will address the subject from ... viewpoint.
- a. its
 - b. theirs
 - c. it
 - d. their
116. You should use a form which ... on the web under www.ieee.org.
- a. can be found
 - b. can be founded
 - c. can find
 - d. and can be found
117. We need ... fellow practitioners.
- a. network
 - b. to network
 - c. networking
 - d. to network with
118. It provides a forum for the exchange of ideas ... practicing engineers from the universities, consultants, and in the manufacturing and supply industries.
- a. between
 - b. among
 - c. both
 - d. not only

119. Our student activities ... an important part of the discussion.
- was
 - were
 - is
 - has been
120. ..., we were able to find sponsoring companies and subsidies from the University.
- Fortune
 - Unfortunately
 - And fortune
 - Fortunately
121. I prefer the ... approach in this particular case.
- classic
 - classical
 - class
 - classified
122. They might ... a hunch things were right.
- have had
 - to have
 - has
 - having
123. She studies ... at Ohio State University.
- economy
 - economic
 - economics
 - economical
124. Both literature and music ... the fine arts.
- have
 - has
 - is
 - are
125. The quantity of scientific data ... enormous that dealing with it is a whole new discipline in itself.
- is so
 - are so
 - such
 - as such
126. ... to the introduction of the microwave oven, people spent much more time cooking their meals.
- After
 - Prior to
 - At present
 - During
127. Scientists are still uncertain about ... this phenomenon occurs.
- how
 - which
 - with
 - that
128. ... I need is a good dictionary.
- Which
 - When
 - What
 - Why
129. Bill Haley, ..., with his song «Rock around the clock», insisted he was the founding father of the genre «rock'n'roll».
- the first superstar rock performer
 - was the first superstar rock performer
 - and the first superstar rock performer
 - so the first superstar rock performer

130. No one is sure ... makes him think so.

- a. what
- b. it
- c. how
- d. which

131. The ... coverage provided many in-depth articles.

- a. expanding
- b. to expand
- c. expand
- d. expanded

132. The standard is now ... its maintenance phase.

- a. enters
- b. to enter
- c. entering
- d. enter

133. It is more than just a rumor.

- a. not
- b. not only
- c. no
- d. never

134. Unfortunately, the complexity of such a system is to be considered as a practical solution.

- a. too great
- b. to greet
- c. great
- d. greet

135. Oft-suggested alternatives variations in the sun's brightness.

- a. includes
- b. include
- c. including
- d. to include

136. A is not ... as B.

- a. big
- b. bigger
- c. the biggest
- d. as big

137. «If I'd known I was going to live this long, I'd ... better care of myself» (Ragtime musician James Herbert Blake, at age 100, in 1983).

- a. have taken
- b. taken
- c. took
- d. take

138. This is typical ... schooling.

- a. of
- b. at
- c. to
- d. in

139. Of course, the definition of hands-on ... drastically in the past 20 or 30 years.

- a. has changed
- b. changed
- c. will change
- d. and changed

140. Tumble dry at high heat (..... exceeding 75°C) at normal setting.

- a. no
- b. not only
- c. not
- d. nor

141. What is the reason ... your decision?

- a. of
 b. for
 c. at
 d. from
142. Such devices are
 a. programming
 b. program
 c. to program
 d. programmable
143. Adult's salt consumption should be ... more than 6g a day.
 a. not
 b. not just
 c. no
 d. never
144. Let's discern the subsets that
 a. elements fall into
 b. elements to fall
 c. into elements
 d. falling elements
145. It is important to understand which topics the authors ... most.
 a. to rely
 b. rely on
 c. and rely
 d. relying
146. How challenging the problem is, ... less important than how challenging it feels to them.
 a. is it
 b. had been
 c. it
 d. is
147. The thing ..., we still live in a world that's filled with opportunities
 a. has been
 b. was
 c. is
 d. will be

Exercise 20.

Render the following sentences into Ukrainian. Pay special attention to the boldfaced linguistic devices. If necessary, consult dictionaries or other sources of information.

1. Let's **take part** in the workshop.
2. I'll **do my best to keep abreast** of current events and technological advances.
3. Do you follow my **train of thought**?
4. I **would rather** not talk about it. **That's against the rules.**
5. We are **on the verge of** democratizing knowledge.
6. They've completed the assignment **ahead of time.**
7. **To this end** they have reconsidered the point **in question.**
8. **It comes as no great surprise** to both **underuse** and **overuse** such terms.
9. He finally decided to **get rid of** this idea.
10. We had to start the project **from scratch.**
11. I can **take care** of it.
12. Did you **change your mind**?
13. I have read **quite a few** journals, but only this one contains **a wealth of** information.
14. I think it would certainly be useful **in the long run.**
15. Does it **make any sense** to you?
16. Can you **do without** it?
17. My job is OK **for the time being.**
18. I **look forward to seeing** you soon.
19. She is **by far** the best jazz singer — she's **just** marvelous!

20. I've **run out of** paper.
21. **Bluntly put**, there's not much of a future for this application.
22. **It seems that** they will be used in the foreseeable future.
23. **It turned out** to be correct.
24. **On the whole**, our **tentative** data **suggest** that the law **holds**.
25. **There is no doubt** that all attendees are **familiar with** the conference structure.
26. **It should be borne in mind** that **so far** this estimate is a theoretical prediction.
27. **To the best of our knowledge**, the conference is intended to reflect the state-of-the-art in the major subfields.
28. **We have every reason to believe** that careful planning doesn't rule out the possibility of spontaneous discovery.
29. **When it comes to** research, enthusiasm **does matter**.
30. **As to this point**, it is **argued** that **what one knows** will usually **rest on** assumptions one **takes for granted** without knowing them to be true.
31. Do **drop me a line** if you have a book on this subject.
32. **Actually**, the technique **may well** be effective.
33. **The thing is** that many people believe that this field is stagnant.
34. **It goes without saying** that this idea lacks originality.
35. **Put down** these statistics **lest** you forget them.
36. You'll never understand it **unless** you study carefully.
37. This scientist addressed a famous and simple question: «Why is there something **rather than** nothing?»
38. **As a matter of fact**, this is a **challenging** task.
39. The reaction **may have taken** place.
40. This process **can well be** effective.
41. No final decision between **the two alternatives** is possible at present.
42. **Apart from** state-of-the art physics procedures, they have used cutting-edge chemistry techniques.
43. It is not at all difficult to connect the lines that are just an inch **apart**.
44. Further work on this problem is, however, **badly needed**. It is **ever so important to reach a** worldwide English-language **readership**.
45. This **causes** the components to be separated.
46. There are **a few** papers dealing with this subject.
47. The theory **turned out** to be correct.
- 48 I just can't **make up my mind when it comes to** this brand.
49. Such algorithms may be used **repeatedly**.
50. A **progressive** increase in volume has been noticed recently.
51. This **seems to be** correct.
52. This method **may well be** effective.
53. We study this phenomenon **in terms of** structure and evolution.
54. Be careful **not to jump to conclusions**.
55. This is the **actual** approach that we have employed **lately**.
56. The changes seem to be **gradual rather than sharp**.
57. **Frankly speaking**, I don't like **the approach proposed**.
58. **Basically**, the proposed approach did help us to come to important conclusions.
59. This problem will be discussed **at some length**.
60. **Now that is** a Christmas dinner!
61. **Now that** it's here all anyone can do is complain! Amazing!
62. **Suffice it to say for now** that it transforms a NUMBER to its **corresponding (respective) VALUE**.
63. **At one time** they all had taught mathematics.
64. **From then on**, to enable this, they need to declare license.
65. I don't want **to overstay my welcome**.
66. Many people believe that this field is static and, indeed, stagnant. Well, I hope to prove that **nothing is further from the truth** and that our discipline is a vibrant and synergistic combination of science and art, combined with **a dollop of** economics, in a state of continuing renewal and discovery, with many unanswered and important **questions yet to be answered**.
67. The word «organic» **refers to** the way farmers grow and process agricultural products, such as fruits, vegetables, grains, dairy products and meat.
68. **Saddle slow, ride fast**.

69. He says he's **middle-brow** on tea & chocolate, **very mixed on** books, **out of touch entirely** on sports, **lowbrow/mainstream on** clothes, shoes, cars, all sorts of other things.

70. Well, **for one thing**, many of the examples are way too short. **For another thing**, I know from experience that (at least some of) the people don't see any problem with them.

Exercise 21. English Idioms Test. Fill in the blanks. If necessary, consult dictionaries or other sources of information.

1. Alex and John are as different as ... and cheese.
 - a. coffee
 - b. ham
 - c. jam
 - d. chalk
2. My father wants me to study law, but I have made up my ... to become an archaeologist instead.
 - a. mind
 - b. heart
 - c. brain
 - d. head
3. If something ... true it sounds true.
 - a. tolls
 - b. tells
 - c. rings
 - d. says
4. Why do they always go there? I don't know, I haven't the foggiest
 - a. idea
 - b. thought
 - c. answer
 - d. guess
5. It was just a tongue-in-cheek remark. He wasn't really He was just pulling my leg!
 - a. serious
 - b. joking
 - c. angry
 - d. funny
6. Gosh! I'm all thumbs. I'm so I will never be able to handle this equipment.
 - a. nervous
 - b. clumsy
 - c. excited
 - d. stubborn
7. I am so mad at my cousin. We were supposed to go shopping but she
 - a. stood me up
 - b. pulled my leg
 - c. had no room in her car
 - d. wasn't under the weather

Exercise 22. Translate the following:

analog-to-digital
 state-of-the-art
 one-to-one
 red-orange

mission impossible
 well-lit
 self-educated
 all-inclusive
 pretty good
 all things scientific
 semi-independent
 re-reading
 non-Newtonian
 pre-1960
 mid-1990s
 murky waters
 scholarship
 multitalented
 semiconductor
 ready-made product

Exercise 23. Render the following passages into Ukrainian.

A.

CALL for PAPERS: Journal of Teaching in International Business
 Special Issue: Digital Technology in Teaching International Business

The Journal of Teaching International Business invites the submission of articles on this exciting theme of high interest. New technologies allow us to disseminate information in different ways and allow us to create interactive environments in which to learn.

Topics:

Theoretical, conceptual, and empirical papers, particularly those with an area-specific focus of Africa, Asia, Eastern Europe, Middle East, or Latin and South America are sought. Descriptive works that offer significant managerial and/or public policy guidelines or implications are also invited. Research foci included in this call for papers are those related to:

- * Teaching and learning efficacy
- * Outcomes assessment
- * Curriculum development
- * Electronic delivery systems
- * Digital teaching materials
- * Internet-enhanced classes

Cross-cultural and comparative studies that investigate long-distance, or digitally enhanced teaching techniques, whether synchronous or asynchronous, and research that measures the usefulness, or describes the use of new technologies or techniques that have been developed to improve learning, will be considered for publication.

In all cases, articles must emphasize the practical relevance of the issues presented and must be written to appeal to academics, practitioners and policy makers. The goal is to provide readers with thoughtful and provoking ideas that can be implemented by academics and practitioners, and supported by policy makers in government and international agencies.

General Guidelines:

Papers should use the American Psychological Association (APA) style guidelines and be double-spaced. In addition to the main body, submissions should include a title page and an abstract of 100-150 words on a separate page. Manuscripts should be between 15 and 25 pages including figures, tables, illustrations, and bibliography.

B.

The flow of expert knowledge is undergoing rapid change. As information highways are constructed around the globe, new questions about ethics, goals, and economics must be answered. Science Communication, published by Sage (www.sagepub.com), addresses theoretical and pragmatic questions central to some of today's most vigorous political and social debates. This discourse crosses national, cultural, and economic boundaries on issues such as health care policy, educational reform, international development, and environmental risk.

Science Communication unites international scholarly exploration of three broad but interrelated topics: Communication within research communities — Communication of scientific and technical information to the public — Science and Technology communications policy. Science is broadly defined within the context of Science Communication to include social science, engineering, medical knowledge, as well as the physical and natural sciences.

Science Communication sets new standards for scholarly and critical analysis of public communication by linking public policy to the parameters in which knowledge is created. Topics include:

- Communication among experts and professionals... The journal explores such diverse and important subjects as how scientists and engineers use new communication technologies, and the unique problems in peer-review practices for research journals.
- Communication history... In this rich and varied area of inquiry, you'll find a broad range of articles, including the evolution of science broadcasting, content analyses of gender and racial stereotypes in science magazines, and evaluations of the effectiveness of government programs to enhance the public's understanding of science.
- Communication of scientific information to other professionals... Because the dissemination of scientific information is critical, Science Communication examines important and far ranging issues, such as the use of scientific knowledge in court, and how research findings are shaped to refine government regulation.
- Communication to audiences outside technical communities... In the pages of Science Communication, you'll find articles that analyze the content of scientific information in commercial television, as well as scholarship that probes issues like the changing economics and ethics of science museums, zoos, aquaria, and science centers.

Noteworthy

Remember not only to say the right thing in the right place, but far more difficult still, to leave unsaid the wrong thing at the tempting moment.

Benjamin Franklin

Unit 9**Grammar Compendium:****Articles and their Usage****System of Tenses****The Passive Voice****Verbals:**

- **Participle**
- **Infinitive**
- **Gerund**

Types of Questions**Verbs MAKE & DO****Irregular Verbs****Miscellanea:****Useful Expressions for
Discussion****About Yourself****Conference Vocabulary****Tips on Resume Writing****TOEFL® Tips****On Figurative Language****Presentations Tips****Describing Products****Qualifying Exam Sample Test**

ARTICLES AND THEIR USAGE

There exist definite (the), indefinite (a, an) and zero (Ø) articles in English.

The definite articles «the» are used with specific nouns (when the listener or reader knows what specific thing or person the speaker is talking about: Where is the dictionary? (that I gave you). Де словник? (той, що я вам дав). The method was used before. Цей метод використовувався раніше. «The» is used when the noun is unique — «only one»: The sun is shining» (There is only one sun).

The indefinite articles «a», «an» are used with singular countable nouns that are non-specific: I need a pencil — Мені потрібен олівець.

For plural count and non-count nouns that are indefinite, we use «some» instead of «a»: I need some pencils. — Мені потрібні олівці. Would you care for some coffee? Чи хочете кави?

Ø is used for plural count and non-count nouns that are indefinite and when the speaker talks about the things in general: When Ø people can communicate with each other they get along better. Коли люди спілкуються, їм легше порозумітися.

It is useful to remember three so-called «golden rules» (with some exceptions to them):

<p>1. Do not use the definite article «the» with non-count nouns denoting substances, abstract nouns, or when you talk about things in general: Ø Life is life. Життя є життя. Ø Tea is popular beverage. Чай популярний напій. Ø Literature and Ø music are called «<u>the fine arts</u>». Літературу та музику називають витонченим мистецтвом.</p>	<p>But: <u>The</u> life of the scientist was hard. Життя вченого було важким. They lived <u>a</u> happy life. Вони жили щасливо. <u>The</u> tea I had today was Chinese. Сьогодні вранці я пив китайський чай. Please, pass <u>the</u> salt. Будь ласка, передайте сіль.</p>
<p>2. Use either definite or indefinite articles with singular countable nouns: He is going to buy <u>a dictionary</u>. Він збирається придбати словник. Where is <u>the dictionary</u> you spoke about? Де той словник, про який ви згадували?</p>	
<p>3. Use indefinite article with the names of professions: He is <u>a mathematician</u>. Він математик. She is <u>an engineer</u>. Вона інженер.</p>	<p>But: They are Ø doctors. Вони лікарі. They are Ø engineers. Вони інженери.</p>
<p>4. Use <u>the</u> with «of-phrases»: <u>The</u> exploration of space. Дослідження космосу. <u>The</u> knowledge of chemistry. Знання хімії.</p>	<p>But: Space exploration. Chemistry knowledge.</p>

GENERAL USAGE OF ARTICLES:

ARTICLES USED WITH CERTAIN EXPRESSIONS

a	the	∅
a couple of a dozen a pair of a lot of a great deal a great many a host of as a result a hundred a thousand two times a day/per day an hour what such a + countable noun Such What a promising approach!	at/to the office to the movies to the theater in the school (inside the building) the first the second(...) the last the ...est (the best, the biggest; the most...) at (in) the end in the beginning (the) so-called in the future (some day)	at work at home at/to school (general area) in school (activity indication) (a) part of in stable condition according to contract in rush hour last night by bus/car/train on foot face to face arm in arm from beginning to end in 1973 on Wednesday at 11 p.m. in future (from now on)

ARTICLES WITH PROPER NAMES

	∅	the	a
cities, states streets, squares, avenues, roads, boulevards, city districts countries (use «the» when they have a plural name and are viewed as unions) geographic areas (regions) continents mountains, mountain peaks mountain ranges lakes lakes when they form a set rivers oceans and seas gulfs bays	Paris, London, New York New Jersey, Ohio Baker Street, Fifth Avenue, Broadway, Manhattan Canada, France, Ukraine Europe, Asia, South America, Africa Mount Everest Lake Michigan, Ontario Tampa Bay	<u>Exception:</u> the Hague <u>Exception:</u> the Strand the Bronx the Philippines, the United Kingdom (the) USA the Orient, the Middle East, the Crimea <u>Exception:</u> the Matterhorn the Rocky Mountains, the Alps the Great Lakes the Danube the Atlantic Ocean, the Black Sea the Gulf of Mexico	

canals		the Erie canal	
planets	Mars, Venus	<u>Exceptions</u> : the Sun, the Moon, (the) Earth	
separate islands	Jamaica		
chains of islands		the Canary Islands	
deserts		the Gobi desert	
parks	Central Park		
tourist attractions, famous buildings, monuments, museums	<u>Exception</u> : Disneyland	the White House the National Gallery	
with universities, colleges, schools beginning with a proper noun	Harvard University, Lambton college		
with universities, colleges, schools beginning with «university», «school», «college»		the University of Virginia the college of arts and sciences	
names of magazines	Time magazine		
names of historic documents		the Treaty of Geneva	
names of wars (except World Wars)	World War I	the War of Independence	
names of ships, trains, airplanes		the Orient express	
names of scientific methods: a) well-known and established (the) b) those still not recognized by everyone (Ø)	Green method	the Montessori method	
proper names a) denoting family as a whole (the) as opposed to separate name (Ø) b) specifying maiden name (a)	Ann Johnson	the Johnsons	She was a Brown before marriage.

Exercise 1.

Fill in the blanks with «the», «a», «an», or leave blank.

- May I have a look at ____ book that I brought yesterday?
- She is ____ chemist.
- John likes ____ rice.
- Ann has decided to become ____ engineer, while Mike and Andrew would rather become ____ geographers.
- Where is ____ coffee that we bought last week?
- ____ teachers want ____ students to succeed.
- ____ water is essential for life.
- Please pass ____ pepper.
- ____ spreadsheets can help us (to) make ____ calculations.
- In 1816 a Scottish natural philosopher invented ____ kaleidoscope.
- ____ Coal is second major natural resource.
- ____ Ronald Reagan was President of ____ USA during ____ Cold war.
- Jane wants to study ____ business at ____ University of Illinois.
- He has graduated from ____ Ohio State University.
- ____ Rhode Island is the smallest state in ____ USA.

SYSTEM OF TENSES

Simple Present (Present Indefinite) (Present Indefinite) «now»	Present Progressive (Present Continuous) «already in progress now»
Express:	
<p>1. <u>General relationships and timeless truths:</u></p> <p>Time <u>changes</u> everything. Час змінює усе.</p>	<p>1. <u>Actions in progress:</u></p> <p>He <u>is studying</u> for an exam (right)</p> <p>Нині він готується до іспиту. This device <u>is becoming</u> more and more popular. Цей прилад набуває (нині) все більшої популярності.</p> <div style="border: 1px solid gray; padding: 2px; width: fit-content; margin-left: auto; margin-right: auto;"> now at the moment currently at present </div>
<p>2. <u>Permanent states:</u></p> <p>Ann <u>likes</u> mathematics. Енн любить математику.</p>	<p>2. <u>Uncompleted actions:</u></p> <p>She <u>is still looking for</u> a job. Вона все ще шукає роботу. John <u>is making</u> dinner. Джон готує вечерю.</p>
<p>3. <u>Habitual and recurring actions:</u></p> <p>John <u>jogs</u> every morning. Джон бігає підтюпцем щоранку.</p>	<p>3. <u>Repetition and duration, temporary states and activities:</u></p> <p>He <u>is taking</u> English classes <u>this year</u>. Цього року він відвідує заняття з англійської мови. She <u>is living</u> with her parents <u>this month</u>. Цього місяця вона мешкає разом з батьками.</p>
<p>4. <u>Mental perception and emotions:</u></p> <p>He never <u>worries</u>. Він ніколи не хвилюється.</p>	<p>4. <u>Emotional comment on present habit:</u></p> <p>She <u>is always cracking</u> jokes! Завжди вона шуткує!</p>
<p>5. <u>Definite future plans or schedules</u></p> <p>She <u>completes</u> her studies in a month. Через місяць вона закінчить навчання.</p>	<p>5. <u>Future events:</u></p> <p>I'm <u>leaving</u> at 7 a.m. tomorrow. Я їду завтра о 7 годині ранку. The delegation <u>is coming</u> tomorrow. Завтра прибуває делегація.</p>
<p>6. <u>Events with future time adverbials: when; if; unless; before; after.</u></p> <p>After she <u>completes</u> her studies, she plans to stay here for good. Після закінчення навчання вона планує залишитись тут назавжди.</p>	
<p>7. <u>Future events with verbs open/close, begin/end, come/leave:</u></p> <p>The class <u>begins</u> at 8 a.m. Заняття починаються о 8 годині ранку. The store <u>closes</u> at 10 p.m. Крамниця зачиняється о 10 годині вечора. He <u>comes</u> tomorrow. Він прибуває завтра.</p>	

Tense markers

usually/generally/as a rule
 sometimes/from time to time
 rarely/seldom/hardly ever
 never/almost never
 often/
 frequently
 always
 every | day
 | morning
 | other day

now/right now/at the moment/
 currently/at present
 still
 today
 this year/week
 these days
 always

NOTE.

Use ONLY Simple Present with stative verbs:

understand	
know	I <u>know</u> it.
believe	Я знаю це.
like	I <u>understand</u> what
remember	you <u>mean</u> .
need	Я розумію, що ви
want/wish	маєте на увазі.
mean	This idea <u>sounds</u> nice.
prefer	Ця ідея
appear	звучить непогано.
seem	
sound	
smell	
feel	

look
 taste
 have

Projects look OK on paper.
 Food tastes delicious.
 I have two dictionaries.

BUT:

I'm looking at you.

He's tasting food.

We're having a party next Sunday.

«I'm feeling good», sang Nina Simone.

Exercise 2.

Choose the correct form of the verbs from the parentheses:

- I (understand / am understanding) now.
- This suggestion (is sounding / sounds) nice.
- Barbara always (goes / is going) to work at 7 a.m.
- Coffee (is smelling / smells) good.
- She usually (wakes up / is waking up) in the wee small hours of the morning (at dawn).

SIMPLE FUTURE**(Future Indefinite)**

«at a certain time in the future»

1. probable future events:I will call you*

Я тобі зателефоную.

I will help you

Я допоможу тобі

I'll get the phone

Я підійду до телефона

Tense markers

later
 tomorrow
 in 2 hours
 next month
 tonight
 soon
 from now on відтепер
one of these days (цими) днями
 (стосовно майбутнього)
 5 years from now
 the day after tomorrow

NOTE.

I/we		will	<i>(American English)</i>
s/he			
they			

I/we		shall	<i>(British English)</i>
s/he			
they			

2. mental perception and emotions:

You'll		like		it! Тобі це обов'язково сподобається!
		love		

NOTE.

DO NOT use Future Tense in a sentence where there are two clauses, one of which is time clause beginning with **when; before; until; after/as soon as; unless; should** (as equivalent of **if**).

I will do it		if/should		you come.
		when		
		before		
		after/as soon as		
		(після того, як)		
		until (допоки)		
unless (якщо не)				

3. **to be going to future:**a. **future plans, intentions:**

She **is going to study** at the university.

Вона збирається навчатися в університеті.

I'm going to do it no matter what!

Я збираюся це зробити (зроблю це) будь-що!

b. **probable and immediate future events:**

The class **is going to start** in a minute.

За хвилину почнуться заняття.

Also: The laboratory **is (just) about to close**.

Лабораторію вже майже зачинили.

NOTE.

Talking about the future you may well use the following expressions:

* **in the long run** — in the distant future, укр. у далекому майбутньому, на перспективу.

* **in the short run** — in the near future, soon, укр. незабаром

— Why are you learning Spanish?

— I think it will be useful in the long run.

Past Progressive (Past Continuous)	Future Progressive (Future Continuous)								
Express:									
«in progress at a time in the past»	«in progress at a certain time in the future»								
1. events in progress at a specific time: He was studying at 10 p.m. Вчора о 10 годині вечора він вчився.	1. events that will be in progress at a time in the future; will last for a period of time in the future: I will be delivering a lecture on philosophy from 9 a.m. till 11 a.m. tomorrow. She will be working on her paper for the next two weeks. Вона працюватиме над статтею два наступні тижні.								
2. interrupted actions: I was reading when she came. Я читав у той момент, коли вона прийшла.	<div style="border: 1px solid black; padding: 5px; text-align: center;">Tense markers</div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>from 5 a.m. till 7 a.m.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 5px;">this time</td> <td style="padding: 5px;">tomorrow</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;">next year</td> </tr> </table> <p>10 years from now</p> <p>still</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 5px;">for 2</td> <td style="padding: 5px;">hours</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;">days</td> </tr> </table> <p>at 8 a.m. tomorrow</p> <p>when X come(s)</p> </div>	this time	tomorrow		next year	for 2	hours		days
this time		tomorrow							
		next year							
for 2	hours								
	days								
3. two actions in the past continued at the same time: He was reading while I was writing my essay. Він читав у той час, коли я писав твір.									
4. repetition and iteration: I was reading all day long. Я читав цілий день.									
<div style="border: 1px solid black; padding: 5px; text-align: center; margin-bottom: 10px;">Tense markers</div> <div style="border: 1px solid black; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-right: 1px solid black; padding: 5px;">yesterday</td> <td style="padding: 5px;">at 5 p.m.</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;"></td> <td style="padding: 5px;">from 3 p.m. to 10 p.m.</td> </tr> </table> <p>all day long</p> <p>while/as/during /meanwhile / in the mean time</p> </div> <p>NOTE. Use while with Past Progressive, and when with Simple Past.</p>	yesterday	at 5 p.m.		from 3 p.m. to 10 p.m.					
yesterday	at 5 p.m.								
	from 3 p.m. to 10 p.m.								

Exercise 3. Choose the correct form of the verb from the parentheses:

1. When Olga arrived everyone (was studying / studied).
2. At 6 p.m. she (was studying / studied).
3. At this time tomorrow we (will be taking / will take) the test.
4. I (will call / am calling) you one of these days.
5. Albert (was reading / read) while Victoria (was watching / watched) TV.

<p align="center">Simple Past</p> <p align="center">«at a certain time in the past»</p>	<p align="center">Present Perfect</p> <p align="center">«in the past but related in some way to the present»</p>
<p><u>Express:</u></p>	
<p>1. <u>events that took place at a definite time in the past:</u> We <u>discussed</u> it yesterday. Ми обговорили це учора.</p> <div data-bbox="85 753 638 804" style="border: 1px solid black; padding: 5px; text-align: center;"> <p>tense markers</p> </div> <div data-bbox="85 821 638 1357" style="border: 1px solid black; padding: 5px;"> <p>in 1990 when X was 20 as a child yesterday last year / month the day before yesterday long ago/ once upon a time the other day (цими) днями (стосовно минулого) this morning (the morning is over) eventually/finally/at(in) the end/ ultimately at that time 2 hours ago / later (for the) first / last time just/just now (only a moment ago) щойно</p> </div>	<p>1. <u>actions happened at an indefinite time in the past:</u> We <u>have already</u> discussed it. Ми вже обговорили це (колись раніше).</p> <div data-bbox="722 783 1208 834" style="border: 1px solid black; padding: 5px; text-align: center;"> <p>tense markers</p> </div> <div data-bbox="722 868 1208 1344" style="border: 1px solid black; padding: 5px;"> <p>lately / recently / of late / in recent years (останнім часом) up to now so far already never ever since + time marker in the past yet during the past 2 days for 3 years now (вже три роки) just нещодавно</p> </div>
<p>2. <u>events that lasted for a time in the past:</u> He <u>taught</u> at Harvard for 10 years before he came here. Він викладав у Гарварді протягом 10 років перед тим, як переїхав сюди (він більше там не викладає).</p>	<p>2. <u>situations that began in the past, continue to the present:</u> He <u>has attended</u> the university for 3 years. Він навчається в університеті протягом 3 років. He <u>has lived</u> in Germany since 1992 (he still lives there). Він проживає у Німеччині з 1992 року.</p> <p><u>MIND:</u> since is used to indicate the beginning of the time period; for is used to indicate duration of time.</p>
<p>3. <u>habitual or repeated events:</u> She <u>studied</u> English every day until she passed the test. Вона вчила англійську щодня, доки (допоки) не склала іспит.</p>	<p>3. <u>actions completed in the past but related to the present:</u> John <u>has applied</u> for several job openings and now he's waiting for the results. Джон подав заявку на декілька вакансій і тепер очікує на результати.</p>

4. past mental perceptions or emotions:
She always knew what she wanted.
Вона завжди знала, чого прагне.

NOTE.

used to and be used to + ...ing/noun

***used to** describes habits, regular activities, states in the past that no longer exist now;

***be used to + ...ing/noun** means

«be accustomed to», «have a habit»

He used to work at the university.

Раніше він працював в університеті.

He is used to working at the university.

Він звик працювати в університеті.

or: He is used to his present job.

Він звик до своєї теперішньої роботи.

Past Perfect	Future Perfect
2 actions (or more) occurred	
before a certain time in the past	before a certain time in the future
Express:	
<u>action(s) or state(s) that took place before other event(s) in the past:</u> He <u>had studied</u> very hard Action 1 <u>before he passed</u> the exam. Action 2 Він наполегливо вчився перед тим (до того), як склав іспит.	<u>future event(s) happening before other future event(s):</u> <u>By the time you come,</u> Action 2 we <u>will have finished</u> the experiment. Action 1 Коли ви прийдете, ми вже закінчимо експеримент. <u>I will have finished</u> translation by 9 p.m. Я закінчу переклад до дев'ятої години вечора.
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Tense markers</div> <div style="background-color: #e0e0e0; padding: 5px; width: fit-content; margin: 5px auto;"> before after when hardly ... when never ... before </div>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Tense markers</div> <div style="background-color: #e0e0e0; padding: 5px; width: fit-content; margin: 5px auto;"> before tomorrow by 5 p.m. by the year... </div>

NOTE.

The **Present Perfect Progressive**(Continuous), the **Past Perfect Progressive** (Continuous), the **Future Perfect Progressive** (Continuous) are used mainly to emphasize the duration of activity expressed by Present Perfect, Past Perfect, and Future Perfect, respectively:

He | has taught | mathematics for 2 years.
 | has been teaching |

He | had studied | very hard before he passed the test.
 | had been studying |

By the end of the year | we will have worked/lived/taught | here for 5 years.
 | we will have been working/living/teaching |

Sequence of Tenses (Reported Speech)

He says that he Він каже, що	is studying studies вчиться	today	here
		now	this/these
	studied вчився	yesterday	
		last year	
	will study буде вчитися	tomorrow	
		two days from today	
	could study	three days ago	
		next month/year	
He said that he Він казав, що	was studying studied вчиться	that day	there
		then	that/those
	had studied вчився	the day before (on the previous day)	
		the year before the previous year	
	would study буде вчитися	the next day the following day	
		two days from then	
	could study	three days earlier	
		the following month/year	

NO tense changes are required when you mention1. things that are always true:

Cavendish discovered that water consists of hydrogen and oxygen.

2. statements that occurred only a very short time ago:

He told me (just now), «I can't understand your idea».

He said that he can't understand my idea.

NOTE.

Questions in reported speech:

«Am I right?» asked X.

X		asked		if		s/he was right
		wondered		whether (or not)		

GRAMMAR: THE PASSIVE VOICE

The English passive is by far the most frequent in scientific writings, and least frequent in conversation.

Passive formation:

Samuel Morse **invented** the electric telegraph in 1835.

subject
AGENT

object

to be + Participle II

The electric telegraph **was invented** by Samuel Morse.

Note that the majority of passive sentences that occur in speech and writing (about 85 percent) are agentless (do not have an explicit agent): Many people are employed in manufacturing.

We denote an agent or instrument the following way:

The poem was written **by** John. (*agent, doer*)

Вірш написаний Джоном.

The poem was written **with** pencil. (*instrument*)

Вірш написаний олівцем.

The results were obtained **by** professor Smith **with** the help of new equipment.

Результати були отримані професором Смітом на новому обладнанні (за допомогою нового обладнання).

1.

Sometimes there is significant difference between the active and passive voice.

Cf.: Few people read many books. (Meaning: there are few people in the world who read lots of books.)

Many books are read by few people. (Meaning: there are many books that are read by very few people.)

2.

Some passive sentences in English have no active voice variant:

John **was born** in Ireland.

3.

Do NOT use passive with the following words: **lack, resemble, fit, have.**

THE PASSIVE IS USUALLY USED:

1. When the agent is unknown:

The book was stolen.

2. When the agent is redundant:

French is spoken in France.

3. When the writer wants the statement to sound objective (the agent and/or the source of information are not mentioned):

It is thought/believed/assumed

(Вважають, що ...)

It is rumored ...

(Ходять чутки, що ...)

that this is a promising method.

***It used to be thought...**

(Раніше вважали, що...)

They discuss the issue.	The issue is discussed.
They are discussing the issue.	The issue is being discussed.
They discussed the issue.	The issue was discussed.
They had discussed the issue.	The issue had been discussed.
They have discussed the issue.	The issue has been discussed.
They were discussing the issue.	The issue was being discussed.
They will discuss the issue.	The issue will be discussed.
They must discuss the issue.	The issue must be discussed.

Mind specific passive constructions and the ways of translating them into Ukrainian:

1. Indirect Passive:

a. She gave her sister a book.

object 1 object 2

(indirect) (direct)

A book was given to her sister. (*direct passive*) **Her sister was given** a book. (*indirect passive*)

Scientists were invited to the conference.

Вчених запросили на конференцію.

They were shown brand-new equipment.

Їм показали найновіше обладнання.

2. Prepositional Passive

a. The terms were **insisted on**.

На умовах наполягали.

The lecture was **followed by** a discussion.

За лекцією йшла дискусія.

The lecture was **succeeded by** another one.

За однією лекцією йшла інша.

The conference was **preceded by** preliminary arrangements.

Конференції передувала попередня підготовка (або: перед конференцією було проведено підготовку).

All manufacturing processes are **subject/subjected to** change.

Усі технологічні процеси зазнають змін.

The resolution was **objected to** by almost everyone. Проти резолюції були майже усі.

b. They make use of a device
object *object*

Use is made of a device.

A device is made use of.

Прилад використовують.

They take steps to improve the situation.
object

Для поліпшення ситуації вживають необхідні заходи.

Steps are taken to improve the situation.

VERBALS PARTICIPLE

There exist the following types of **verbs** in English:

- | | |
|---|---|
| — notional verbs
смилові | They study English. |
| — auxiliary verbs
допоміжні | Do you like the book? I haven't decided yet.
We will see you later. |
| — modal verbs
модальні | I can do it. |
| — link-verbs
дієслова-зв'язки | He is a scientist. |
| — substitutes
дієслова-замісники | He likes physics, and so do I. |
| — emphatic do
дієслово-підсилювач | I do need this information. |

English notional verbs are characterized by a great variety of **forms** that can be divided into two main groups: **finite** and **non-finite** (verbals).

Особові (finite) форми виражають особу, число, час, стан, спосіб дії, і виступають у реченні присудком.

Безособові (non-finite) форми не мають звичайних форм особи, числа, способу, та не виступають у ролі присудка, хоча й можуть входити до його складу.

VERBALS are:

- **Participle**
- **Infinitive**
- **Gerund**

Participle

Tenses	Active	Passive
Simple (indefinite)	doing	(being) done
Perfect	having done	having been done

Participle I

moving object
предмет, що рухається

Participle II

the **installed** machines
or
the machines **installed**
встановлені машини (машини, що встановлені/
що їх було встановлено)

Perfect Participle

Having made* the experiment he **left** the laboratory.
Зробивши експеримент, він залишив лабораторію.

* *Перфектні форми дієприкметника вказують на завершеність дії стосовно дії, яку виражає присудок*

Participles in a Sentence (A,B,C)

Attribute

Означення

The project **proposed** by professor is very promising.
 Проект, **запропонований** професором, має великі перспективи.
 The paper **presented** attracted a great deal of attention.
Прочитана доповідь привернула багато уваги.
 This is the article **so much spoken about**.
 Ось стаття, **про яку так багато говорять**.
 The scientist **investigating** this problem works at our Institute.
 Вчений, **що (який, котрий) досліджує** цю проблему, працює у нашому інституті.
 This is the best method **known**.
 Це найкращий серед **відомих** методів.

NOTE.

A few **Participles II** change their meaning according to their position

the people **involved** = the people **concerned**
 the people who were affected by what was happening
 люди, про яких йде мова
 (можливі варіанти перекладу:
 ті, що розглядаються; дані)

BUT:

an **involved** explanation =
 a **complicated** explanation
 складне пояснення

BUT:

a **concerned** expression =
 a **worried** expression
 стурбований вираз

Mind the meaning of the verbs:

to involve включати, залучати

The experiment involves three stages.
involved

Експеримент включає три стадії.
включав

This is the paper involving the latest data.

Ось доповідь, яка залучає останні дані.

to concern стосуватися

The problems concern all of us.
concerned

Ці проблеми стосуються усіх нас.
стосувалися

This is the article concerning the new method.

Ось стаття, що стосується нового метода.

*** ALSO:**

I didn't realize that this experiment would involve so much concern.

Я не усвідомлював, що цей експеримент здавний викликати таку тривогу.

*** ALSO:**

I concern myself with history =
 I am interested in history

Я цікавлюся історією.

***all concerned** усі зацікавлені особи

**Adverbial
Modifiers**

Обставини

When discussing progress in their work scientists decided to carry
While out another experiment.

Обговорюючи (під час обговорення) досягнуті результати, вчені
вирішили провести ще один експеримент.

Computer is a complex device when viewed as a whole.
if

Комп'ютер — складний прилад, якщо розглядати його в цілому.

Being invited too late, we couldn't attend the conference. Ми не змогли
відвідати конференцію, бо нас запросили дуже пізно.

When going into reaction, elements change their properties.

Вступаючи у реакцію, елементи змінюють свої властивості.

Having discussed the issue, they went to the library.

Обговоривши це питання, вони пішли до бібліотеки.

Having been discovered, this law became known to many scientists.

Після того, як закон було відкрито, він став відомий багатьом ученим.

Considered from this point of view, the issue is of little importance.

Якщо розглядати питання з цієї точки зору, то воно не надто важливе.

Unless otherwise stated, ... Якщо немає особливих застережень, ...

NOTE.

Mind the translation of certain set expressions containing participles:

Given — Якщо є; за умови; якщо

Stated — Якщо сформулювати

Seen — Якщо розглядати

Granted — Припустімо, (а далі?)

Let's take it for granted — Давайте вважати, що це доведено (зрозуміла річ)

It being so, — За таких умов,

This being the case, — Якщо справи ідуть таким чином (у такий спосіб),

Parentheses

вставні слова

frankly speaking, — чесно кажучи,

generally speaking, — у цілому,

broadly considered, — якщо розглядати в цілому

putting it another way, — інакше кажучи,

as already mentioned, — як вже було сказано,

as emphasized above, — як уже наголошувалося раніше,

PARTICIPAL CONSTRUCTIONS**Subjective**

The students were seen
making the experiment.

Бачили, як студенти
робили експеримент.

to see
to watch
to hear

Objective

We saw the students
making the experiment.

Ми бачили, як студенти
роблять експеримент.

NOTE.

to have (get) something done
someone do something

I **had the letter translated** (somebody did it for me).

Мені переклали листа.

I **had John translate** the letter (John did it for me).

Джон переклав мені листа.

Cf.:

I **have translated** the letter (I have done it myself).

Я (сам) переклав листа.

OTHER CONSTRUCTIONS

It being late, we postponed the meeting.

The session was over, with many problems left unsolved.

The first experiment was hard to perform, the other ones causing no trouble.

The results as presented at the conference are very promising.

The phenomenon thus discovered puzzled almost everyone.

Ми відклали збори, бо (тому що) було пізно.

Засідання закінчилось, але (причому, а) багато питань залишилось невирішеними.

Лише перший експеримент було складно провести, усі інші минули без проблем.

Результати у тому вигляді, як їх подано на конференції, є дуже перспективними.

Явище, яке було відкрито таким чином (у такий спосіб), здивувало майже усіх.

NOTE.Set-phrases with participles

standing committee — постійно діючий комітет

abstracting journal — реферативний журнал

refereed journal фахове видання

steering | committee — оргкомітет
organizing |

learned society — наукове товариство
 /nid/

naked eye — неозброєне око,
 /kid/ Also: **unaided** eye

allied disciplines > суміжні дисципліни
related fields

NOTE.

Presenting the report is my colleague.
 Доповідь виголошує моя колега.

VERBALS INFINITIVE

Tenses	Active	Passive
Simple (Indefinite)	to do	to be done
Progressive (Continuous)	to be doing	—
Perfect	to have done	to have been done
Perfect Progressive (Continuous)	to have been doing	—

Infinitive in a Sentence

Subject

Підмет

To explain this phenomenon is not easy.
Пояснити це явище — нелегка справа.
To err is human.
Людині властиво помилятися.

Part of Predicate

Частина присудка

Our aim is to master English.
Наша мета — вивчити англійську мову.
We are to study English. | Ми повинні вчити
We have to study English. | англійську мову.
They had to work hard.
Їм довелося напружено працювати.
You must have read this article.
Мабуть, ви прочитали цю статтю.
You could have done it better.
Ви могли б зробити це краще.

Object

Додаток

Science teaches us to create.
Наука вчить нас творити.

Attribute

Означення

The article to be translated is here.
Стаття, яку треба перекласти, знаходиться тут.
The problem to be solved is extremely difficult.
Проблема, яку треба вирішити, дуже складна.
The conference to be followed by an exhibition is to take place tomorrow.
Конференція, яка буде супроводжуватися роботою виставки, має відбутися завтра.

He was the first (scientist) to study this phenomenon.
the last (one)
the next
the only

Він був першим (вченим), хто вивчав це явище.
останнім
наступним
єдиним

**Adverbial
Modifiers**
Обставини

You must study hard (in order) to excel.
Ви повинні наполегливо вчитися,
аби досягти успіху (бути кращим).
This method is (not) accurate enough to give reliable results.
Цей метод (не)достатньо точний,
аби за його допомогою отримати надійні результати.
These details are too important to be neglected.
Ці деталі надто важливі, щоб ними нехтувати.

Hydrogen and oxygen unite to make water.

to make
to form
to yield
to bring about
to produce
to give (rise to)

Кисень та водень поєднуються, утворюючи воду.

Parentheses
Вставні слова

To sum up, | підсумовуючи,
To summarize, |
To begin with, — почнемо з того, що
To put it another way, — інакше кажучи
to say nothing of | не кажучи вже про
not to mention |
so to say/speak — сказати б
that is to say — тобто
To put it briefly, — коротше кажучи,
*to be on the safe side — про всяк випадок

Exercise 4. Translate the following sentences into Ukrainian.

1. It is never too late to learn.
2. Newton was the first to realize the universality of gravity.
3. The subject is important enough to be discussed in full detail.
4. These methods are to be described in the next chapter.
5. Water is to be purified to meet our needs.
6. The intention of the author is to show some newly developed methods.
7. These factors combine to make the problem very complicated.
8. To be on the safe side, we are to take into consideration everything.
9. The two quantities are added to yield the desired result.
10. This is the rule not to be forgotten.
11. She was the last to join our group.
12. The problem is too complex to be solved right away.
13. To get the best results, follow the directions carefully.
14. To know everything is to know nothing.

Constructions with the Infinitive

Subjective

Підмет з інфінітивом

He is known to be a reliable person.

Відомо, що він надійна людина. / Він, як відомо, надійна людина.

The article is said to be very interesting.

Кажуть, що це дуже цікава стаття. / Ця стаття, кажуть, дуже цікава.

She is expected to come.

Очікують, що вона прийде.

to know	знати	
to think		вважати
to consider		
to believe		
to suppose		виявляти
to find		
to say		повідомляти
to report		
to expect		очікувати
to state		
to see		спостерігати
to watch		
to observe		

Objective

Додаток з інфінітивом

I know him to be a reliable person.

Я знаю, що він надійна людина.

We consider this problem to be of great importance.

Ми вважаємо, що це надзвичайно важлива проблема.

They reported him to win the prize.

Повідомили, що він здобув премію.

to be likely ймовірно
to be unlikely малоімовірно
to be sure напевне/напевно
та після Participle II

He is | (un)likely | to come
sure

(Мало)ймовірно, що він прийде.

Він обов'язково прийде.

Only the methods known from practical experience to be reliable have been used.

Було використано лише ті методи, котрі, як відомо з практичного досвіду, є надійними.

to happen		ставатися
to chance		
to seem		видаватися
to appear		
to prove		виявлятися
to turn out		

He seems to know the rule.

Очевидно, він знає це правило.

It turned out to be a | success.
failure.

Це виявилось | успіхом
невдачею.

to allow
to permit
to enable

|

ДОЗВОЛЯТИ

This device enables accurate measurements to be carried out.

Цей прилад дозволяє зробити точні виміри.

to want
to wish
to desire

|

бажати

to like
to love

Do you want me to help?

Ви хочете, щоб я допоміг?

They should be made to comply with safety regulations.
Їх треба примусити підкоритися правилам безпеки.

to make* — примушувати;
зробити так, щоб...

* Teachers should make their students study.
Вчителі повинні зробити так, щоб їхні учні вчилися.

* When the verb **make** is *passive*, its complement is infinitive WITH **to**, when *active* — infinitive WITHOUT **to**.

For+to+Infinitive Construction

There is not enough time for this article to be published this year.
 Недостатньо часу для того, аби ця стаття вийшла друком цього року.
 That was for him to decide.
 Це повинен був вирішити він. (Порівняйте: *It was up to him).

NOTE.

Bare Infinitive (інфінітив без **to**)

Do NOT use **to**:

1. after modal and auxiliary verbs:

I don't ∅ understand you.

Я не розумію вас.

If one can't ∅ have what one loves, one must ∅ love what one has.

Якщо не маєш того, що любиш, люби те, що маєш.

2. after let, would rather, had better, make (active), and in the sentences beginning with Why:

Let us ∅ be friends.

Давайте будемо друзями.

I would rather not ∅ do it.

Я ліпше цього не робитиму.

What makes you ∅ think so?

Що примушує вас думати саме так?

Why not ∅ come?

Чому б не прийти?

NOTE.

Split Infinitive (розщеплений інфінітив)

Really, I want to understand you.

Справді, я хочу зрозуміти вас.

I want to really understand you.

Я справді хочу зрозуміти вас.

NOTE.

Sometimes **to** can be used INSTEAD of the infinitive:

I would not do it even if I wanted **to**.

I would not do it even if I wanted **to do it**.

Я б не зробив цього, навіть якщо і хотів би (це зробити).

— Would you like some tea?

— I'd | love to.

| like to.

— Ви хотіли б випити чаю?

— Із задоволенням.

BUT:

Mind the verb **try**:

— Can you do this?

— I'll **try**.

— Ви можете це зробити?

— Спробую.

VERBALS GERUND

	active	passive
Simple (Indefinite)	using	being used
Perfect	having used	having been used

GERUNDS and NOUNS

NO plural ending:
Writing poetry is difficult.

Take plural ending:
I have read some of his writings recently.

PREPOSITIONS are often used

BEFORE Gerunds:

I am fond **of** cooking.

AFTER Nouns:

The cooking **of** your sister is better than mine.

GERUNDS and INFINITIVES

express something real, fulfilled:

I tried closing the door.
(MEANING: I closed the door).
I forgot mailing the letter.
(MEANING: I mailed the letter,
but I can't recall when).

express something hypothetical, unfulfilled:

I tried to close the door.
(MEANING: I didn't close the door).
I forgot to mail the letter.
(MEANING: I didn't mail the letter).

ARE USED WITH THE FOLLOWING VERBS:

enjoy
avoid
consider
appreciate
forgive

postpone
put off

quit
suggest
admit
deny

go on
keep on

hope
want
expect

afford

BOTH Infinitive and Gerund are used with

(dis)like
begin
start
continue
stop
remember
forget
try

They like | *working hard.*
continued | *to work hard.*

USE GERUND WITH THE FOLLOWING EXPRESSIONS

I am	capable of (здатний) fond of (подобатися) accustomed to (призвичаїтися) interested in (цікавитися) successful in (досягати успіху) afraid of (боятися) tired of (втомитися)	doing a lot of work.
I have no	excuse for (вибачення) reason for (причина) possibility of (можливість)	coming so late.
They	succeed in (мати успіх) insist on (наполягати на) think of (думати про) thank for (дякувати) object to заперечувати, виступати проти * rely on * count on розраховувати на * feel like * don't mind не бути проти	getting a job.
It's	* worth * worthwhile варто * not worth(while) * no use не варто	postponing the meeting.

They	<p>* can't help * can't resist не могли не</p> <p>* can't stand * can't bear ненавидіти</p>	doing nothing.
We	<p>* look forward to з нетерпінням чекати</p> <p>Would you mind* Чи не могли б Ви</p> <p>*/найбільш ввічлива форма прохання/</p>	<p>hearing from you.</p> <p>coming later?</p>

GERUND in a Sentence

Subject Підмет	<p><u>Reading</u> books is useful. Читати книги — корисно.</p> <p><u>Carrying out</u> this task is of great importance. Дуже важливо виконати це завдання. Виконання цього завдання має велике значення.</p>
Part of Predicate Частина присудка	<p>His favorite pastime <u>is listening</u> to music. Його улюблене заняття — слухати музику.</p> <p>How about <u>postponing</u> the test? Що щодо відкласти тест?</p> <p>What about </p>
Object Додаток	<p>He insisted <u>on translating</u> the text. Він наполягав на перекладі тексту.</p> <p>Ann likes <u>studying foreign languages</u>. Енн подобається вивчати іноземні мови.</p>
Attribute Означення	<p><u>The boiling temperature</u> of water is 100° C. Температура <u>кипіння</u> води — 100° C. (ПОРІВНЯЙТЕ: <u>boiling</u> water (Participle I) — вода, <u>що кипить</u>)</p>
Adverbial modifiers Обставини	<p><u>On entering</u> the room, he greeted everyone. Зайшовши до кімнати, він привітав усіх присутніх.</p> <p><u>After discussing</u> the problem, they arrived at important conclusions. Після обговорення проблеми вони дійшли важливих висновків.</p>

CONSTRUCTIONS WITH GERUND

Noun with 's / Possessive Adjective + Gerund

I object to your participating.
 I know of John's coming late.
The scientist's having discovered
 this phenomenon made him famous.

Я виступаю проти вашої участі.
 Я знаю, що Джон прийде пізно.
 Відкриття вченим цього явища
 принесло науковцю славу.

MIND the difference between

Possessive Adjectives		AND	Possessive Pronouns	
My	Our		Mine	Ours
Your	Your		Yours	Yours
His/Her/Its	Their		His/Hers/Its	Theirs

Exercise 5.

 Translate the following sentences into Ukrainian.

1. Forecasting future is always an uncertain business.
2. We learn much by reading books.
3. Writing essays in English requires practice.
4. It is worth remembering this rule.
5. They are capable of constructing these facilities.
6. Active animal life exists at all temperatures from the melting point of ice, to about 40° below the boiling point of water.
7. There are many reasons for questioning this theory.
8. The exhibition was worth attending.
9. He could not help joining the discussion.
10. I really thank you for taking all the trouble.
11. If you are not interested in asking questions, you are not interested in having answers.
12. The problem is worth solving.
13. I like to work without being disturbed.
14. Your studying much now will help you in your future work.
15. We succeeded in obtaining reliable results.
16. They know about our investigating the problem.
17. In spite of his being tired, he continued to work.
18. I object to your discussing this issue now.
19. A true scientist is interested in being told about his or her mistakes.
20. I know of your having read this article.
21. He went away without having told us the necessary information.
22. The result of his investigation depended upon his having applied the proper method.
23. Academician Artzimovich once humorously defined science as a practice of the scientist's satisfying his or her curiosity at the expense of the government.

TYPES OF QUESTIONS

1. General questions

Загальні запитання — це запитання, на які можна відповісти «так» чи «ні». Наприклад:

Are you here?

Перед підметом ставиться допоміжне або модальне дієслово, якщо це дієслово входить до складу присудка:

Can you speak Italian?

Are you writing a letter?

Will you do this research?

Якщо присудок виражений дієсловом у Simple Present або Simple Past, перед підметом ставиться допоміжне слово do (does, did):

Do you know this rule?

Did he come yesterday?

MIND: Do you have this book? (*American English*)

Have you got this book? (*British English*)

У заперечній формі заперечна частка not ставиться перед смисловим дієсловом, або зливається з допоміжним або модальним дієсловом. Такі запитання в українській мові перекладаються «невже». В англійській мові ствердна відповідь на запитання у заперечній формі завжди починається словом yes:

— Don't you want to join us?

— Yes, I do.

— Didn't you see him?

— Yes, I did.

— Won't you come later?

— Yes, I will.

2. Special questions

Спеціальні запитання починаються словами who? what? when? why? where? which? whose? how much/many?

— Who wrote this article?

— I did.

What did you do yesterday?

Who is he speaking with?

3. Alternative questions

Альтернативні запитання стосуються одного з двох явищ, речей, і завжди вживаються зі сполучником or:

Shall I read or translate this passage?

What test is more difficult: TOEFL or GRE?

Did Bill or did Laura enter the university?

4. Disjunctive questions

Роз'єднувальні запитання складаються з двох частин: перша — стверджувальне або запитальне речення з прямим порядком слів, друга — коротке загальне запитання. Якщо перша частина запитання є стверджувальним реченням, то дієслово у другій частині вживається у заперечній формі і навпаки:

You have already translated the text, haven't you?

He cannot (can't) understand it, can he?

There is a solution to the problem, isn't there?

He visited Canada last year, didn't he?

MIND:

Everyone (someone) has read the announcement, haven't they?

NOTE.

Rhetorical questions — риторичні запитання

a. Direct rhetorical questions often introduce a topic:

What do we know about ... ?

What is the nature of ... ?

b. The leading rhetorical questions are used to focus on the main points of a topic:

with positive implication:

Isn't Chinese hard to learn? (*IMPLICATION*: it is hard to learn Chinese)

with negative implication:

Who was more interested in the project than John? (*IMPLICATION*: no one was more interested in the project).

Verbs MAKE & DO

MAKE

create or produce something

ALSO used with food and meals,
and nouns related to verbs:

They discovered a new star —
they made an important discovery.
I phoned him —
I made a quick phone call.

MAKE

an agreement
an announcement
an attempt
a change
a decision

a meal (prepare a meal)
dinner

a comment
remark

an effort
an estimate
an impression (on someone)
mistake
money
progress
request

DO

action

DO

a degree
research (work)
experiment
business
engineering (etc.)

one's best
one's duty

good
harm

the homework
the housework
the dishes (мити посуд)

IRREGULAR VERBS

<u>Present</u>	<u>Past</u>	<u>Past Participle</u>
cost	cost	cost
cut	cut	cut
hit	hit	hit
hurt	hurt	hurt
let	let	let
put	put	put
set	set	set
split	split	split
forecast	forecast	forecast
build	built	built
lend	lent	lent
send	sent	sent
spend	spent	spent
hold	held	held
lead	led	led
read /ri:d/	read /red/	read /red/
understand	understood	understood
deal	dealt	dealt
feel	felt	felt
mean	meant	meant
leave	left	left
meet	met	met
lose	lost	lost
sleep	slept	slept
get	got	got (gotten — <i>American English</i>)
win	won	won
sell	sold	sold
tell	told	told
sit	sat	sat
stand	stood	stood
strike	struck	struck
make	made	made
say	said	said
hear	heard	heard
come	came	come
become	became	become
run	ran	run
begin	began	begun
drink	drank	drunk
swim	swam	swum
sink	sank	sunk
ring	rang	rung
break	broke	broken
choose	chose	chosen
give	gave	given
freeze	froze	frozen

steal	stole	stolen
take	took	taken
rise	rose	risen
speak	spoke	spoken
write	wrote	written
grow	grew	grown
know	knew	known
throw	threw	thrown
draw	drew	drawn
bring	brought	brought
buy	bought	bought
seek	sought	sought
catch	caught	caught
teach	taught	taught
think	thought	thought
eat	ate	eaten
fall	fell	fallen
do	did	done
go	went	gone
forget	forgot	forgotten
see	saw	seen
draw	drew	drawn
hide	hid	hidden (hid)

MIND:

find	found	found
found	founded	founded
to show	showed	shown/showed
to prove	proved	proved
		<i>(British English)</i>
		proven
		<i>(American English)</i>

feel	felt	felt
fall	fell	fallen

lay	laid	laid
lie	lay	lain

to learn	—	learnt/learned	—	learnt/learned
to dream	—	dreamt/dreamed	—	dreamt/dreamed
to burn	—	burnt/burned	—	burnt/burned

USEFUL EXPRESSIONS FOR DISCUSSION

FEEDBACK

SAY:

Oh, sure. О, так.
 Oh, I see. О, зрозуміло.
 Uh-huh.
 Uhm-hmm.
 Well.
 All right. Добре. Гаразд.

DO:

Make eye contact with the speaker.
 Nod your head.
 Smile.
 Look surprised when something surprises you.

During the discussion:

INITIATE THE DISCUSSION

Perhaps we could begin by discussing our problem.
 Можливо, ми почнемо з обговорення нашого питання.
 Could I suggest that we get everyone's opinion on that?
 Будь ласка, ваші думки з цього приводу?

ASK PEOPLE FOR OPINIONS, INFORMATION, AND EXPLANATIONS

Could you tell us what you think? Чи не могли б ви сказати, що ви думаєте?
 Does anyone know more about this? Може, хтось знає ще щось стосовно цього?

I	wonder am wondering was wondering	why...	Цікаво, чому ...
---	---	--------	------------------

OFFER OPINIONS AND GIVE INFORMATION

I believe that ... Я вважаю, що ...
 In my opinion ... На мою думку ...
 My feeling is that ... Я відчуваю, що ...
 I have every reason to believe that ... Я маю підстави вважати, що ...

SUMMARIZE INFORMATION

To summarize/To sum up ... Підсумовуючи, ...

ENCOURAGE PEOPLE TO SPEAK BY BEING COOPERATIVE AND BY ACCEPTING DIFFERENT POINTS OF VIEW

Do you agree? Ви згодні?

Do you have the same opinion? Ви також думаєте так?

Have you got...

American English

British English

I think some people here probably disagree with us. I'd like to hear what they have to say.
 Можливо дехто з присутніх не згоден з нами. Хотілося б послухати, що вони скажуть.
 I know Alex has a different point of view. I'd be interested in hearing it.
 Я знаю, що Алекс має іншу думку. Мені було б цікаво її почути.
 Do you think (believe) that ... Ви вважаєте, що ...

EXPRESSING AGREEMENT AND DISAGREEMENT

POSITIVE REPLY	NEGATIVE RESPONSE	INDEFINITE REPLY
Yes. Right. Yes, that's right. I quite agree. That's quite right. Exactly. That's it!	I'm afraid, that's wrong/ not true/not quite right. I wouldn't say so. Not quite so. Not necessarily (so). I don't think so.	It depends. Fifty-fifty. More or less. Probably.
By all means. Sure. Certainly.	I can't say at the moment. I'm not aware of it. I have no idea.	Perhaps. It seems like it.
No doubt.	Far from it. Not at all. By no means. That's out of the question.	May be. May be not. I wouldn't deny that, but... .
You can say that again. I agree with you completely.	On the contrary. I disagree on that point.	I'm in two/twenty minds about it.
You bet! (Атож! Ще б пак!)	I prefer ... to ...	I'm not (quite) sure (of it).

OFFERS AND REQUESTS

Pay special attention to the ways of expressing suggestions, offers, and requests:

I / me

Let me...(e.g. Let me introduce myself... Let me help you...)
Shall I...? (e.g. Shall I read it? Shall I translate it?)
Should I ... ?
Would you like me to...?
May I...?
Can I...?
Could I... ?

YOU

Would you... ?
Could you... ?
Can you... ?
Would you mind (+ Gerund) ... ?

YOU AND ME

Shall we...?
Let's... .
Maybe / Perhaps we should/could...?
Why don't we / you ... ?
How / What about ...?

ABOUT YOURSELF

1.

What's your name? How do you pronounce it? How do you spell it?
 Where are you from?
 When were you born?
 Where were you born?

2.

<p>Are you a</p> <p>I wonder if you are a whether </p>		<p>scientist? (post)graduate student / PhD student / doctoral student / postdoc? biologist? geographer? mathematician? specialist in information technology (IT)? physicist? chemist? linguist?</p>
--	--	--

Yes, that's right.

I'm afraid that's wrong.

What are you majoring in? (What is your major?)

3.

What is your educational background?
 What university have you graduated from?

I graduated from ... in

I have graduated from

4.

<p>Who is your</p>		<p>research advisor? supervisor?</p>
--------------------	--	---

Academician ...

Professor ...

Doctor ...

5.

<p>What is the subject/topic of your What do you mean by ... Explain the term ...</p>		<p>research? investigation? thesis? dissertation?</p>
---	--	--

6.

Why is your work important?

It reveals some new facts

| *about ...*

indispensable for ...

It deals with the problems that have not been studied before.

It is an insight into

7.

What is the aim / goal / objective / of your research?

In order to reach my goal I have

*to obtain
to show
to verify
to demonstrate
to confirm*

8.

What are the

*methods
procedures
techniques*

of your research?

9.

What is the possible application of your work?

Is your work

*—theoretical?
applied?
both theoretical and applied? _____
purely theoretical?
—part of your Institute Research Program?*

10.

Have you already obtained any valuable results?

Yes, I have. (...)

I do hope to obtain (more) promising results

*in the near future.
soon.*

What do you do with the data you obtain?

Is it difficult to analyze the results?

(How) can you claim that the problem you studied is solved?

11.

What (equipment) do you use in your work?

I use sophisticated devices; laboratory equipment.

I don't use any special equipment (devices).

Do you use a computer?

What for?

I use a computer to store and to process the necessary data.

What software do you use?

12.

Do you have / Have you got any publications on the subject you study?

<i>I have already published</i>	<i>several</i>	<i>articles.</i>
	<i>a number of</i>	<i>papers.</i>

*Not yet.***13.**

Did you take part in any scientific conference?

Where?

When?

14.

Do you carry out research individually or in a team?

*I work in a team.**I do independent research. / I work independently.***15.**

What (scientific) journals do you read/

What do you like to read?

*I'm fond of ...**I prefer ... to ...***16.**

Are you interested in ... ?

What are you interested in?

Is this problem

| very interesting?

| of interest?

| important?

| of importance?

| of significance?

17.

What part of your | dissertation have you already completed?

| research paper

| article

| poster presentation

CONFERENCE VOCABULARY

a world ~
всесвітня

symposium
симпозіум

a research ~
наукова

international ~
міжнародна

conference ~
конференція

a stimulating ~
цікава

a regular ~
чергова

an annual ~
щорічна

скликати, збирати ~
відкриття ~

рамки (межі) ~

тематика ~

хід ~

бути організатором ~

організовувати ~

проводити ~

при сприянні / під егідою

місце проведення ~

точна дата

заздалегідь

ухвалити дату

завершувати ~

закривати ~

учасник

брати участь

заявка

анкета

заповнювати анкету

ставити підпис

рукопис

екземпляр

праці конференції

дошка для оголошень

стіл для довідок

реєстраційний внесок

звільнити від сплати

реєстраційного внеску

культурна програма

to convene a ~

opening of a ~

opening ceremony / session

scope of a ~

topics, themes, subjects, subject-matter of a ~

the course of a ~

to host a ~

to organize a ~

to run a ~

under the auspices of / under the aegis of

location/place of a ~

the exact date

in advance

to approve the date

to conclude a ~

to close a ~

participant, attendee

to take part,

to participate

an application form

questionnaire

to fill out a questionnaire

to sign / to put a/one's signature

a manuscript

a copy (of)

proceedings/transactions

bulletin board

an information desk

a fee (a registration fee)

to exempt from paying a registration fee

social events

a written ~
письмове

invitation ~
запрошення

oral ~
усне

a formal ~
офіційне

запрошувати
відмовлятися від ~

to invite
to refuse an ~
to decline an ~
to turn down an ~

прийняти ~
розглянути питання про ~

to accept ~
to consider ~

long-term ~
довгострокова

program ~
програма

~ in brief
коротка
a final ~
остаточний
варіант

preliminary ~
попередня

current ~
програма, що діє
на поточний момент

a draft ~
проект

розробити ~
запропонувати ~
за програмою

to develop a ~
to offer a ~
according to the program

deputy ~
заступник

chairperson
(chairman, chairwoman) ~
голова

chairmanship
головування

newly elected ~
щойно обраний (обрана)

головувати
виконувати обов'язки

to preside
to be in the chair (at a conference, meeting)
to act as a ~

invited ~
запрошений

speaker ~
доповідач

plenary ~
пленарний

principal ~
основний

keynote ~
головний

список доповідачів
стендова доповідь

a list of speakers/presenters
poster presentation

засідання
семинар

session
workshop

обговорення
дискусія

discussion
debate

важливе | питання, проблема
актуальне |

important
urgent
burning
vital

question
problem
matter
issue
point

точка зору
порядок денний
включити до порядку денного
регламент
протокол
бюлетень
голосувати

point of view, viewpoint
agenda
to include in the agenda
time-limit
minutes
ballot
to vote

BASIC CRITERIA regarding the level of papers

ORIGINALITY

Does the paper present a new idea or development which has not previously been published?

TECHNICAL/SCIENTIFIC VALUE

Does the paper present an important step in the process of going from an idea or concept into an industrial product?

CLARITY AND SUITABILITY

Is the subject well presented? Does it clearly state what results have been obtained?
Is it suitable for presentation at this particular conference?

REGISTRATION FORM

To pre-register complete this form and return it to the organisers.

- I am interested in the conference. Please send me a conference program and registration form
- I am unable to attend but would like to remain on your mailing list

Please complete in block letters (type or print)

Title (Mr./Mrs./Ms./Dr./Prof. — **American English**) / (Mr./Mrs./Ms./Dr./Prof — **British English**):

First name:

Last name/Surname/Family name:

Job title:

Position held:

Organisation:

(Postal/Mailing) Address: / Snail mail:

Postcode/zipcode:

Country:

Spouse's name (if attending)

Telephone:

Fax:

E-mail:

Signature:

Date:

TIPS ON RESUME WRITING

The traditional academic *curriculum vitae* (c.v.) highlights your education. A *resume* highlights experience and abilities. It includes:

- ***personal data.***

NAME
MAILING ADDRESS
Telephone number
FAX, e-mail number

- ***educational background*** (mention your degree, college or university attended, areas of special training).

EDUCATION

- ***work experience*** (including internships)

EXPERIENCE

- ***languages*** (list the languages you speak with a relevant level description, e.g., elementary; conversational; intermediate; advanced; fluent; near-native speaker proficiency)

- ***computer skills*** (including word processing skills, Internet etc.; list certificates, if any)

- ***awards received*** (optional)

- ***hobbies*** (optional)

- ***references*** (optional)

TOEFL® TIPS

The TOEFL test, developed in 1964, is intended to evaluate the English proficiency of nonnative speakers who wish to study in colleges or universities in English-speaking countries.

Section 1 — Listening Comprehension measures the ability to recognize and understand English as it is spoken in North America.

Section 2 — Structure and Written Expression measures the ability to recognize important grammatical points in English.

Section 3 — Vocabulary and Reading Comprehension measures the ability to understand the meaning of words and phrases in written English as well as reading comprehension of passages from various academic subjects.

Tips on Section 1

The problems tested include vocabulary and structures that are most frequently used in English as it is spoken in North America.

Перекладання — ключ до успіху!

Наведемо кілька прикладів —

every other year — every two years;

in a day — the day after tomorrow;

as soon as you graduate — after/upon your graduation.

There was a two-fold increase — the increase doubled.

Також перевіряється знання таких зворотів, як, наприклад,

used to та to be used to + Gerund:

Janis used to work hard — she worked hard in the past;

Janis isn't used to working so hard — she isn't accustomed to hard work (she has no such habit);

умовних речень (звороти I wish ...; If only ...);

емфатичних зворотів (типу She herself didn't know what to do — she didn't know what to do, she had no idea what to do; Never have you done such a thing — this is the first time you have done it.)

Приклади:

— What a nice picture! Did you paint it yourself, Sue?

— Well, it was my mother's idea, but I had John do it.

Who painted the picture?

Відповіді:

(A) John's brother

(B) Sue's mother

(C) John

(D) Sue

Аби дати правильну відповідь — C — необхідно знати зворот to have / get something done, someone do something.

— I'm thirsty.

— Could you bring some cold water?

What is the offer?

(A) Bring some water (правильна відповідь)

(B) Close the door

(C) Bring some wine

(D) Call her on Thursday

Також можливі запитання типу:

What is the woman's / man's occupation?

Where does this conversation (most probably) take place/occur?

Наприклад,

— We'd like something for dessert.

— How about our house specialty — raspberry pie?

Where does the conversation (most probably) take place/occur?:

(A) In a supermarket

(B) In the garden

(C) In a restaurant (правильна відповідь)

(D) In the street

Певну складність становлять питання на розуміння імплікацій типу «What does the woman / man mean?» «What do we learn from the conversation?», «What could be inferred from this conversation?», «What does the woman/man imply?», коли питають про те, що мається на увазі, про що непрямо йдеться.

— The weather is perfect. Will you go to the beach?

— I guess so.

What does the woman mean?

(A) She doesn't like the weather

(B) She will probably go to the beach

(C) She doesn't agree with the man

(D) She thinks it's too hot

Правильна відповідь — В, вирази *I guess so, I think so, I wouldn't say no* передають непряму згоду.

Окремо слід наголосити на розрізненні фразеологічних зворотів:

— I don't know whether Mark is kidding or not.

— He is always pulling my leg, too.

What do we learn from the response?

(A) Mark is a good kid

(B) He has long legs

(C) He doesn't know if it is true

(D) He says Mark makes playful fun of him as well

Аби дати правильну відповідь D треба знати значення виразів *to make fun, to kid, to pull someone's leg* (обманювати).

Наведемо декілька типових фразеологічних зворотів:

— Can we postpone this test?

— That is out of the question!

— Do you often cry?

— Once in a blue moon!

— Are you here on vacation?

— Actually, I'm going to stay here for good.

— Why are you learning Spanish?

— I think it will be useful in the long run.

— Will you come to dance tonight?

— I'm looking forward to it!

— Sorry, I'm late.

— Never mind.

— It was a swell party!

— It sure was! або

— You bet!

i.e. impossible

i.e. almost never

i.e. permanently, forever

i.e. in the distant future

i.e. want it to happen in the future

i.e. don't worry; it's OK; think nothing of it

i.e. Sure! Of course! Отож! Авжеж!

- Boy, it's hot!
- You can say that again.
- I do like your room!
- I still need some chairs to fit the bill.
- Do you live on campus?
- No, I don't.

- I can't concentrate on this work!
- Take your time.
- I would rather not do it.
- It's up to you.
- Will you go jogging?
- I'm afraid, not.
 I'm a little bit under the weather today.
- It took so much time to write this article!
- But it was well worth the trouble.
- I'm so tired.
- Can I lend you a hand?
- Wish me good luck.
- I'll keep my fingers crossed for you!
- Thanks for your help!
- Anytime!

- i.e. I completely agree with you.
- i.e. really
- i.e. to match
- to live on campus —
жити у студентському містечку
- to live off campus —
жити за його межами

- i.e. don't hurry
- i.e. prefer
- i.e. The decision is yours

- jogging — біг підтюпцем
- i.e. slightly ill (but not seriously)

- i.e. it deserved difficulty

- i.e. Can I help you?
- i.e. wish me well
- i.e. I wish that nothing goes wrong

- i.e. My pleasure. You're welcome.
Don't mention it.

Для аудіювання пропонуються довші бесіди та тексти науково-популярного характеру (уривки з лекцій, діалоги з життя студентів тощо). Наприклад:

The regulations of the Graduate School provide for two plans of study for the Master's degree. Plan A requires 24 hours of course work plus a written thesis. Plan B requires 30 hours of course work and submission of the more modest Master's essay.

It should be noted that, by devoting a third year to the Master's Program, it's usually possible for a student to complete both the Master's Program and the requirements for Secondary teaching certification. The coordinator of secondary teaching major will advise Master's Students interested in certification, and there is a checklist of requirements for the combined programs available in the department office.

What is the (main) topic of the text?

Відповіді:

- (A) Two plans for M.A. studies (правильна відповідь)
- (B) Teaching certification
- (C) A new course
- (D) Regulations for undergraduate students

Who is the speaker addressing?

- (A) Educational specialists
- (B) Pupils
- (C) Students (правильна відповідь)
- (D) Professors

(Можливе запитання: «Who is the speaker?»)

Which program demands a more serious thesis?

- (A) Plan B
- (B) Plans A and B

- (C) Plan A (правильна відповідь)
 (D) Secondary Teaching Certification

Where a checklist of the requirements for the combined programs can be found?

- (A) Behind the department office.
 (B) Near the department office
 (C) At the dean's office
 (D) In the department office (правильна відповідь)

Tips on Section 2

The language tested is formal, rather than conversational. The topics of the sentences are of a general academic nature.

Section 2 складається з двох частин, у першій треба додати частину речення, якої не вистачає, у другій — знайти слово, конструкцію або зворот з помилкою. Корисно повторити такі сполучення як neither ... nor, either ... or, both ... and, in spite of, despite, to approve of, to be aware of, to differ from, to be capable of, to interfere with, to be opposed to, to refer to, to worry about, to distinguish between, to be known for, to be satisfied with, possibility of, exception to, knowledge of та ін.

Checklist for Section 2

1. Missing subject

... spend the winter in a state of hibernation.

- (A) That many animals
 (B) Because animals
 (C) Many animals (правильна відповідь)
 (D) While animals

2. Repeated subject

The students they will have to take the test.

A B C D

Відповідь — B

3. Verbs (tense, agreement or form)

The Universal Product Code ... in 1973.

- (A) introduced
 (B) is introduced
 (C) was introduced (правильна відповідь)
 (D) has been introduced

These devices have been first used in 1996.

A B C D

Відповідь — B (правильно — were).

4. Pronouns (form or agreement)

She was a scientist whose studied anthropology as well as history.

A B C D

Відповідь — B. Правильно — who.

5. -ING and -ED forms

I enjoy to speak foreign languages.

A B C D

Відповідь — В (після слова enjoy вживається герундій — speaking).

They were ... in our publications.

- (A) interesting
- (B) interest
- (C) interested
- (D) to be interested

Відповідь — С.

6. Articles and Singular/Plural Nouns

The oxygen is known to be the most abundant element.

A B C D

Відповідь — А.

American university degrees are awarded on completion of a specified amount of courses

which earn students credits.

C D

Відповідь — В (правильно — number)

7. Comparatives and superlatives.

The more we studied the subject, ... we liked it.

- (A) the least
- (B) less
- (C) at least
- (D) the less

Відповідь — D.

8. Word forms (nouns, verbs, adjectives or adverbs).

Electronics is the world's most important industrialization.

A B C D

Відповідь — D (правильно — industry).

9. Vocabulary usage.

I looked at a movie on television today.

A B C D

Відповідь — А (правильно — watched
to look — подивитися, поглянути
to watch — дивитися досить довго).

Strange as it may seem, I have very little knowledge in electricity.

A B C D

Відповідь — D (правильно — knowledge of).

10. Conditional sentences.

If it will rain, I'll come and meet you in the car.

A B C D

Відповідь — В (правильно — if it rains, ...).

If there were no hackers there will be no security.

A B C D

Відповідь — С (правильно — would).

Strategy #1

- a) Scan the entire passage for general meaning. Don't worry about understanding every word.
- b) Now read the passage carefully.
- c) Read each question and scan back for the answer.

Strategy #2

- a) Read each question quickly.
- b) Read the entire passage carefully.
- c) Reread each question and scan back for the answer.

Test of written English (TWE)

Since 1986 the TOEFL examination has included a writing test — a thirty-minute essay. The examinees are asked to write on a specific topic (express or support an opinion, defend a point of view, or interpret information presented in a chart or graph).

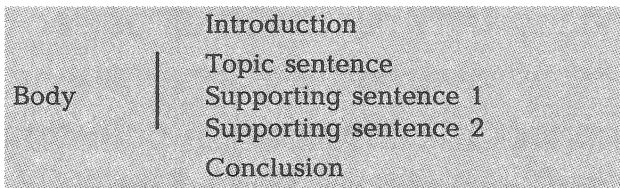
A good essay is

- well-organized and well-developed;
- effectively addresses the writing task;
- uses appropriate examples and details to support and/or illustrate ideas;
- demonstrates syntactic variety, range of vocabulary, appropriate word choice;
- shows unity and progression.

TIPS ON TWE

An essay has three parts:

1. **An introduction** (where the main idea is stated).
2. **Body paragraph(s)** (made up of topic sentence and supporting sentences).
3. **Conclusion** (restatement of the main idea, writer's opinion/viewpoint on the topic).



The number of paragraphs depends on the number of points you want to discuss.

Outlining is a way of organizing your thoughts before you write.

There are several steps that precede the outlining

- 1) **brainstorming** (writing down as many ideas and details as possible);
- 2) **grouping the ideas**.

Make use of transitions (logical connectors). You may begin the essay with such phrases as:

Many people think that ... (but others believe that ...)

It goes without saying that ...

X is important because ...

USE:

First ... second ... third ...

for instance ...

in addition ...

also ...

moreover ...

likewise ... /similarly ...

(yet) conversely/by turns

despite/ in spite of

one the one hand ...

on the other hand ...

In my opinion, ...

Personally, I think that ...

NOTE.

The clause marker *therefore* occurs after a semicolon (;) or period (.),

NOT a comma (,)

SAMPLE ESSAY

The key to protecting the environment is action. We all must work together to make the environment as clean and healthy as possible. Give specific reasons why.

Environmentalists say that protecting the health of our planet will help us all. However, it is really hard to change our lives enough to prevent global pollution. The biggest trouble, for example, with most air pollutants is that they are invisible. That makes it difficult to see how dangerous they are.

Consider such dangerous pollutant as carbon dioxide. Carbon dioxide comes from things we do every day, like driving cars. A gallon of gasoline weighs eight pounds. If you burn it in the engine of a car it releases more than five pounds of carbon in the form of carbon dioxide. Even our gas stoves give off carbon dioxide.

New kinds of cars and furnaces that run on solar power or wind power or some other kind of renewable energy will help conserve scarce fuel and reduce the amount of pollutants being released into our air, land, and water. But while we are waiting for those kinds of things to come along, we need to use less gas, oil and coal. It's true that we probably can't give up cars altogether — but we can use them less. People could walk and bike many more places than they do now. At least, they could drive small cars that use less gas.

Now many people are fighting for the environment, but despite the work of many people, each year the health of our earth gets worse. Unless we are willing to work on saving the environment, it will probably keep getting worse. But if we choose to care about our planet, we could leave the world greener than we found it.

On Figurative Language

When a person doesn't recognize instances of non-literal language, s/he may fail to figure out the intended meaning — even from the context — and may miss the meaning of a significant portion of information from conversations, TV, university lectures or printed texts. What does it take to understand figurative language? In short, literal language refers to stating the facts without any exaggerations or alterations of the subject at hand while figurative language states the facts with comparisons to similar events and some possible exaggerations. Figurative utterances convey complex meanings in a colorful manner. *Metaphor* (from the Greek — *metaphora*, meaning «transfer») is language that directly compares seemingly unrelated subjects. More generally, a metaphor describes a first subject as *being* or *equal to* a second subject in some way. Thus, the first subject can be described because implicit and explicit attributes from the second subject are used to enhance the description of the first. A metaphor is generally considered to be more forceful and active than an *analogy* (metaphor asserts two topics are the same whereas analogy may acknowledge differences). Other rhetorical devices involving some kind of explicit or implicit comparison, such as *simile*, *allegory*, *parable*, *metonymy*, *synecdoche*, *allusion*, *personification*, *hyperbole*, *litotes* are usually distinguished by the manner in which the comparison between subjects is delivered. For example, metaphor and *simile* are both terms that describe a comparison: the only difference between a metaphor and a simile is that a simile makes the comparison explicit by using «like», «as» etc. The Columbia Encyclopedia, 6th edition, explains the difference thus: a simile states that A is like B, a metaphor states that A is B or substitutes B for A. An *allegory* is an extended metaphor in which a story is told to illustrate an important attribute of the subject. A *parable* is an extended metaphor told as an anecdote to illustrate or teach a moral lesson. Both *metonymy* and metaphor involve the substitution of one term for another. In metaphor, this substitution is based on similarity, while in metonymy, the substitution is based on contiguity (association), e.g. «*the White House*» is used to mean «the President and staff». *Synecdoche*, where a specific part of something is used to refer to the whole (e.g. «*roof*» for «a house», «*Britain*» for the entire United Kingdom), is closely related to metonymy. Indeed, *synecdoche* is often considered a subclass of metonymy. An *allusion* is a figure of speech that makes a reference to a well-known person, place, event, literary work, or work of art (e.g. *Henry Higgins* in George Bernard Shaw's play *Pygmalion* (1913), a professor of phonetics known for his hectoring manner with his pupil Eliza Doolittle). *Personification* gives an inanimate object human traits and qualities (e.g. «*the device reads*» or «*the Baby New Year*» representing «the New Year»). *Hyperbole* exaggerates the statements and is used to create emphasis — «*these books weigh a ton*» (weigh a great deal, are very heavy). *Litotes* is a form of understatement with the intention of subtle emphasis («*not unrealistic*»; «*not unfamiliar*»). For example, the phrase «*not bad*» can be said in such a way as to mean anything from «mediocre» to «excellent».

Consider the following:

- | | |
|---|------------------------------------|
| ● to grasp the idea (a concept) | ● the brightest minds / think tank |
| ● to break the ice | ● the dawn of civilization |
| ● to digest the information | ● a spiritual bond |
| ● to plant ideas | ● brain drain VS. brain gain |
| ● to throw/shed some light on ... | ● a gateway to (success) |
| ● a train of thought | ● (the) corporate ladder |
| ● a crop of (students; ideas; patents) | ● (in) the realm (of) |
| ● a bridge between (old and new ideas) | ● a diamond in the rough |
| ● (a/the) marriage of (theory and practice) | ● the Rosetta stone (of) |
| ● a family of (fonts; products and solutions) | |

(after Wikipedia and Wiktionary)

PRESENTATIONS TIPS

Introductions

Good morning / afternoon / evening.

Welcome to

Let me introduce myself.

I'm / my name is ..., and I represent

I am in charge of / responsible for... .

I take care of ...

Let me tell you a little about our company.

We specialize in

We are currently providing services
working on
developing
designing
producing

Our main line of business is

I'm (really) glad/ happy to be here.

Today, I'd like to talk (to you) about

I'm here to talk about

My topic today is

The focus of my speech is

I'd like to share some thoughts on

I (it) will probably take about ... minutes.

We have two alternatives: / several options... .

We could either ... or

We could both ... and

Showing linear organization

Let's get started.

I've divided my topic into (several / three/ four / five) sections/parts/ subtopics.

The first thing we need to discuss / talk about is

The first / second / next item (thing) on the list (agenda) is

First (of all), / The first point is

Second (ly),

Third (ly),

To begin with, ... /Let me start by ... / Let's start by .../ First, let me tell you about

I've divided my topic into (several / three/ four/ five etc.) parts.

The next point is

Finally / The final point is / In the end...

Let's move on (to the next topic).

Showing reference

As to ..., / As for ..., As far as ... is concerned, ... / Speaking of..., /

When it comes to... / Regarding...,/ In regard to ..., / With regard to .. / Concerning ...,

Getting back to the topic, ...

To get back to ...

What you just said is very important and that raises the next issue... .

Let's go back to an important issue raised 15 minutes ago.

To get back to the original question...

Anyway,

Emphasizing / Highlighting

The thing is ... / The point is ...

As a matter of fact, ...

Actually, ... / In fact, ... / As a matter of fact, ...

In particular, ... / Particularly, ... / Especially, ...

First and foremost,...

It goes without saying that...

It comes as no (great) surprise that...

It's important to keep in mind that ... /

It should be borne in mind that...

We have every reason to believe that ...

It is well known that ...

The main (major) issue/ problem / question / point / thing we need to discuss is

The (most) important thing (here) is

The main reason is ...

What is the main problem?

What is the real issue (here)?

Our primary concern is

The crux of the matter is

Let's stop right there and focus on... .

Reducing categoricity

To the best of our knowledge, ...

Basically, ... / Generally, ... / In general, ... /

Usually, ... / As a rule, ... / In most cases, ... / For the most part...

The main thing is...

To put it simply, ...

Perhaps / Probably

It seems that...

It turned out that...

Unfortunately, ...

Giving examples

For example, / For instance,

To illustrate,

Let me give you an example of... / To illustrate

A case in point

Commenting

Hmmm. I hadn't thought of that before.

I don't quite follow you.

I didn't get what you said (about)... .

Excuse me for interrupting, ...

May/ Can I add something here? / Furthermore, ... / Besides, ...

May I ask a question?

By the way...

Moreover, ... / What's more,

Agreement

I agree.

You're right.

That's right / (quite) correct.

(I think that's a) good idea / point.

That's a great / very interesting idea / point.

Yes.

*Yep!

I think/ believe (that) / In my opinion, / I feel that...
I would add (something here)...

What about ... ?
Have you considered ... ?

What do you think (about ...) ?
Any thoughts on that?
What's your opinion on that
What/How about ... ?
(Do you have) any ideas (on that)?
Any suggestions?
Why don't we ... ? / Let's ... / How about ... / Maybe we should

Disagreement

Yes, but
On the other hand,
However,
You may be right / have a good point, but ...
I may be wrong, but ...
That may be true, but ...
Part of what you said is true. The other part, however, is not.
Many people might disagree with what you just said. But let's look at your basis for thinking that.
This is the issue that most scholars can't agree on, so let's examine the point of view you just raised.

Hmm... I have to think about that.
Hmm... I'm not sure of the best way to respond to that just now. Can we come back to that later?
I'm sorry. I can't say at the moment.
I'll explain it (a little) later. / We'll come/ get to that later.
Well, let me think for a minute how to put this...
I'm not (quite) sure (of it).
Let's try to get at this another way.
Another way to look at this is...
Well, let's see...
What I would say is...
An exception to that is...
A counter-example would be...
So you somewhat disagree with...
Nevertheless, ... / Still, .../ All the same,
I am not so certain/sure that...
Even if that is so, ...

That's not (quite) right.
That's not quite/really what I had in mind/the way I see it.
If I understand you correctly, I don't think that is really related.
I'm afraid, that's wrong/not true.
I wouldn't say so.
Not quite so.
Not necessarily (so).
Frankly speaking, I don't like the approach proposed.

I disagree.
I don't think so.
Far from it.
By no means.
That's out of the question.
On the contrary.
I disagree on that point.
No.
*Nope.

Showing indifference

Interesting. / That's interesting.
 It depends.
 Fifty-fifty.
 More or less.
 May be. May be not.

Clarification

What do you mean by ...
 In other words, ... / Putting it another way,
 What I mean is ...
 What I'm trying to say is ...
 What I wanted to say was ...
 To clarify,
 What do you mean (by that)?
 What are you trying to say?
 What was that again?
 Could you clarify /elaborate on that?
 You mean
 (I think) what you mean is
 If I understand you (correctly),
 So, your idea is / you think (that) ...

Responding

I understand (what you mean). / I see. / I get it.
 Good idea.
 Good point.
 Great / good / (very) interesting question
 (That sounds like) a good idea.
 Sounds good.
 That raises the issue of ...
 The problem here is ...
 It looks like / seems/appears(that) ...
 The thing is (that) ...
 In other words ... / (So,) what you mean is ...
 If I understand you correctly ...
 Can you explain ...
 Can you tell me why ...
 Why / How come ... ?
 Let me explain.
 Let me tell you why ...
 The reason is ...

Conclusions

Finally, ... / Let me conclude by... / In conclusion, ... / To conclude, / To summarize, ...
 /To sum up, ... / In summary / Summing it up, ...
 The conclusion is ...
 All in all... / The bottom line is...
 In brief, ... / In a word,... / In a nutshell,
 That's all for today.
 (Do you have) any questions?
 We have just a few minutes for questions.
 Thank you. *(optional)*
 Thank you for your time. *(optional)*

DESCRIBING PRODUCTS

Tell me about this product/model/device/machine/machinery/gauge, please.

What is it? Who uses it? (How) does it work?

Could you give me some (more) information/ details on/ about ... (this product/gadget/widget/gimmick/gizmo)?

What is special/unique about this one?

What are the specifications?

Is it safe?

Let me tell you about

This is our newest / best-selling product (in its class).

We're really pleased with its performance.

It's an excellent

It's lightweight

 durable

 comfortable

 stackable

 compatible (X-compatible OR compatible with ...)

It is made of

It can/could be used for ... / You can use it to .../ One can/could use it for... /

It is used for ... / You need it for

You can ... with it.

This (particular one / model) has/contains (several components).

This comes with

This is equipped with... .

This costs ... / This sells for... / This is priced at .../ This one goes for

QUALIFYING EXAM SAMPLE TEST

I. Read the passage and answer the questions that follow

Neuroeconomics combines neuroscience, economics, and physiology and studies how people make decisions. Neuroeconomics is the subset that focuses on our choices, especially the cognition that happens when we understand our options and then choose one. The very term «neuroeconomics» is yet another new word with «neuro-» prefix, a successor to «e-», «cyber-» and other current hot affixes of the last decade. A well-known proponent of this new field is US professor Paul Zak. He argues that most economists theorize about how human beings behave instead of going out to observe. In neuroeconomics, the goal is to look at the role of the brain when we make decisions, categorize risks and rewards, and interact with each other. It seems that there may be biochemical underpinnings to our willingness to be co-operative, perhaps associated with the hormone oxytocin. Several scientists have argued that the methodology of neuroeconomics answers irrelevant questions. However, neuroeconomic research has been able to provide more insight into some behavior that could not be adequately explained by other methods. Neuroeconomics findings tend to confirm that emotions are important factors in many economic choices.

- The passage is about
 - Essentials of cybernetics
 - Current trends in biochemistry
 - Magnetic resonance imaging applications
 - An insight into decision making process
- According to the passage, Paul Zak suggests that economists should pay more attention to
 - negotiating
 - theorizing
 - observing
 - sampling
- It can be inferred from the passage that
 - Oxytocin definitely influences decision making
 - Oxytocin has nothing to do with decision making
 - Oxytocin will not be studied in context of decision making
 - Oxytocin could possibly influence decision making
- The word OPPOSITE in meaning to the word proponent in line 5 is
 - competent
 - ornament
 - opponent
 - constituent
- It can be concluded that
 - there is no theory of human behavior
 - cybernetics studies how human brain works
 - biochemistry may be applied to economics
 - people tend to be co-operative in economic negotiations
- The underlined word another could best be replaced by which of the following:
 - one more
 - other
 - the other
 - other than
- The underlined word a successor to could best be replaced by which of the following:
 - a thing coming after
 - a thing coming before

- c. a thing accompanying
d. a thing introducing
8. The underlined word decade could best be replaced by which of the following:
- a. 10 months
b. 10 days
c. 10 years
d. 10 hours
9. The underlined phrase human beings could best be replaced by which of the following:
- a. humanitarian
b. person
c. people
d. humanitarians
10. The underlined word observe could best be replaced by which of the following:
- a. write and present
b. produce and sell
c. select and collect
d. see and notice
11. The underlined word goal could best be replaced by which of the following:
- a. idea
b. aim
c. income
d. subject
12. The underlined word underpinnings could best be replaced by which of the following:
- a. equipment
b. limitations
c. support
d. methods
13. The underlined word willingness could best be replaced by which of the following:
- a. kindness
b. politeness
c. eagerness
d. firmness
14. The underlined word perhaps could best be replaced by which of the following:
- a. never
b. always
c. definitely
d. probably
15. The underlined word to confirm could best be replaced by which of the following:
- a. to corroborate
b. to refute
c. to question
d. to test

II. Complete the following sentences

16. Dr. Snow ... our department leader from 1990 to 1996.
- a. is
b. has been
c. was
d. will be

17. There ... two major categories of organized research: exploratory and mission-oriented research.
- is
 - be
 - are
 - to be
18. It was their research ... helped them improve our equipment.
- did
 - when
 - if
 - that
19. ... overheat liquids.
- No
 - Not
 - Not only
 - Never
20. Taxi service ... to and from the Congress Center downtown.
- is available
 - are available
 - available
 - to be available
21. Nobel laureate and Princeton professor, Dr. Joe Taylor, will describe his work as a radio astronomer ... in his discovery of radio waves.
- culminating
 - culmination
 - culminated
 - culminate
22. The finalists are given ... registration for the conference.
- compliments
 - compliment
 - complimentary
 - and compliment
23. The student paper competition has become one of ... technical events.
- the largest
 - the large
 - large
 - larger
24. ... 50% of the submitted papers were accepted for presentations.
- To approximate
 - Approximate
 - Approximately
 - Approximating
25. I would like to thank many individuals for making this event
- possible
 - possibly
 - and possible
 - possibility

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ANSWER KEY

Unit 1

Ex.2

I. 1-F. 2-C. 3-E. 4-A. 5-H. 6-G. 7-D. 8-B. 9-N. 10-M. 11-I. 12-K. 13-L.
 II. 1-B. 2-D. 3-C. 4-A. 5-F. 6-E.

Ex.5

1-E. 2-G. 3-F. 4-A. 5-B. 6-D. 7-C. 8-J. 9-H. 10-I. 11-N. 12-P. 13-Q. 14-K. 15-M. 16-O. 17-L.

Unit 2

Ex.10

1-d. 2-c. 3-b. 4-d. 5-d.

Ex.12

1-d. 2-d. 3-d. 4-b. 5-c. 6-a. 7-d. 8-a. 9-b. 10-d. 11-a. 12-a. 13-a. 14-c. 15-d.

Unit 3

Ex.3

1-E. 2-C. 3-D. 4-A. 5-B.

Ex.6

1-b. 2-b. 3-d. 4-c. 5-b. 6-d. 7-c.

Ex.7

1-b. 2-a. 3-b. 4-a. 5-d. 6-b. 7-a. 8-a. 9-a. 10-c. 11-d. 12-d. 13-b. 14-d. 15-b. 16-a. 17-c.

Ex. 10

1-a. 2-c. 3-d. 4-b. 5-a. 6-a. 7-b. 8-d. 9-c. 10-a. 11-c. 12-a. 13-c. 14-d. 15-c. 16-a. 17-a. 18-d. 19-c.
 20-a. 21-c. 22-d. 23-b. 24-a. 25-b. 26-d. 27-b. 28-c. 29-a.

Ex.16

1. __, __, __. 2. __, __. 3. __, __. 4. A. 5. The.

Ex.18

1-d. 2-b. 3-a. 4-b. 5-a. 6-b. 7-c. 8-a. 9-a. 10-c. 11-c. 12-b. 13-a.

Unit 4

Ex.2

1-D. 2-C. 3-E. 4-B. 5-A.

Ex.5

1-a. 2-d. 3-a. 4-b. 5-a. 6-c. 7-a. 8-a. 9-b. 10-d. 11-d. 12-c. 13-c. 14-a. 15-d. 16-c. 17-b. 18-d. 19-a.
 20-b. 21-d. 22-d. 23-b. 24-d. 25-b.

Ex.7

1-c. 2-c. 3-d. 4-c. 5-a. 6-c. 7-d. 8-a. 9-b. 10-c.

Ex.10

1-d. 2-c. 3-b. 4-a. 5-d.

Ex.11

1-d. 2-d. 3-d. 4-c. 5-b. 6-a. 7-a. 8-a. 9-d. 10-b. 11-b. 12-d. 13-a. 14-a. 15-d.

Unit 5

Ex.6

1-a. 2-a. 3-a. 4-d. 5-b. 6-a. 7-a. 8-a. 9-d. 10-c. 11-b. 12-c. 13-d. 14-d. 15-d. 16-d. 17-a. 18-d. 19-d.
 20-a. 21-d.

Ex.7

1-J. 2-M. 3-E. 4-K. 5-B. 6-H. 7-D. 8-C. 9-F. 10-G. 11-I. 12-A. 13-L. 14-R. 15-T. 16-V. 17-P. 18-U.
 19-O. 20-N. 21-Q. 22-S.

Ex.10

1-a. 2-a. 3-c. 4-c. 5-a. 6-a. 7-a. 8-d. 9-d. 10-c. 11-c. 12-c. 13-a. 14-a. 15-b. 16-b. 17-a. 18-d. 19-b.
 20-a. 21-c. 22-a.

Ex.15

1-c. 2-b. 3-d. 4-b. 5-b. 6-d. 7-d. 8-a. 9-b. 10-c. 11-c. 12-b. 13-a. 14-a. 15-d. 16-b.

Unit 6**Ex.4**

1-a. 2-b. 3-c. 4-a. 5-a. 6-b. 7-a. 8-b. 9-d. 10-b. 11-a. 12-a. 13-a. 14-d. 15-a. 16-d. 17-a. 18-a. 19-b. 20-d. 21-a. 22-d. 23-a.

Ex.8

1-b. 2-a. 3-c. 4-c. 5-a. 6-c. 7-b.

Ex.10

1-D. 2-F. 3-A. 4-B. 5-C. 6-E.

Ex.12

1-b. 2-c. 3-a. 4-a. 5-a. 6-c. 7-c. 8-d. 9-a. 10-b. 11-b. 12-d. 13-c. 14-a. 15-b. 16-d. 17-d.

Ex.13

1-b. 2-b. 3-a. 4-b. 5-a. 6-a. 7-b. 8-a. 9-a. 10-a. 11-a. 12-b.

Ex.15

1-E. 2-B. 3-I. 4-K. 5-J. 6-A. 7-C. 8-L. 9-D. 10-F. 11-H. 12-M. 13-G.

Ex.16

1-c. 2-c. 3-a. 4-c. 5-d. 6-a. 7-d. 8-d. 9-c. 10-d. 11-a. 12-a. 13-a. 14-d. 15-b.

Unit 7**Ex.5**

1-b. 2-a. 3-c. 4-a. 5-d. 6-a. 7-a. 8-d. 9-b. 10-c. 11-c. 12-c. 13-d. 14-d. 15-a. 16-c. 17-c. 18-a. 19-d. 20-a. 21-d. 22-d. 23-d. 24-d. 25-d. 26-b.

Ex.13

1-b. 2-a. 3-a. 4-d. 5-c. 6-d. 7-a. 8-d. 9-c. 10-d. 11-a. 12-b. 13-b. 14-d. 15-b.

Unit 8**Ex.10**

1-G. 2-E. 3-I. 4-C. 5-H. 6-N. 7-J. 8-L. 9-K. 10-D. 11-A. 12-F. 13-B. 14-M. 15-Q. 16-O. 17-P.

Ex.16

1-D. 2-E. 3-A. 4-B. 5-C. 6-G. 7-F. 8-J. 9-I. 10-H.

Ex.19

1-d. 2-c. 3-d. 4-b. 5-d. 6-a. 7-d. 8-c. 9-c. 10-a. 11-c. 12-d. 13-d. 14-b. 15-b. 16-d. 17-c. 18-a. 19-d. 20-a. 21-a. 22-a. 23-a. 24-d. 25-d. 26-c. 27-b. 28-c. 29-c. 30-d. 31-d. 32-a. 33-a. 34-d. 35-c. 36-a. 37-d. 38-b. 39-c. 40-c. 41-b. 42-d. 43-c. 44-b. 45-c. 46-d. 47-c. 48-a. 49-b. 50-a. 51-a. 52-a. 53-b. 54-c. 55-a. 56-c. 57-d. 58-b. 59-b. 60-b. 61-c. 62-a. 63-a. 64-b. 65-a. 66-b. 67-a. 68-a. 69-a. 70-a. 71-a. 72-a. 73-a. 74-b. 75-a. 76-c. 77-a. 78-c. 79-b. 80-a. 81-d. 82-c. 83-b. 84-b. 85-b. 86-b. 87-b. 88-d. 89-a. 90-a. 91-a. 92-b. 93-b. 94-c. 95-c. 96-c. 97-d. 98-b. 99-d. 100-d. 101-c. 102-c. 103-a. 104-b. 105-b. 106-c. 107-d. 108-c. 109-a. 110-d. 111-a. 112-b. 113-c. 114-c. 115-d. 116-a. 117-d. 118-b. 119-b. 120-d. 121-a. 122-a. 123-c. 124-d. 125-a. 126-b. 127-a. 128-c. 129-a. 130-a. 131-d. 132-c. 133-c. 134-a. 135-b. 136-d. 137-b. 138-a. 139-a. 140-c. 141-b. 142-d. 143-c. 144-a. 145-b. 146-d. 147-c.

Ex.21

1-d. 2-a. 3-c. 4-a. 5-a. 6-b. 7-a.

Unit 9**Ex.1**

1-the. 2-a. 3 ____. 4-an, ____ . 5-the. 6-____. ____ . 7-____ . 8-the. 9-____, ____ . 10-the. 11-____. 12-____, (the), the. 13-____, the. 14-____ . 15-____, (the).

Ex.2

1-understand. 2-sounds. 3-goes. 4-smells. 5-wakes up.

Ex.3

1-was studying. 2-was studying. 3-will be taking. 4-will call. 5-was reading; was watching.

Qualifying Exam Sample Test

1-d. 2-c. 3-a. 4-c. 5-c. 6-a. 7-a. 8-c. 9-c. 10-d. 11-b. 12-c. 13-c. 14-d. 15-a. 16-c. 17-c. 18-d. 19-d. 20-a. 21-a. 22-c. 23-a. 24-c. 25-a.

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АНГЛІЙСЬКА ДЛЯ НАУКОВЦІВ
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THE LANGUAGE OF SCIENCE

АНГЛІЙСЬКА
ДЛЯ НАУКОВЦІВ

Ільченко Ольга Михайлівна,
випускниця Київського національного університету імені Тараса Шевченка. Доктор філологічних наук (2003), професор, завідувач кафедри іноземних мов Центру наукових досліджень та викладання іноземних мов НАН України. У 1994 та 1998—1999 роках стажувалася у США. Має досвід роботи перекладача Світового банку (1996).

