

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СХІДНОУКРАЇНСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ
імені ВОЛОДИМИРА ДАЛЯ

Методичні матеріали й завдання з аудиторної роботи
«Іноземна (англійська) мова»
для студентів 2 курсу спеціальності «Інформатика»
(Напрямок підготовки 6.030502 «Економічна кібернетика»)

ЗАТВЕРДЖЕНО
на засіданні кафедри іноземних мов
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Методичні матеріали й завдання з аудиторної роботи («Іноземна (англійська) мова») для студентів 2 курсу спеціальності «Інформатика» (Напрямок підготовки 6.030502 «Економічна кібернетика») /Укладач: Н. А. Сура. – Сєвєродонецьк: вид-во СНУ ім. В. Даля, 2015. – 41 с.

Викладено методичні матеріали й навчальні завдання з аудиторної роботи («Іноземна мова за професійним спрямуванням») для студентів 2 курсу спеціальності «Інформатика» (Напрямок підготовки 6.030502 «Економічна кібернетика»). Методичні вказівки та навчальні завдання мають за мету надання практичної допомоги викладачам ВНЗ щодо навчання студентів професійно орієнтованого спілкування іноземною мовою.

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Unit 1 AN EDUCATED MAN AND COMPUTER

Exercises

I. Read and memorize the following words:

abacus ['æbakas] – рахівниця

e. g. The abacus has so remote origins that they cannot be dated.

digit ['dɪdʒɪt] – цифра, число

e. g. These digits are easily multiplied.

key [ki:] – кнопка, клавіша, ключ

e. g. This ordinary adding machine has ten keys for each column of digits.

hardware ['hɑ:dwɛə] – апаратне забезпечення

e. g. The hardware inside the machine expresses arithmetical and logical relations.

software ['sɒftweɪə] – програмне забезпечення

e. g. Hardware is useless without software which is computer instructions programs.

to store [sto:] – запам'ятовувати, зберігати

e. g. A computing machine can take in and store information.

storage ['sto:ndʒ] – пам'ять; зберігання даних

e. g. The part of a computer which stores information is called storage or memory.

input ['ɪnput] – вхід, введення

e. g. The part of the computer that takes in information is called the input unit.

output ['aʊtput] – вихід

e. g. The part of a computer that puts out information is called the output unit.

to compute [kəm'pjʊ:t] – обчислювати

e. g. A digital computer is a machine which computes by using digits or numbers.

to count [kaunt] – рахувати

e. g. The word computer comes from a Latin word which means to count.

to perform [pə'fɔ:m] – виконувати

e. g. The computer can perform different kinds of operations.

to display [dɪs'pleɪ] – показувати

e. g. After performing calculations a computer displays a result.

to compare [kəm'peɪə] – порівнювати

e. g. I shall compare my results with yours.

to calculate ['kælkjuleɪt] – обчислювати

e. g. I'll show you how to calculate by using a computer.

to record [rɪ'kɔ:d] – записувати

e. g. The instructions are recorded in the order in which they are to be carried out.

to process ['prəʊses] обробляти, опрацьовувати

e. g. The basic job of computers is the processing of information.

II. Learn the following word combinations:

in daily use у повсякденному житті

to do useful work виконувати корисну роботу

to process data обробляти дані

to save a lot of money економити багато грошей

to do a lot of operations виконувати багато операцій

punched tape перфострічка

to plug instruction ввести команду

fast and accurately швидко і точно

to do weather forecasting зробити прогноз погоди

to keep records of financial affairs вести облік фінансових робіт

to take a square root добувати квадратний корінь

to raise, to a power підносити до степеня

low level languages
a set of instructions
to come for an interview
a software programmer

мови низького рівня
 низка вказівок
 прийти на співбесіду
 програміст

III. Make up sentences:

Computer is/ was	a machine which performs a sequence of operations a universal information processing machine the most amazing achievement now widely used in many fields used in chemical plants, power stations a million times faster than humans a data storage system created by man built in 1939 by H. H. Aiken constructed by the Ukrainian Academician S. A. Lebedev in 1950
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IV. Fill in the blanks with the necessary words:

- The store ... a numerical quantities and data which are to be processed, (contains, concludes, consists of).
- The arithmetic unit normally ... the operation of addition, subtraction, multiplication and division and certain other special operations, (performs, carries out, carry).
- The input and output devices are to supply information and to ... it from the computer, (obtain, receive, get).
- Computers are a million times ... than humans in performing computing operation (faster, quicker, rapid).
- The number of electronic computers used in any given field of human activity is sometimes believed to ... the degree of its modernity, (indicate, show, testify).

V. Make up questions and let your fellow-students answer them:

What do we call	a computer? a microprocessor? memory? personal computer? a program? a microcomputer?
A computer	a heart of a microcomputer
Personal computer	a tiny processor on a single
A microprocessor	chip used in microcomputer
Memory	is is data storage system created by man
A program	a computer used for home and personal use
A keyboard	a set of instructions composed for solving given problems by computer
	a part of a computer which store information
	a small scale computer using a single microprocessor chip in its architecture a part of a computer which allows the user to communicate with the computer

VI. Complete the following sentences:

- The hardware inside the machine expresses arithmetical and logical
- A computing machine can take in and store
- The part of a computer which store information is called
- Computer is the most amazing
- After performing calculations a computer

displays 6. The basic job of computers is the processing of 7. The input and output devices are to supply information and to obtain it from

VII. Translate into English:

1. Електроніка є основою сучасної автоматики. 2, Кібернетика тісно пов'язана з іншими галузями знань. 3. ЕОМ використовуються в промисловості, медицині, науково-дослідній роботі, банках і під час прогнозування погоди. 4. Августа Ада Байрон – дочка славнозвісного поета. Вона зробила математичне забезпечення для першого комп'ютера. 5. У шістнадцятирічному віці вона мала глибокі знання з математики. 6. ЕОМ відкриває великі перспективи для людської творчості, про які могли говорити хіба що фантасти. 7. Цифрова обчислювальна машина за один день може виконати такий обсяг роботи, з яким команда обчислювачів не впорається й за рік.

VIII. Give synonyms to the words in bold type:

1. Computer penetrate almost into all spheres of our modern society. 2. Basic is considered to be one of the easiest programming languages to learn. 3. A digital computer computes by using numbers or digits. 4. A hybrid computer is a machine which combines some of the properties of digital and analogue computers. 5. Computer is a data storage system created by man. 6. Computer is a million times faster than humans in performing computing operations.

IX. Read and dramatize the following dialogues:

A: What are you looking at?

B: That book.

A: Which one? Point to it.

B: That one, there.

A: Oh, yes. «Programming languages». Interesting book, isn't it?

B: Yes, it is. I wish I had it.

A: So do I.

A: Hello, glad to see you.

B: Hello, so am I.

A: Today's your birthday, isn't it?

B: That's right. It's kind of you to remember.

A: Well, many happy returns of the day. Here is a present for you.

B: Oh, thank you. What a beautiful flower! Oh, and what's that?

A: I know your future speciality is electronic computers. And I'd like to present you this personal computer.

B: Oh, I don't know how to thank you. Thank you ever so much.

A: I am glad you like it.

A: What a luck running into you. How are you getting on?

B: Thanks. Everything's all right. I am quite well. And how are you?

A: You see I was ill last week.

B: What was the matter with you?

A: I had a cold, high temperature and a headache.

B: Poor you. Can I do anything for you?

A: Please, bring me your notes. I missed some lectures and now I can't catch the idea of what difference between RAM and ROM memory and what CNC (computer numerical control) is.

B: All right. By the way, I have got a textbook «Computer memories». I'll bring it if you like.

A: Thank you. I need it badly.

B: See you in the evening.

A: Good-bye. Give my best regards to our group, please.

X. Complete the following dialogues:

A: Hello. Glad to see you. Where are you going?

B: ...

A: What is your job?

B: ...

A: My company has an immediate opening for a software programmer. Are you a specialist in this field?

B: ...

A: Can you come for an interview tomorrow?

B: ...

A: You shouldn't miss such an opportunity.

B: ...

A: Bye-bye. See you tomorrow.

XI. Make up your own dialogue using the following expressions: good morning, glad to see you, a computer, to perform operations; an ordinary business, adding machine; calculate, multiplication, subtraction, addition, division, with help of computer.

XII. Read and retell the text:

FROM THE HISTORY OF COMPUTER

The educated man of 200 years ago did not need to know anything about science. The educated man of 25-30 years ago did not need to know anything about computers. But the educated man of today needs to have some significant knowledge of science and a little significant knowledge about computers.

The computer is no doubt the most amazing achievement of mankind. It is a data storage system created by man. A human tells the machine what to do, when to do it and how it should be done. The word *computer* comes from a Latin word which means *to count*.

Nearly one hundred fifty years ago there were no such things as computers: knotted ropes, marks in clay, the abacus are all methods of keeping track of numbers.

In 1833 an English inventor and mathematician Charles Babbage, professor of Cambridge University designed the first computer. The mathematical programme for his machine had been composed by Lord Byron's daughter.

The first programmed computer which operated successfully was built in 1939 by H. H. Aiken, professor of Harvard University.

In our country the first electronic digital computer MACM was constructed by the Ukrainian Academician S. A. Lebedev in 1950.

Such computers as BESM, Minsk, Ural, Razdan-3, M-20, M-220, Nairi-3, Strela, Dniepr were created in our country.

Nowadays computers greatly increase man's thinking capabilities of planning, analyzing, computing and controlling. Hundreds of computers are already in daily use. They penetrate almost into all spheres of our modern society, from nuclear energy production and missile design to the processing of, bank checks, weather forecasting, manufacturing, research and medical diagnoses.

There are three kinds of computers: digital, analogue and hybrid. An analogue computer computes by using physical analogue of numerical measurements. A digital computer computes by using numbers or digits. A hybrid computer is a machine which combines some of the properties of digital and analogue computers. Invention of electronic computers is one of the greatest achievements of mankind. The significance of it cannot be compared, with the invention of the steam-engine and the utilization of atomic energy.

XIII. Read and discuss the text:

COMMUNICATION WITH COMPUTER

Men use languages in order to communicate with each other. When the man wishes to communicate with the computer he uses in the same way «languages» such as BASIC, PASCAL, ADA, FORTRAN, ALGOL, COBOL, PL/m and others.

BASIC is considered to be one of the easiest programming languages to learn. It is now used almost universally.

PASCAL is a general purpose high level programming language. It is named after the famous French mathematician, Blaise Pascal. In 1642 he designed and built the first mechanical calculator the «Pascaline».

ADA is a high level programming language. It is a PASCAL-based language, but much more comprehensive than PASCAL. It was named after Augusta Ada Byron (1816-1852), daughter of the English poet, Lord Byron.

FORTRAN is a problem oriented high level programming language for scientific and mathematical use. FORTRAN was the first high level programming language. It was developed in 1956 and was designed to easily express mathematical formulas for computer processing. It is still widely used programming language.

ALGOL – was developed as an international language for the expression of the algorithms between individuals as well as a programming language. It was introduced in the early 1960s. ALGOL was originally known as IAL or International Algebraic Language.

COBOL is internationally accepted programming language developed for general commercial use. The advantages of using COBOL are that it is relatively simple to learn and programs can be quickly written and tested. Programmers can easily understand programs not written by themselves.

XIV. Read and translate the text:

COMPUTERS: THE SOFTWARE AND THE HARDWARE

The number of electronic computers used in any given field of human activity is sometimes believed to indicate the degree of its modernity. For example the more computers a scientific institute uses the more modern it is believed to be. It is not always born in mind, however, that computers alone represent only what is called the hardware, i. e. the machinery together with its subtle technical and logical design. In order that the hardware may be used effectively, another essential factor is needed: the so-called software or applied thoughts. The preparation of computer programs, the working out of the logical aspects of material to be manipulated in a computer, takes-up as much, if not more, time as the actual production of the hardware and is by no means easier. The software, as most intangible product, is not always capable of being readily evaluated. This, however, does not change the fact that it is at least as decisive as the hardware in obtaining solutions to concrete scientific and technological problems.

There are two basic types of electronic computers: digital and analogue. Each type has its uses in various fields. However, they have one thing in common: for their effective operation they require ingeniously thought-out software.

GRAMMAR EXERCISES

I. Put the Infinitives in brackets in Indefinite, Continuous or Perfect Tenses in the Active Voice. Translate the sentences into Ukrainian:

1. A computer (to store) information which it (to receive). 2. When I (to come) into the room my friend (to compile – складати) a program. 3. When you (to come) to the laboratory I (to show) you how to calculate by using a computer. 4. You (to solve) this algebraic problem and I (to compare) my results with yours. 5. When a computer (to do) reasonable operations it (to compute) or (to calculate). 6. The electronic computer just (to perform) its calculations. 7. They (to do) many operations on the computer. 8. When you come back he (to perform) computing operations. 9. Owing to the computer we (to process) a great deal of information. 10. They (to write) a program for the computer by the end of the month. 11. I (to compile) a program for the computer for two hours when the lecturer came into the laboratory. 12. This equation seems to

have no solution. We (to perform) calculations for an hour. 13. She (to discuss) some questions with her instructor now. 14. Before the design (to be) ready they (to work) on it for 3 hours.

II. Choose the correct form of the verb:

1. They (explained, were explained) how to solve this problem on a computer. 2. The sequence of reasonable operations (has been performed, has performed) by the computer. 3. These digits (are multiplied, multiply) easily. 4. The experiments on the new computer (were carrying out, were being carried out) during the whole month. 5. The sequence of reasonable operations (is carrying out, is being carried out) by this computer now. 6. Many books on computers (had been translated, had translated) into Ukrainian by the end of last year. 7. By means of instruction any computer (will tell, will be told) what operations to perform. 8. Your scientific article «An educated man and the computer» (will be published, will publish) by the end of the year.

III. Find the sentences in which the verbs to have and to be are translated as повинен:

1. The general purpose of this unit is to perform different arithmetic operations. 2. The students of our Institute have at their disposal the computing centre. 3. This personal computer has been constructed at our lab. 4. The lecture was to begin at 9 o'clock. 5. You have to remember the names of the scientists who have contributed to the designing of computers. 6. The results of the experiment have carefully been checked up today. 7. For a digital computer information has to be in the form of digits or numbers.

IV. Say what you can do with the help of the computer. Use the following expressions: to take an information or data, to perform a sequence of reasonable operations, to put out information, to store information, to display the answers, to keep records of financial affairs, to do weather forecasting, to process data.

V. Insert modal verbs can, may, must, should or their equivalents in the necessary tense-form:

1. Information or data ... be stored in the computer's memory or storage.
2. An analogue computer ... to calculate by using physical analogues of numerical measurements.
3. The first automatic computers ... operate at the low speed.
4. Your scientific article on computers ... be published at our Institute.
5. My friend was happy when at last he ... work at the computing centre.
6. Our students ... to visit the computing centre to see the operation of computers.
7. You ... know the difference between the digital and analogue computers.
8. We ... help him to solve this problem by a personal computer.
9. Every student of our speciality ... to know what a hybrid computer is.

VI. Put questions to the words in bold type:

1. Hardware is useless without software which is computer instructions and programs.
2. A computer stores information which it receives. 3. When our professor was speaking on the history of computers he mentioned Charles Babbage and his great inventions. 4. The mathematical programme for the first computer had been compiled by Lord Byron's daughter.
5. The first programmed computer which operated successfully was built in 1939. 6. Computers have already penetrated almost into all spheres of modern economy.

VII. Find verbals, state their functions. Translate into Ukrainian:

1. Discussing the advantages of the new memory unit the professor gave the students all the necessary explanations. 2. Information to be computed is usually stored in registers. 3. To add and to subtract means to perform mathematical operations. 4. Logical operations performed by a computer are comparing, selecting, sorting and determining. 5. The way of solving this problem is very difficult.

VIII. Transform each pair of sentences into one with a Complex Object:

1. Electronic computers owe their birth to the discoveries of many scientists and inventors. Everybody knows it. 2. A computer performs a sequence of reasonable operations. We

know it. 3. A computer displays the answers. We saw it. 4. My friend didn't know how to compile a program for a computer. I helped him. 5. They should test this electronic device tomorrow. We want it.

IX. Transform these sentences using Complex Subject instead of Complex Object:

1. We know the input and output to be the parts of a computer. 2. We know the French mathematician Pascal to construct the first mechanical computer. 3. They say devices for accepting information to have been described in some scientific magazines. 4. They say the computer to be the most amazing achievements of mankind. 5. Everybody knows the hardware to be useless without software.

X. Use the Participial Construction instead of the Infinitive Construction:

1. I watched my friend compile the program for computer. 2. We saw the operator put the card into the computer. 3. The professor was heard to give the students all the necessary explanations discussing the advantages of the new memory unit. 4. They observed the computer operate automatically. 5. In the laboratory we saw the perforator punch holes in the cards.

XI. Find sentences with the Absolute Participle Construction. Translate into Ukrainian:

1. Compiling a program requires great attention of a programmer. 2. We must have this information processed. 3. Personal computers being used for many purposes, scientists go on improving their characteristics. 4. We know of Pascal's having invented the first mechanical computer. 5. The problem being difficult, we solved it with the help of computer. 6. Scientists use computers widely, the latter helping in performing calculations at great speeds.

XII. Complete the following sentences using Gerundial Construction:

1. Scientists were interested in 2. My parents insisted on ... 3. We know of ... 4. They object to ... 5. I am surprised at ... 6. The professor insists on ...

XIII. Translate into English. Mind the verbals:

1. Піднесення до степеня та добування квадратного кореня – математичні операції. 2. Слід пам'ятати всі ці правила, розв'язуючи задачу. 3. Для того щоб скласти програму для комп'ютера, програміст повинен мати хороші знання з математики. 4. Після виконання обчислень комп'ютер показує результат. 5. Винайшовши комп'ютер, людство зробило великий крок уперед на шляху прогресу. 6. Дані, що обробляються, надходять у комп'ютер через вхідний пристрій. 7. Відомо, що комп'ютер – найдивовижніше досягнення людства. 8. Ми знаємо, що Б. Паскаль сконструював перший механічний комп'ютер. 9. Існує два типи електронних комп'ютерів: цифрові та аналогові, причому кожний застосовується в різних галузях. 10. Процес запам'ятовування даних комп'ютером називається зберіганням інформації.

COMMUNICATIVE SITUATIONS

1. You consult your son about computers. What can you say?
2. You are at the conference. The theme of your report is Programming languages.
3. At the exam the professor asks you about the development of computers.
4. You're the head of a firm, producing computers. What can you say to advertise your product?

Unit 2

READING AND COMPREHENSION

1. Перегляньте текст і зробіть висновок про: 1) характер тексту: а) навчальний, б) науковий; в) текст-інструкція, г) патентний опис); 2) про його функціональну спрямованість: а) дати класифікацію комп'ютерів; б) дати визначення основних вузлів комп'ютера; в) дати опис програмної частини комп'ютера.

2. Визначте, якому з абзаців тексту відповідає таблиця, що йде за текстом.

Computer

One of the most important developments, of this century is the computer. As a consequence, there is now at the service of man an inanimate power of over 200 billion calculating operations per second, supplementing -the thinking and the memory of man.

Computers are used nowadays for many different kinds of work, e. g. in offices, banks, factories, hospitals, universities and schools. Their use is becoming more widespread as cheaper and smaller computers become available. People can now buy small personal computers.

What are computers? And what can they be used for? Computers are electronic systems. They are used for handling, or processing, facts and figures. The facts and figures processed by a computer are usually known as data. Computers can process large amounts of data very quickly.

The data fed, or put, into a computer is input data. Input data is processed according to a set of instructions called a program. Both input data and programs are needed for processing. The results of processing are output data. Very often, the output data is new and useful information. "Information" here means output data useful for making decisions.



A computer can be used to process many different types of data. For example, a scientist can use a computer to do numerical calculations. A businessman can use a computer to analyse a list of customers or stock (stores held by the business). An engineer can use a computer to produce diagrams or plans. The table below shows some different types of process and data for different users:

User	Process	Data
scientist businessman	calculating analysing	numbers (i.e. numerical data) names, addresses (i.e. non-numerical data)
engineer manufacturer	designing controlling	colours, patterns measurement (volume, time, temperature, speed)
hospital	analysing plotting	electrical Signals
library/shop	information retrieval	stock details

WHILE-READING SECTION

Language Study

Practice 1. Згадайте про значення інтернаціональних слів. З'ясуйте за словником їх вимову: computer, service, billion, calculate, operation, office, bank, factory, university, personal computer, electronic system, fact, instruction, program, result, information, businessman, list, diagram, plan.

Practice 2. Наступні слова – «помилкові друзі перекладача». 1) Напишіть їх передбачувані значення. 2) Випишіть усі значення зі словника. 3) Уточніть по контексту їх значення в даному тексті: process, processing, data, table, designing, controlling, hospital.

Practice 3. Прочитайте наступні речення та за суфіксами визначте належність виділених слів до різних класів слів: N, V, Adv, Adj.

1. The system *analyst* provides the *programmer* with the details of the data processing problems. 2. These terminals are *very useful interactive* devices for use in offices because of their speed and *quietness*. 3. The new microcomputer we purchased does not have a Fortran *compiler*. *He is programmable* in Basic only. 4. A computer is a machine with an intricate network of electronic circuits that operate switches or *magnetize* tiny metal cores. 5. In very large and modern *installations*, the computer *operator* sits in front of a screen that shows an up-to-date *summary* of the computer jobs as they are being processed. 6. The *introduction* of terminals and screens has *partly* replaced the use of punched cards. 7. *Binary arithmetic* is based

on two digits: 0 and 1. 8. Multi-plexing is when many *electrical* signals are combined and carried on only one *optical* link. 9. Computers are machines designed to process *electronically specially* prepared pieces of *information*. 10. The *computed* results were printed in tables.

Practice 4. Заповніть пропуски відповідним змісту речення словом із запропонованого списку.

a) operation, operate, operator, operational, operationally, operating: 1. A computer can perform mathematical ... very quickly. 2. One of the first persons to note that the computer is malfunctioning is the computer... . 3. The job of a computer is to ... the various machines in a computer installation. 4. The new machines in the computer installation are not yet

b) acceptance, accept, accepted, acceptable, acceptably: 1. A computer is a device which ... processes and' gives but information. 2. The students are still waiting for their ... into the Computer Science program. 3. It is ... to work without a template if the flowcharts are not kept on file.

c) solution, solve, solvable, solver: 1. It may take a lot of time to find a ... to a complex problem in programming. 2. A computer can ... a problem faster than any human being. 3. A computer has often been referred to as a problem

d) remark, remarkable, remarkably: 1. Today's computers are ... faster than their predecessors. 2. Systems analysts will often make ... about existing programs so as to help make the operations more efficient. 3. There have been ... developments in the field of computer science in the last decade.

e) communication, communicate, communicable, communicative, communicably: 1. A computer must be able to ... with the user. 2. Fibre optics is a new development in the field of 3. Some people working in computer installations aren't very ... because they are shy.

f) calculation, calculate, calculating, calculated, calculator, calculable, calculus: 1. A computer can do many kinds of ... quickly and accurately. 2. ... is a branch of mathematics for making ... without the use of a ... machine. 3. A computer can .. numbers much faster than a manual 4. Some problems aren't ... without logarithm tables.

g) mechanic, mechanism, mechanize, mechanical, mechanically, mechanistic, mechanics, mechanization, mechanized: 1. Today's computers are less ... than they used to be. 2. The ... devices in a computer system operate more slowly than the electromagnetic devices. 3. The ... of the brain is very complicated but unlike a computer it isn't

h) necessity, necessitate, necessary, necessarily, necessities, need, needed: 1. Because it is expensive to set up a computer department it is ... to budget well for the basic ... of the installations. 2. A good programmer isn't ... going to be a good systems analyst. 3. Students' lack of understanding of the basic concepts in computer science may ... the instructor to restructure the course.

i) dependence, depend on, dependable, dependably, dependent, dependency, depending: 1. The length of time a programmer takes to make a program will vary ... on the complexity of the problem and his ability and experience. 2. One can always ... a computer to obtain accurate answers because it's probably the most ... machine in the world today.

j) technology, technological, technologically, technologist: 1. Computer ... is a fast growing discipline. 2. The ... improvements of computers are reducing man's workload.

Practice 5. Заповніть таблицю.

Term	Class	Characteristics
a computer data program information input data output data	electronic machine	that processes data

Practice 6. Які частини слів (підкресліть їх) вказують на 1) діяча (1 риса), 2) на процес (2 риси), 3) на результат процесу (3 риси).

computer – computation
processor – processing
programmer – programming – program
calculator – calculating – calculation

Practice 7. З'єднайте слова лівої і правої колонок так, щоб отримати термінологічне поєднання.

data	machine
electronic	input
numerical	output
device	data

Practice 8. Напишіть визначення наступних термінів. Для кожного терміна напишіть різні варіанти визначення. Уточніть переклад термінів за словником.

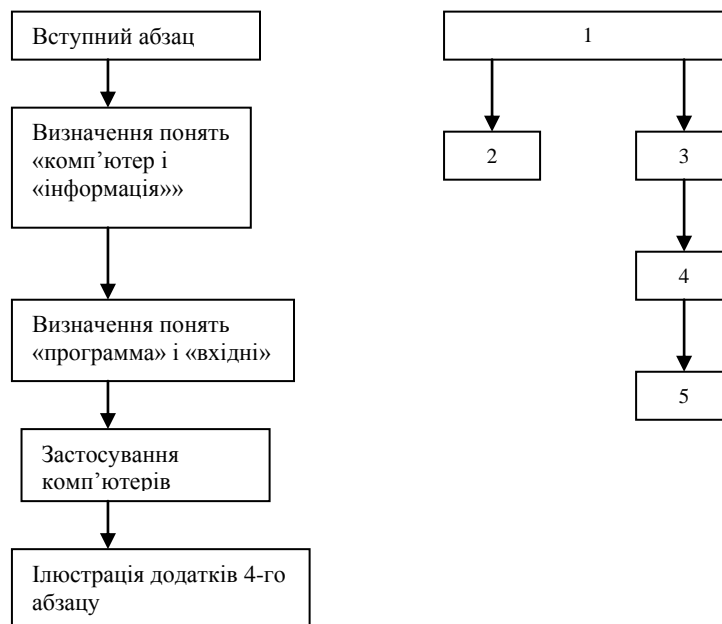
computer, data, input data, program, output data, information

Text Study

Practice 1. Яке речення передає основний зміст тексту?

1. Input data is fed into a computer. 2. Computers are used by different users. 3. The program tells computer what to do; 4. Computers are machines used for processing facts and figures at great speed and with high reliability.

Practice 2. Яка із схем точніше відображає логіку всього тексту?



AFTER-TEXT SECTION

Text Discussion

Practice 1. Скориставшись обраною вами схемою в **Practice 2**, розкажіть про основні вузли комп'ютера, їх призначення, застосування комп'ютерів у різних сферах діяльності. При підготовці повідомлень скористайтесь активним словником.

Active Vocabulary

Галузь застосування	Іменники і поєднання з іменниками	Дієслова дієслівні поєднання	Прикметники	Конектори
Поняття, пов'язані з роботою комп'ютера	Data, input data, output data, program, information, instruction	to process, to handle, to put into		as a consequence for example i.e.
Сфера застосування комп'ютера		to do calculations, to analyse, a list of, to produce, diagrams, to control, measurements	numerical	

PRE-TEXT SECTION

Practice 1. Прочитайте текст і заповніть таблицю українською мовою.

Вид комп'ютера	Характеристики
Комп'ютери I покоління	
Комп'ютери II покоління	
Комп'ютери III покоління	
Комп'ютери IV покоління	

The Development of Computers

The first computers used thousands of separate electrical components connected together with wires. In the late 1940s, computers were made using vacuum tubes, resistors, and diodes. These computers were called first generation computers.

In 1956, transistors were invented. Transistors are made from materials called semiconductors. Computers using transistors were called second generation computers. Second generation computers were smaller than first generation computers.

Second generation computers also used less electrical power. Both first and second generation computers were very expensive. Computer components (such as transistors, diodes, resistors) can now be made from semiconductor materials of different shapes. Nowadays, complete circuits can be made from a single piece of semiconductor, called a chip. Such circuits are called integrated circuits (IC's). Computers using integrated circuits were first produced in the 1960s. They were known as third generation computers. Their integrated circuits had about 200 components on a single chip. Today, we can produce more than 100,000 components on a single chip. A chip can be as small as 0.5 cm square.

With the invention of chips, computer manufacture has become much simpler. The manufacturer does not have to connect thousands of components together. Most of the connections are made inside the chip. It is even possible to build a complete processor in a single chip. A processor on a single chip is called a microprocessor.

AFTER-TEXT DISCUSSION

Practice 1. Уважно прочитайте текст і виберіть з нього речення, що характеризують розміри, конструкцію, швидкість обробки даних в комп'ютерах різних поколінь. Складіть таблицю англійською мовою, аналогічну таблиці у передтекстовому завданні. Порівняйте обидві таблиці. Внесіть в таблицю додаткові дані.

Practice 2. Опишіть кожну ілюстрацію, скориставшись наступними моделями.

This computer is called... . It used (uses)... . It consists of... were (are) small (large). ...
... cheap (expensive). It was first ...ed in... .

READING AND COMPREHENSION

1. Перегляньте текст і розділіть його на 2 частини, які могли б бути поміщені під заголовками: 1) Computer hardware. 2) Computer software. Позначте речення, які узагальнюють зміст а) першої частини; б) другої частини.

The Parts of a Computer System

In order to use computers effectively to solve problems in our environment, computer systems are devised. .Computer systems may be discussed in two parts.

The first part is hardware – the physical, electronic, and electro-mechanical devices that are thought of and recognized as «computers». The hardware consists of Central Processing Unit (CPU), input devices and output devices. The CPU is made up of a processor and a main memory, or main store. The processor carries out, or executes, instructions in the program. The main memory stores input data and the program needed by the processor. The main memory also holds output data, or the results of processing.

Input devices are used to provide data for the CPU. The keyboard is a common data input device. By using a keyboard, a user can enter data directly into the computer system. Data is sometimes entered on cards. The cards are read by an input device called a card reader. Data is often input from a mass storage device, such as magnetic tape or magnetic disc. A mass storage device has a much larger capacity than main memory. That is, it can store more data. The tapes or discs are read by an input device called a tape drive or a disc drive.

Output devices receive data from the CPU. The Visual Display Unit (VDU) and printer are common output devices. The VDU is similar to a television screen. The printer produces printed output on paper. Both the VDU and printer present output data for immediate use. Sometimes, the output data is transmitted along a telephone line to another computer. Output data can also be stored for future use on a mass storage device, such as magnetic tape or magnetic disc.

Input devices, output devices and mass storage. Devices are collectively called Input-Output Devices (I-O Devices), or peripherals.

The second part is software – the programs that control and coordinate the activities of the computer hardware and that direct the processing of data.

For the computer system to operate, computer programs are required. A computer program is a set of instructions for the CPU. These instructions tell the CPU where to find the input data in the system. The CPU is also instructed how to process the data and where to put the results. Programs are not hardware, as they have no electrical or mechanical components. They can be easily changed according to the needs of the user.

Computer software can be divided into two very broad categories – systems software and application software.

WHILE-READING SECTION

Language Study

Practice 1. Прочитайте уважно 1-шу частину тексту й згрупуйте дані нижче словосполучення у дві колонки під рубриками 1) hardware; 2) software; знайдіть за словником переклад цих поєднань. При пошуку значення многочленного словосполучення в словнику не забудьте, що «основним» є останнє слово в ланцюжку.

Model: input device пристрій (чого?) введення інформації

CPU, VDU, programs; main memory; input device;

printer; magnetic tape; magnetic disc; tape drive; disc drive; instruction; card reader

Practice 2. Доберіть до термінів лівої колонки відповідні визначення з правої.

1. hardware

a set of instructions for the CPU

2. software	devices used to provide data for the CPU
3. CPU	devices which receive data from CPU
4. input devices	parts of hardware in which instructions are carried out and data is stored
5. output devices	physical, electronic and electromechanical devices

Practice 3. Складіть дієслівні сполучення, з'єднавши дієслова лівої колонки з відповідними іменниками. Перекладіть утворені поєднання українською, орієнтуючись на зміст тексту. Перевірте правильність перекладу за словником.

1. to be made up of	a processor and a main memory
2. to carry out	data
3. to store	card reader
4. to hold	instructions
5. to enter	output data
6. to be read by	input data
7. to input	printed output
8. to receive	CPU
9. to transmit	a Central Processing Unit
10. to instruct	input devices
11. to process	output devices
12. to consist of	

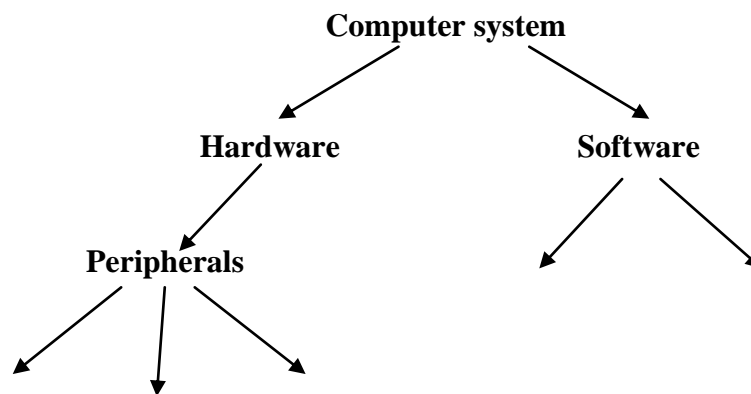
Об'єднайте отримані поєднання в синонімічні пари.

Practice 4.

При класифікації і групування об'єктів за тими чи іншими ознаками часто використовуються наступні сполучення: (they) fall into/are classified into/are divided into/are grouped into (certain-categories). Наприклад:

Computer software can be divided into two categories.

Заповніть наступну діаграму. Після цього складіть речення, що відображають угруповання систем, що входять в систему комп'ютера.

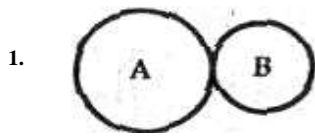


Practice 5.

«Проблема» і «її вирішення» можуть бути представлені у різний спосіб:

1. To enter data directly into the computer system, a user uses a keyboard.
2. A user can enter data directly into a computer system by using a keyboard.
3. Data is entered directly into a computer system by a user using a keyboard.

Напишіть вирішення для кожної із зображених ситуацій. Після цього з'єднаєте «проблему» і «її рішення» у відповідності з наведеними прикладами.



Rotate gear B clockwise.

2.

(right-hand screw) Lower the load.
effort bar

3.

throttle
accelerator
Open the throttle.

4.

Raise the bucket in the well.

5.

Reverse the direction of rotation of pulley B.

6.

handle
Apply the brake.

7.

A
40 teeth
B
80 teeth
Rotate gear B at 40 rev/min.

8.

Rotate gear B clockwise.

9.

Raise load L.

10.

100 teeth 50 teeth
Rotate gear B at 50 rev/min anti-clockwise.

Practice 6. Заповніть

пропуски потрібним за змістом префіксом з числа наведених нижче.

multi-, semi-, mini-, deci-, mono-, de-, sub-, mega-, inter-, auto-, prime-

1. ...byte means one million bytes.
2. ...plexing is when many electrical signals are combined and carried on only one optical link.
3. Blocks are separated from each other by marks called ...block gaps.
4. The number system we use in everyday life is the ...mal system, which has a base of 10.
5. Some screens are ...chromatic whereas others produce multicolour pictorial graphics.
6. The complete description of the logical structure of data is called the schema and the description of the parts, the ...schema.
7. The main storage locations of a computer are called its

...ary storage. 8. The small ferrite rings called cores have two states: they can 'be either magnetized or ...magnetized. 9. The introduction of chips or ...conductor memories made it possible to reduce the size of the computer.

Practice 7. Прочитайте наступний уривок; в процесі читання виберіть слова з префіксами і заповніть ними таблицю, подану нижче.

Computers may have a short history but prior to their development, there were many other ways of doing calculations. These calculations were done using devices that are still used today; the slide rule being a perfect example, not to mention the ten fingers of the hands. These machines, unlike computers, are non-electronic and were replaced by faster calculating devices.

It wasn't until the mid-1940s that the first digital computer was built. The post-war industrial boom saw the development of computers take shape. By the 1960s, computers were faster than their predecessors and semiconductors had replaced vacuum tubes only to be replaced in a few years by tiny integrated circuit boards. Due to microminiaturization in the 1970s, these circuits were etched onto wafer-thin rectangular pieces of silicon. This integrated circuitry is known as a chip and is used in microcomputers of all kinds.

It has been forecasted that by the end of this decade, exceptionally faster and smaller computers will replace those in use today.

Prefixes				
negative and positive	size	location	time and order	number
unlike			post-war	

Text Study

Practice 1. Яке речення відображає основну думку тексту?

1. Only hardware is necessary to make up a computer system. 2. Software alone doesn't constitute a computer system. 3. A computer system needs both hardware and software to be completed.

Practice 2. Визначте, які з наведених нижче речень відповідають змісту тексту.

1. A system is a good mixture of parts working together. 2. Input and output devices operate more slowly than decision-making devices. 3. The «computer» is the «hardware». 4. The processor is usually referred to as the CPU. 5. Peripherals fall into Input-Output Devices and mass storage devices.

AFTER-TEXT SECTION

Text Discussion

Practice 1. Розкажіть про основні підсистеми комп'ютера. Скористайтеся активним словником, приведеним нижче.

Active Vocabulary

Галузь застосування	Іменники і поєднання з іменниками	Дієслова/ дієслівні поєднання	Прислівники	Конектори
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частини комп'ютерної системи, склад комп'ютера	hardware CPU processor main memory input device output device mass storage device software program application software	to be made of to consist of	Effectively directly easily	для уточнення висловлювання: or such as that is для вираження «причини»: as
дії комп'ютера		to carry out instructions to store data to hold data to enter data to be read by to transmit to process to instruct CPU to direct		

PRE-TEXT SECTION

Practice 1. Прочитайте наступний уривок і вивчіть діаграму, на якій відображено: головна думка (main idea), основні деталі (major details) я допоміжні деталі (minor details). Подібний аналіз допомагає визначити логіку тексту, а також скласти реферат, анотацію, стисло переказати текст.

It is the incredible speed of computers along with their memory capacity that make them so useful and valuable.

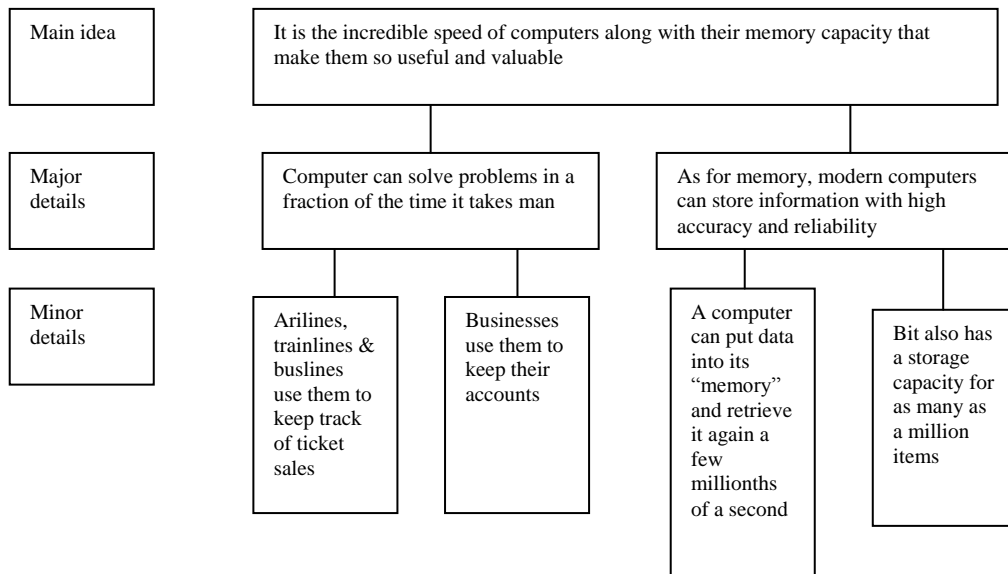
Computers can solve problems in a fraction of the time it takes man. For this reason, businesses use them to keep their accounts, and airlines, train lines and bus lines use them to keep track of ticket sales. As for memory, modern computers can store information with high accuracy and reliability. A computer can put data into its «memory» and retrieve it again in a few millionths of a second. It also has a storage capacity for as many as a million items.

Practice 2. Прочитайте текст про застосування комп'ютерів на залізничному транспорті і визначте, яке з речень, передає загальну думку про використання комп'ютерів при розподілі залізничних квитків на різні потяги.

Application of Computers

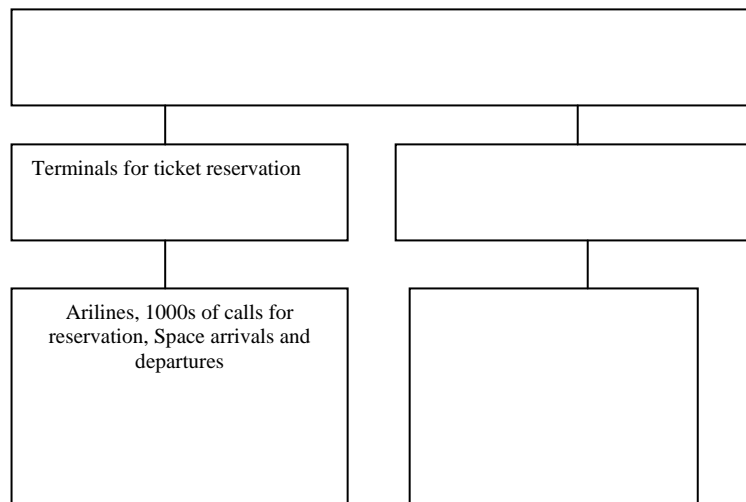
Railways use large computer systems to control ticket reservations and to give immediate information on the status of its trains. The computer system is connected by private telephone lines to terminals in major train stations and ticket reservations for customers are made through there. The passenger's name, type of accommodation and the train schedule is put into computer's memory.

On a typical day, a railway's computer system gets thousands of telephone calls about reservations, space on other railways, and requests for arrivals and departures. A big advantage of the railway computer ticket reservation system is its rapidity because a cancelled booking can be sold anywhere in the system just a few seconds later. Railway computer systems are not used for reservations alone. They are used for a variety of other jobs including schedule, planning, freight and cargo loading, meal planning, personnel availability, accounting and stock control.



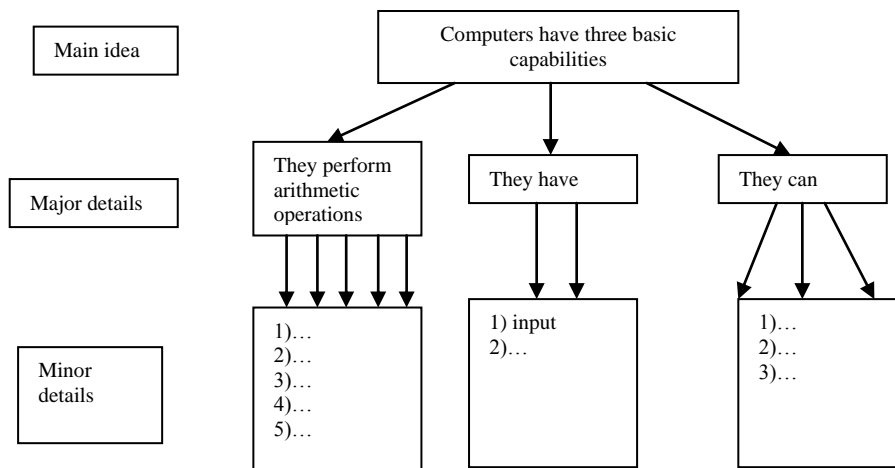
AFTER-TEXT DISCUSSION

Practice 1. Доповніть схему.



Practice 2. Скоротити текст, орієнтуючись на схему.

Practice 3. Перекажіть текст: а) стисло (розкрити верхні блоки схеми); б) детально (розкрити всі блоки схеми).



SELF-TRAINING PRACTICE: SUPPLEMENTARY

Text 1. Pre-Text Section

Practice 1. Прочитайте текст й знайдіть у ньому наступну інформацію:

- які 3 основні стадії виробничого процесу будуть повністю автоматизовані;
- що собою являє схема заводу майбутнього;
- з допомогою чого буде здійснюватися зв'язок між усіма ділянками виробництва;
- на яких ділянках будуть зайняті люди і яку роботу вони будуть виконувати.

Tomorrow's Factory

Machining is only one part of the overall production process in the engineering workshop. There are two more basic operations: design and administration.

In the engineering industry of the future, all three of these operations will be done with the help of computers, which will greatly reduce the need for labour.

There would be three main computers: one each for the flexible manufacturing system, design and administration. Instructions that enter the first computer control how and which goods are made; draughtsmen work out which goods they want made with the second machine; and in the third are lodged all the details about orders, scheduling, the state of stocks and so on.

All three computers are linked to each other, and also to an automated warehouse from which raw materials are passed by a transport mechanism to the factory floor and the machining area. The few places where people would be involved with the factory's processes would be in the design room and in a control area where the factory's administrators sit.

Draughtsmen would design products using their keyboards and screens. The codes representing these parts would come along wires to the production computer, which, in turn, would instruct its battery of machine tools to make the items. There would be a few «seeing» robots in the production department, to make the assembly job easier.

PC MEANS A PERSONAL COMPUTER LANGUAGE MATERIAL VOCABULARY

1. Read the new words aloud and get to know their Ukrainian equivalents Define the meaning of the new words in the sentences.

1. HARDWARE апаратне забезпечення	My friend is a specialist in computer hardware.
2. BOARD доска SYSTEM BOARD системна плата	The floor of the house was covered with boards.
3. POWER сила, потужність, енергія; призводити до руху	What is the power of this engine?
4. KEYBOARD клавіатура	The computer is already on the desk, but the keyboard has not been unpacked yet.
5. MOUSE «миша»	1) Women were afraid that there might be mice in the house. 2) Usually it takes some time to learn to use a mouse.
6. TO PROCESS обробляти PROCESSOR процесор	Thanks to computers we can process I information millions times quicker CPU stands for the central processor unit.
7. DRIVE дисковод	The drives can read and write on diskettes.
8. DRIVER програма, управління пристроями	Drivers are one of the components of a computer.

9. CASE 1) випадок 2) коробка, футляр, кожух	1) Telephone the safety engineer in case of emergency. 2) We decided against moving the case's cover.
10. CONTENTS зміст	I do not know the contents of <i>this</i> book. You can find the necessary information in the contents of the book.
11. TYPE друкувати	The text of the contract will be ready in an hour, the secretary is already typing it.
12. KEY клавіша	How many letter keys are there on this computer keyboard?
13. MANUAL 1) довідник, інструкція 2) ручний	1) Two manuals come with this computer. 2) Automation makes manual labour unnecessary.
14. SOFTWARE програмне забезпечення	You can buy a computer and the necessary software as well.
15. APPLICATION застосування	Nobody expected that the application of this device is so wide.
16. SLIDE ковзати	The surface was wet and nothing could prevent the machine from sliding down.
17. REMOTE віддалений	This remote control needs 4 batteries to power it. He is a remote relative of mine.
18. ROUGH нерівний, шорсткий	Tractors can easily drive along rough ground.
19. ARROW стрілка	Draw an arrow on the map to show the direction of the movement.
20. SCREEN екран	The music started playing and everybody looked at the screen
21. POINTER показчик, указка	You can move the pointer on the screen with the help of the mouse.
22. BUTTON 1) гудзик 2) кнопка	1) The boy has lost a button from his jacket. 2) Press the button to switch on the device.
23. GAME гра	What sports games do you like playing?
24. DISPLAY виставляти, показувати	The British tend not to display much emotion in public. A few figures were displayed on the screen.
25. CHARACTER символ, знак	You can type letters and other characters using this keyboard.
26. DOT крапка	A dot is one of the two characters of the famous Morse code.
27. SHARP гострий, різкий	There were many Sharp arrows prepared for the competition. Those scissors are sharp. The TV picture isn't very sharp.
28. RESOLUTION розподільна здатність	Resolution is one of the characteristics of the monitor.
29. PLUG затикати PLUG IN вставляти штепсель (у розетку)	Of course the radio is not working, you have not plugged it in.

30. STRAIN напруга, навантаження	Not all the people can stand the strains of cosmic flights.
31. REDUCE зменшувати, знижувати	Much is being done to reduce air pollution in large cities.
32. ADJUST приспосовувати(ся)	The body quickly adjusts to changes in temperature. If the chair is too high you can adjust it to suit you.
33. ANGLE кут	They have measured the angles of the triangle.
34. A SCREEN SAVER режим відключення екрану у паузах із збереженням інформації	Nobody knew how to set a screen saver to switch off the monitor screen.

3. Read and translate the sentences into your native language.

1. a) There were a lot **files** on the desk.
b) It took operator some time to find the necessary **file**.
2. a) You can use only **floppy** disks with this computer
b) This hard disk holds more information than 100 **floppies**.
3. a) This floppy drive is usually **referred** to as drive A:.
b) All the **references** are usually located at the end of the article.
4. a) According to the readings of the instrument a considerable **amount** of fuel was stored in the tank.
b) The speed of the rocket carrier **amounts** to eight kms per second.
5. a) The **access** to the mountain village was extremely difficult because of many rapid rivers.
b) You can get access to a great amount of information with the help of CD-ROM.
6. a) This **computer** is not IBM-compatible.
b) The account section has been completely **computerized**.

4. Прочитайте наступні інтернаціональні слова вголос і визначте їх значення.

monitor ['monita]	photo ['foutu]
video ['vidiou]	component [ksm'pounont]
unison [jurmzn]	electronics [,ilek'troniks]
icon ['aikan]	stereo ['stianou]
graphics ['graefiks]	instruction [m'strAkJh]
adapter [a'daeps]	command [ka'ma:nd]
contract ['kontraekt]	punctuation [,panktju'eifn]
disk [disk]	specialize ['spefalaiz]
format [to:mast]	combination [Jombi'neifan]
megabyte ['megabait]	

5. Знайдіть у правій колонці слова, переклад яких дано в лівій.

1. програмне забезпечення	a) hardware, b) commands, c) instruction, d) software, e) remote control
2. обробляти	a) to access, b) to process, c) to reduce, d) adjust, e) to install
3. символ	a) letter, b) figure, c) character, d) key, e) pointer
4. нерівний	a) flat, b) rough, c) manual, d) remote, e) idle
5. застосування	a) software, b) resolution, c) application, d) sharpness, e) amount
6. встановлювати	a) to access, b) to type, c) to install, d) to plug e) to adjust

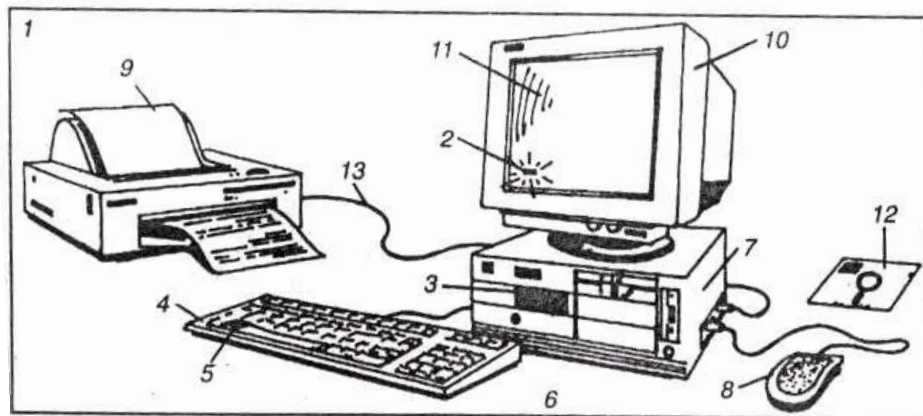
7. сумісний	a) suitable, b) convenient, c) compatible, d) floppy, e) remote
8. посилалися	a) to display, b) to process, c) to refer, d) to point, 5) to plug
9. дисковод	a) driver, b) arrow, c) screen saver, d) drive, e) screen
10. напруга, навантаження	a) access, b) strain, c) pointer, d) angle, e) case

6. Назвіть можливі поєднання наступних дієслів та іменників.

to plug	characters
to adjust	a computer
to install	a keyboard
to reduce	an image
to process	information strain
to type	a floppy disc;
to display	a remote control
a mouse	dots

7. Підберіть відповідні назви частин комп'ютера з наведених нижче.

(keyboard, key, mouse, drive, case, screen, monitor, a floppy disk, earphones, speaker)



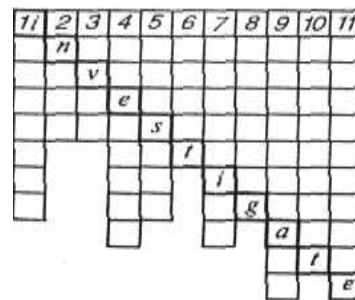
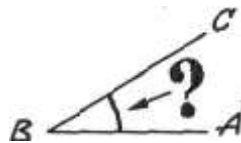
8. Прочитайте і перекладіть українською наступні словосполучення.

hardware pieces	a sports game
to produce hardware	to display a character
to power an engine	to display an image
to supply power	to connect two dots with a line
to use a keyboard	the sharpness of the mage
an ordinary keyboard	at 5 o'clock sharp
a white mouse	a plug
many mice	the strain of the war
to connect a mouse to the computer	to reduce the number of mistakes
to process information	to adjust the equipment to the needs
word processor	of the experiment
a disk drive	the right angle
an engine case	to measure the angle between two
an attache case	lines
in case of an accident	to get a screen saver
to type a letter	to be idle
the best typist in the office	idling speed

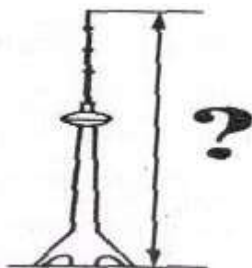
Latin letters keys	to reduce the wear of the engine
to press any key	to wear jeans
to read a manual carefully	to lose a file
to produce the software	to put all the files on the table
a wide application of the product	a floppy disc
applied mathematics	to refer to the experimental data
to slide down	a great amount of information
a remote control	to determine the total amount
a remote village	the access to this important
a rough surface	information
sharp arrows	to access the main highway
a screen of the display	to buy earphones
a long pointer	expensive earphones
to press the button	to be compatible with most
to switch on a stereo system	computers
to play computer games	the compatibility of computers
to communicate with a computer	the sharpness of the picture
a flat surface	eye strain
to release the mouse button	even lightning
as far as smth is concerned	at a slight angle
	to plug earphones into the jack

9. Кросворд.

- To point out, to show something.
-



- To lie on the surface of something.
- in another way, differently.
- There are great... of oil in Western Siberia.
-



7.

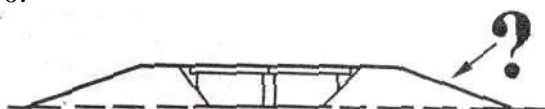


8.



- Coming before and preparing for something
-

more important.



- To make or produce by machinery, etc.

GRAMMAR REVIEW

10. Ознайомтеся з прикладами вживання складених прийменників й перекладіть речення.

Складені прийменники

- | | |
|-------------------|--|
| 1. according to | According to the information received by us the ship will arrive on the 10th of April. |
| 2. as far as | I go by bus as far as the State Library and then walk a few blocks to my office. |
| 3. because of | They didn't go to the country because of the rain. |
| 4. by means of | In big ports ships are loaded and unloaded by means of cranes. |
| 5. due to | The train did not arrive in time due to the snow storm. |
| 6. in addition to | In addition to the trouble in the engine there appeared another in the transmission. |
| 7. in front of | Who is sitting in front of him? |
| 8. in order to | The new equipment was used in order to test the vibration of the engine. |
| 9. in spite of | He left in spite of all my protests. |
| 10. instead of | What book can you give me instead of that one? |
| 11. on account of | The match was delayed on account of heavy rain. |
| 12. owing to | Owing to the new system of regulations the number of accidents went down. |
| 13. thanks to | Thanks to his help we finished our work early. |

11. Перекладіть наступні речення, звертаючи увагу на складені прийменники.

1. By means of this device we can carry out more operations in shorter time.
2. The work is going on according to the schedule.
3. The engine didn't operate well because of bad fuel.
4. In order to protect the surface from heat and cold it was covered with special substance.
5. Due to the establishment of new trolley-bus routes the passenger service in the city was improved.
6. The monument was restored in spite of many difficulties.
7. Who can repair the apparatus instead of him?
8. No planes took off on that day on account of low clouds.
9. Is there a high building in front of your house?
10. Owing to his works not only was the problem solved but a wholly new approach evolved.
11. The expedition sailed as far as Borneo.
12. In addition to sails the boat was also supplied with a motor.
13. In addition to the usual methods of computation they made use of computers.

12. а) Ознайомтеся з прикладами вживання складених сполучників. б) Потім перекладіть речення, звертаючи увагу на складені сполучники.

Складені сполучники

- | | |
|------------------|--|
| 1. as ... as | My younger brother is as tall as I am. |
| 2. as long as | I shall remember you as long as I live. |
| 3. as soon as | I'll telephone you as soon as I return home. |
| 4. as well as | This book is interesting as well as useful. |
| 5. both... and | Both the bridge and the tunnel will be constructed next year. |
| 6. either... or | I shall leave either tonight or tomorrow. |
| 7. in order that | In order that the comfort of the driver may be improved, the design of the seat was changed. |

8. neither... nor I could find him neither at home nor in the office.
9. so that They crossed the mountains so that they could reach the village before dark.
10. the ... the The longer I think of your plan, the more I like it.
11. The shorter the lever (важіль) arm, the greater effort is needed to lift the weight.
12. Both the bridge and the dam will be completed before the navigation season.
13. You can get to that part of the city either by bus or by the underground.
14. As soon as all the calculations are completed, we will begin the tests.
15. These children know neither German nor French.
16. You can stay here as long as the room is free.
17. The strength of this synthetic material is as high as that of steel.
18. Special containers were used in order that the supply of food could be improved.
19. The sun gives us both light and heat; it gives us energy as well.
20. The investigations at the Arctic research station are carried out daily in good as well as in bad weather according to a carefully worked out plan.
21. We decided to cross the mountains so that we could reach the airfield in the daytime.

12. Встановіть, в яких пропозиціях дані слова мають вказане значення.

1. organized – організований
- a) The exhibition is organized by two societies.
- b) The exhibition organized by the two societies was held in London.
- c) The Society of Motor Manufactures organized the exhibition in London.
2. is (to) – повинно
- a) The equipment is to be supplied by a Japanese firm.
- b) The equipment is being supplied by a Japanese firm.
- c) The equipment is supplied by a Japanese firm.
3. has, have (to) – повинно
- a) The electrical equipment has been manufactured in France.
- b) Electrical equipment of special design has to be manufactured.
- c) They have electrical equipment manufactured in France.
4. manufacturing – виробляючий
- a) CAV is a British firm manufacturing diesel engines.
- b) The firm is manufacturing diesel engines for automobiles.
- c) By 2000 the firm will be manufacturing 1-2 million engines a year.
5. experimenting – експериментуючи
- a) They are experimenting with the new component.
- b) Experimenting with the new component they found out that it was most suitable for road surfacing.
- c) The two men started experimenting with the component several years ago.
6. tested – випробуваний
- a) The motor car was tested on the roads.
- b) The firm tested the motor car on the mountain roads.
- c) The motor car was to be tested next spring.



ORAL PRACTICE

1. Topic. *The computer we use at the institute.*

At the institute you have a special subject – computer science – where you learn to use computers properly. You also use computers studying other subjects. Speak on the computers you work on:

- 1) the make and model of the computer you use;
- 2) the type and number of disks it has;
- 3) the volume of memory;
- 4) the type of extras;
- 5) the kind of monitor;
- 6) what machines it is compatible with;
- 7) what programs you can use with it;
- 8) the advantages and disadvantages this computer has.

2. Pairwork. You are in the shop which sells electrical goods. CUSTOMERS: Choose what you are going to buy (a video, a computer, a sound system), fill in the form below and then visit several shops to find and buy the thing you want.

CUSTOMER
Type of equipment _____
Make
Price range
Other requirements

SHOP ASSISTANTS: Choose what you are going to sell (videos, computers, sound systems), fill in the form below. In the shop give all the necessary information to the customer and try to sell the equipment.

SHOP ASSISTANT
Type of equipment
Makes
Prices
Other details

3. Discussion. More and more people begin using computers in their work. Some of them cannot imagine their life without this invention of the 20th century. Children find computer games very interesting. Are computers one of the greatest or the most dangerous inventions?

Say whether you use a computer in your work or for playing computer games. Do you use your computer in any other way or for any other purposes?

a) Read the following arguments. Think of some more.

Computers are one of the greatest inventions	Computers are one of the most dangerous inventions
1. They save a lot of time.	1. They are dangerous for your health.
2. They can do calculations and other things which are not interesting for people to do.	2. People waste a lot of time playing computer games.
3. They help you to process information.	3. You can lose the results of your work if something goes wrong with the computer.
4. You can learn many things using a computer as a tutor.	4. Some people live in a virtual reality not in the real world.
5. You can relax playing computer games.	5. Children cannot do the simplest arithmetic sums because they rely on computers.

b) Discuss the problem in groups of 3-5 students in order to make a decision.

c) Fill in the chart and give your reasons.

	Group 1	Group 2	Group 3	Group 4
Computers are one of the greatest inventions				
Computers are one of the most dangerous inventions				



READING PRACTICE

a) Below you will find the text about a personal computer "Gateway 2000" produced by a company in the USA. Read the text about the main components of the computer and fill in the chart. Check the time required to read the text Are you reading faster than you used to?

The part	Its function

GATEWAY 2000

The Main Parts of the System. There are many hardware pieces in a computer system. Some are: the system board, power supply, keyboard, mouse, hard drive, monitor and the video card¹ and its drivers.

The case. The large metal box that is the main part of the computer is called the case. The case and its contents (power supply, system board, etc.) is called the system unit.

The case has several functions:

- Protects the delicate electronics inside.
- Keeps electromagnetic emissions inside so your TV, cordless phone, and stereo don't go haywire when you power up the computer.
- Can also hold the monitor.

Don't remove the case's cover unless you need to do something inside the unit, and always replace the cover when you are done.

The keyboard

You communicate with your computer with the keyboard. With it, you type instructions and commands for the computer, and information to be processed and stored. Many of the keys on the keyboard are like those on a typewriter; letter keys, punctuation keys, shift keys, tab, and the spacebar. Your keyboard also has many specialized keys.

The instruction manuals for most software applications contain a section describing the functions of each key or combination of keys.

The mouse

The mouse works by sliding it around (ball down) on a flat surface. The mouse does not work if you hold it in the air like a remote control! The desktop is fine, but a ready-made mouse

pad is the best surface to roll the mouse on. Its surface is flat and usually somewhat textured. If a surface is too smooth or rough, the ball inside can slip.

As you glide the mouse, the ball inside moves in the direction of your movement. You will see the arrow on your screen moving in unison. The arrow is called a pointer, and the most important part is the very tip of its point. That's the only part the computer pays attention to.

To use the mouse, slide it on the mouse pad until the pointer's point is on something, like a button or an icon. Then:

Click – position the mouse pointer over an element and press and release the left mouse button one time.

Double-click – same as above except press the mouse button twice in quick succession *without moving the mouse between clicks*. It may take a little practice to not twitch the mouse when you first start double-clicking. Usually you double-click on an icon to start the program.

Drag – position the mouse pointer over an element, press and hold the left mouse button, and drag the mouse across the screen. The pointer moves, dragging the element. At the desired location, release the mouse button. The pointer lets go of whatever it was dragging. An excellent way to practice using the mouse is to play the Solitaire game that comes with Windows.

The monitor

Your computer is not complete without the monitor, a TV-like device that usually sits on top of the computer. The monitor displays text characters and graphics. It allows you to see the results of the work going on inside your system unit. The image that you see is made up of tiny dots called pixels.

The sharpness of the picture depends on the number and size of these pixels.

The more pixels, the sharper the image is. This is called resolution. A display adapter card is actually what builds the video images; the monitor simply displays them. The display adapter for your system is either built onto the system board or is an expansion card plugged into your system board.

Unit 3

TEXT 1

Computers are now essential in many areas of life – modern banking, information technology and many others. However, this is not true for education.

There are some subjects which may be better taught using computers. Elementary mathematics, elementary language learning, any subject that requires a student to memorize basic facts through repetition is good to computer learning. The computer can be programmed to provide an endless number of simple questions, and as the student answers these questions the facts are learned.

However, in the learning and practice of more complex ideas, the computer is not adequate. A computer can evaluate an answer as right or wrong, but it cannot determine why. It cannot find out why a student is making mistakes, and then explain important concepts in a different way so the student will understand. Task connected with explanation cannot be taught by computers as there are too many variables for a computer to deal with successfully.

Thus, while computers may be useful for practicing simple skills, they are not an essential feature of modern education. Until further developments in computers are made, the human teacher will remain indispensable.

ASSIGNMENT TO TEXT 1

I. Read and translate the text.

II. Answer the following questions:

1. Which areas of life are computers essential in? 2. What are the subjects which can be taught with the help of computers? 3. What can't a computer determine and why?

III. Write out sentences with the Passive Voice and translate them.

IV. Make all types of questions to the following sentence:

There are some subjects which may be better taught using computers.

V. Translate from English into Ukrainian the following:

1. information technology. 2. elementary language learning. 3. to provide an endless number of simple questions. 4. more complex ideas. 5. to explain important concepts. 6. to practice simple skills.

VI. Match up:

simple ideas
modern an answer
information skills
elementary learning
computer concepts
complex... technology
to evaluate banking
important mathematics

VII. Fill in the blanks: indispensable, variables, important concepts, a computer, evaluate, computer learning

1. If you want to memorize basic facts through repetition you can refer to
2. A computer can only ... whether the answer is right or wrong.
3. ... can't find out why a student makes mistakes.
4. A computer can't explain ... so that the student will understand them.
5. As there are too many ... the computer can't deal with them successfully.
6. The computers are ... in practicing simple skills.

VIII. Translate:

1. Оскільки існує певна сукупність змінних, комп'ютери не можуть виконувати завдання, що пов'язані з поясненням. 2. Комп'ютер не може пояснити складні ідеї таким чином, щоб студент зрозумів їх. 3. Комп'ютер є незамінним при відпрацюванні простих навичок. 4. Комп'ютер може бути запрограмованим ставити прості питання. 5. Комп'ютер є необхідним у сучасній банківській справі, інформаційних технологіях й у певному ступені в освіті.

IX. Give summary of the text.

TEXT 2

Is there an End to the Computer Race?

Today the word «electronics» is in general usage. Millions of people have electron watches. There are a lot of various radio and TV sets, video cassette recorders and CD players in our houses. In factories and plants we are surrounded with electronically controlled machines and instruments, we are carried by airplanes, ships, trains and cars with built-in electronic devices, and satellites circle the globe. In other words, we are living in an electronic world.

And the center of this world is a tiny silicon plate¹ of a few square millimetres, an integrated circuit², or a chip³, as it is more commonly known. The integrated circuit is undoubtedly one of the most sophisticated inventions of man, science and technology. It is in the heart of every electronic device and the more cassette recorders, TV sets and computers we need, the more integrated circuits are required.

When we speak about a further development of computers we mean not only quantity, but also high technology and high speed. As the operation of an integrated circuit depends on microscopic «components», the purity of all materials and the cleanness at the plant they are produced at must be of the highest quality. A continuous search is going on in laboratories throughout the world for more perfect, reliable and high speed electronic circuits.

In the past it took scientists and researchers a whole lifetime to make a few thousand calculations, whereas for a modern computer this task is a matter of a few seconds. At present computers capable of performing billions of operations a second are required. Supercomputers are different from ordinary computers. The ordinary computer does the computations operation by operation, while the supercomputer operates like a brain: all operations are being done simultaneously.

In the next few years engineers will complete the work on computers of above 2 billion operations a second. It will take a few more years to produce a 10-billion operations computer. The fifth-generation computers performing 100 billion operations a second will become available in the near future. Is there an end to this race?

According to some researchers, we are close to what can be regarded as a true physical limit. But other specialists think that photons will make the operation a thousand times faster. This means that in the future it will be possible to expect the appearance of photon computers and that computations will be done by means of light. Light has several advantages over electronics: light beams are faster, travel in parallel lines and can pass through one another without interference. Already, the optical equivalent of a transistor has been produced, and intensive research on optical-electronic computers is being carried out in a number of countries around the world. In a few decades a new age of light may replace the still youthful electronic age. The race is going on.

Notes to the Text: silicon plate - кремнієва пластина; 2. integrated circuit – інтегральна схема; 3. chip – кристал.

ASSIGNMENT TO TEXT 2

I. Read and translate the text.

II. Answer the questions to the above text

1. What is this text about? 2. What new things appeared in people's everyday life after World War II? 3. What is at the center of all these things? 4. What applications of computers do you know? 5. Where else may computers be used? 6. How does an ordinary computer (a supercomputer) operate? 7. What is the speed of a new supercomputer? 8. What is the task of engineers in the field of computer development? 9. What types of computers do you know? 10. What are the prospects in the development of computers?

III. Make all types of questions to the following sentence:

the integrated circuit is undoubtedly one of the most sophisticated inventions of man, science and technology.

IV. Give English equivalents: електронний годинник, відеомагнітофон, вбудований, подальший розвиток, чистота матеріалу, висока швидкість, стає доступним, згідно, промінь світла.

V. Match up:

general.....speed
electronically controlled.....beams
integrated.....computers
high.....search
continuous.....usage
photon.....circuit
light.....machines

VI. Put the words in brackets in the correct order:

1. (but/we/mean/also/computers/we/quantity/and/high speed/when/a further development of/high technology/speak about not only).
2. (electronic circuits/and/in laboratories/reliable/for more perfect/throughout the world/is going on/high speed/a continuous search).
3. (operates/the ordinary computer/all/operation by operation/are being done/the supercomputer/does/simultaneously/the computations/operations/ while/like a brain).

VII. Fill in the blanks: true physical limit, high technology and high speed, a continuous search, computations, the integrated circuit

1. ... is in the heart of every electronic device we use at present.
2. When speaking about further development of computers we first of all speak about
3. ... is going on in laboratories to work out more perfect, reliable and high speed electronic circuits.
4. The ordinary computer does the ... operation by operation.
5. Some researchers think that with the invention of the fifth generation computers we approach what is called

VIII. Translate:

1. У центрі електронного всесвіту знаходиться маленька кремнієва пластина, інтегральна схема більш відома як чип. 2. Винахід інтегральної схеми є одним з самих складних винаходів людини й науки. 3. Усього кілька десятків років тому назад учені втрачали велику кількість часу, для того щоб зробити декілька тисяч розрахунків. 4. Суперкомп'ютер відрізняється від звичайного тим, що, може виконувати всі операції одночасно. 5. Появлення фотонних комп'ютерів зумовлено тим, що вони можуть здійснювати операції до тисячі разів швидше, ніж звичайні комп'ютери. 6. Перевага світла полягає у тому, що його проміні рухаються швидше й можуть проходити один через одного майже без перешкод.

IX. Give summary of the text.

TEXT 3

1. Read and translate:

Let's look at the progress the computers have made in their development. Besides the great changes in size and speed, we now have machines which change numbers into pictures, words and sounds. The next big change will be when we get computers that will understand human language. But now if you want to programme your own computer, you must learn its language. It does not understand yours. For example you talk with an Englishman. You make one small grammar mistake «have» instead of «has». The man understands what you mean and the talk goes on. But if you make even the smallest mistake in computer language, the talk breaks down and you must go back to the beginning.

TEXT 4

2. Read, translate and render the conversation in reported speech.

Computers

Mary: Have you seen an interesting advertisement in the last issue of «The Economist»?

John: I haven't read it yet.

M.: The School of Engineering offers a new program in information system. Applications are invited for jobs in this field.

J.: Professor Smith has told me about it. This program is interesting. It is designed to meet the needs of persons with a computing background for their work in management and industry.

M.: Don't you think that our son can lecture on this new programme?

J.: Why not? He graduated from the Department of Computer Science and for some years was taking part in the research project connected with the problems of supercomputers and their manufacturing.

M.: As far as I remember his research interests cover software and application.

J.: And what do they say about the contract?

M.: It is a three years' contract and it may be extended for further two years. I'll write Mike a letter.

J.: It's too long. You'd better call him.

TEXT 5

MS-DOS AND ITS MAIN TERMS

What is MS-DOS. The Microsoft MS-DOS *operating system* is like a translator between you and your computer. The programs in this operating system allow you communicate with your computer, your disk drives and your printer, letting you use these resources to your advantage.

MS-DOS also helps you to manage programs and data. Once you have loaded MS-DOS into your computer's memory, you can compose letters and reports, run programs and languages such as Microsoft GW-BASIC, and use devices such as printers and disk drives.

Terms You Should Know. When you are introduced to a new or different idea, you must often learn a new set of words to understand the idea. The MS-DOS operating system is no exception. The following pages explain some terms you will need to know so that you can read and use the manuals.

Program. Programs, often called *application programs*, *applications*, or *software* are series of instructions written in computer languages. These instructions are stored in files and tell your computer to perform a task. For example, a program might tell your computer to alphabetically sort a list of names. Spreadsheets and word processors are other examples of programs.

File. A file is a collection of related information, like the contents of a file folder in a desk drawer. File folders, for instance, might contain business letters, office memos, or monthly sales data. Files on your disks could also contain letters, memos, or data. For example, your MS-DOS master disk contains more than thirty files. Your other disks may contain files that you've created, or that came with the disk.

Filename. Just as each folder in a file cabinet has a label, each file on a disk has a name. This name has two parts: a *filename* and an *extension*. A filename can be from one to eight characters in length, and can be typed in uppercase or lowercase letters. MS-DOS automatically converts filenames to uppercase letters. Filename extensions consist of a period followed by one, two, or three characters. Extensions are optional, but it's good idea to use them, since they are useful for describing the contents of a file to you and to MS-DOS. For instance, if you want to be able to quickly identify your report files, you can add the filename extension *rpt* to each one. Here's an example of a filename with this extension.

a) *progress.rpt*
file name *file name extension*

Directory. A directory is a table of contents for a disk. It contains the names of your files, their sizes, and the dates they were last modified.

Volume Label. When you use a new disk, you can put a label on the outside of it to help you identify its contents. You can also give each of your disks an internal name, called a *volume label*. You can look at the volume label on a disk by displaying its directory. Some programs may look at the volume label to see if you are using the correct disk. So make sure that you label your disks.

Disk Drive. To use the files or programs that are on a floppy disk, you must first insert the disk into a floppy disk drive. Floppy disk drives are commonly referred to as the A drive and the B drive. A hard disk drive, normally installed inside your computer, is usually referred to as the C drive.

Drive Name. A complete *drive name* consists of a *drive letter* and a *colon*. When using a command, you may need to type a drive name before your filename to tell MS-DOS where to find the disk that contains your file. For example, suppose you have a file named *finances.doc* on the disk in drive B. To tell MS-DOS where to find this file you would type the drive name before the filename: *b: finances.doc drive name filename with extension*

Command. Just as you will run programs to create and update files containing your data, you will also need to run some special programs, called MS-DOS commands, that let you work with entire files. When you type MS-DOS commands, you are asking the computer to perform tasks. For example, when you use the disk copy command to copy your MS-DOS master disk, you are using a file named *diskcopy.exe*, whose task is to copy the files on the MS-DOS disk.

Error messages. If you or your computer makes a mistake when using a device or MS-DOS command, MS-DOS displays an appropriate *error message*. Error messages apply to general errors (such as misspelling a command) or to device errors (such as trying to use a printer that is out of paper).

Memory. *Memory* is the place in your computer where information is actively used. When you run a program, MS-DOS stores that program and the files it uses in the computer's available memory. Some programs and files use more memory than others, depending on how large and complex they are.

Devices. Whenever you use your computer, you supply the information (input) and expect a result (output). Your computer uses pieces of hardware called *devices* to receive input and send output. For example, when you type a command, your computer receives input from your

keyboard and disk drive, and usually sends output to your screen. It can also receive input from a mouse, or send output to a printer. Some devices, such as disk drives, perform both input and output.

Device Names. *Device names* are special names given to each device that your computer "knows" about. An example of a device name is LPT1, which stands for the first parallel line printer connected to your computer. When you add a new device, such as a mouse, to your computer, you sometimes need to tell MS-DOS about it by setting up (configuring) your computer for that device.

ASSIGNMENT TO TEXT 5

I. Read and translate the text.

II. Answer the questions to the above text

1. What is MS-DOS? 2. What do the programs in the system allow to do? 3. What is a program? 4. What is a file? 5. What can files contain? 6. What is a file name? 7. What are filename extensions for? 8. What is a directory? 9. Why should we give a disk a volume label? 10. What drives do you know? 11. What commands are for? 12. What is memory used for? 13. What devices do you know?

III. Give English equivalents: розширення, позначка, програмне забезпечення, загрузити у пам'ять, операційна система, дисковод, повідомлення про помилку, ім'я файлу, клавіатура, пристрій, введення інформації, виведення інформації, створювати файл, виконувати програму, «миша».

IV. Match up:

operating..... a task
disk..... label
to managecontents
applicationdisk
to perform system
to describeprograms and data
volume..... files
floppy programs
hardcomputer
to update program
to run drives
to configure..... disk drive

V. Pick out the right definition:

1. Operating system a) allows to communicate with computer and other devices;
 b) a table of contents for the disk;
 c) is a disk copy command.
2. Device a) a disk drive;
 b) a collection of related information;
 c) a piece of hardware.
3. Program a) place where information is stored;
 b) instructions written in computer language;
 c) devices to perform
4. File a) software;
 b) error message;
 c) collection of related information.
5. Volume label a) internal name of disk;
 b) device name;
 c) filename.

VI. Finish answering the questions:

1. What does MS-DOS allow to do? - It allows
2. What can you do if you load MS-DOS into your computer? - If you load MS-DOS into your computer you
3. What are the synonyms of application program? - They are

4. What do files contain? - They
5. How many letters do filenames consist of? - They
6. How can an extension describe the contents of a file? - You can
7. Is an internal name of a disk called a volume label or a drive name? – It's
8. Is A drive meant for a floppy or a compact disk? – It's

VII. Find the correct answer:

1. What do you have to do to find the file you need?
 - a) To type a drive name.
 - b) To give a device name.
 - c) To give a filename extension.
2. Where is information stored?
 - a) In the program.
 - b) In the disk drive.
 - c) In the memory.
3. What devices can serve as input?
 - a) A printer.
 - b) A mouse.
 - c) A screen.

VIII. Fill in the blanks: volume label, files, device names, spreadsheets and word processors. a directory, uppercase or lowercase letters, floppy disk drive, programs and data, a drive letter and a colon, optional.

1. MS-DOS also helps you to manage
2. ... are other examples of programs.
3. ... on your disks could also contain letters, memos, or data.
4. A filename can be from one to eight characters in length, and can be typed in
5. Extensions are ... , but it's good idea to use them, since they are useful for describing the contents of a file to you and to MS-DOS.
6. ... contains the names of your files, their sizes, and the dates they were last modified.
7. You can look at the ... on a disk by displaying its directory.
8. To use the files or programs that are on a floppy disk, you must first insert the disk into a
9. A complete drive name consists of
10. ... are special names given to each device that your computer "knows" about.

IX. Translate:

1. The programs in this operating system allow you communicate with your computer, your disk drives and your printer, letting you use these resources to your advantage. 2. MS-DOS also helps you to manage programs and data. 3. Filename extensions consist of a period followed by one, two, or three characters. 4. Floppy disk drives are commonly referred to as the A drive and the B drive. 5. If you or your computer makes a mistake when using a device or MS-DOS command, MS-DOS displays an appropriate error message.

X. Translate:

1. Прикладом може слугувати пристрій під назвою LPT1, який розшифровується як лінійний принтер. 2. Деякі програми й файли застосовують великий обсяг пам'яті, в залежності від їхнього розміру й складності. 3. Коли ви друкуєте команди MS-DOS, ви змушуєте комп'ютер виконувати ті чи інші команди. 4. Застосування розширень не є обов'язковим, але їх рекомендується використовувати під час опису змісту файла. 5. «Жорсткий» диск, який є на вашому комп'ютері, звичайно розташовується під літерою C.

XI. Give summary of the text.

TEXT 6 WINDOWS

Microsoft Windows (or simply Windows) is a software program that makes your IBM PC (or compatible) easy to use. It does this by simplifying the computer's *user interface*.

The word *interface* refers to the way you give your computer commands, the way you interact with it. Usually the interface between you and the computer consists of the screen and the keyboard, you interact with the computer by responding to what's on the screen, typing in commands at the DOS command line to do your work.

DOS often isn't very intelligent at interpreting your commands and most people consider it awkward or intimidating as a user interface. These commands can be confusing and difficult to remember. Who wants to learn lots of computer commands just to see what's on your disk, copy a file, or format a disk?

Windows changes much of this. What's been missing from the PC is a program that makes the computer easy to use. Windows is just such a program. With Windows, you can run programs, enter and move data around, and perform DOS-related tasks simply by using the *mouse* to point at objects on the screen. Of course, you also use the keyboard to type in letters and numbers.

Windows interprets your actions and tells DOS and your computer what to do.

In addition to making DOS housekeeping tasks such as creating directories, copying files, deleting files, formatting disks, and so forth, easier, Windows makes running your favorite *applications* easier, too. (An application is a software package that you use for a specific task, such as word processing).

Windows owes its name to the fact that it runs each program or document in its own separate *window*. (A window is a box or frame on the screen.) You can have numerous windows on the screen at a time, each containing its own program and/or document. You can then easily switch between programs without having to close one down and open the next.

Another feature is that Windows has a facility - called the Clipboard - that lets you copy material between dissimilar document types, making it easy to *cut* and *paste* information from, say, a spreadsheet into a company report or put a scanned photograph of a house into a real estate brochure. In essence, Windows provides the means for seamlessly joining the capabilities of very different application programs. Not only can you paste portions of one document into another, but by utilizing more advanced document-linking features those pasted elements remain "live". That is, if the source document (such as some spreadsheet data) changes, the results will also be reflected in the secondary document containing the pasted data.

As more and more application programs are written to run with Windows, it'll be easier for anyone to learn how to use new programs. This is because all application programs that run in Windows use similar commands and procedures.

Windows comes supplied with a few of its own handy programs. There's a word-processing program called Write, a drawing program called Paintbrush, a communications program called Terminal for connecting to outside information services over phone lines, small utility programs that are helpful for keeping track of appointments and notes, a couple of games to help you escape from your work, and a few others.

Years of research went into developing the prototype of today's popular graphical user interfaces. It was shown in the early 1980s that the graphical user interface, in conjunction with a hand-held pointing device (now called the mouse), was much easier to operate and understand than the older-style keyboard-command approach to controlling a computer. A little-known fact is that this research was conducted by the Xerox Corporation and first resulted in the Xerox Star computer before IBM PCs or Macintoshes existed. It wasn't until later that the technology was adapted by Apple Computer for its Macintosh prototype, the Lisa.

ASSIGNMENT TO TEXT 6.

I. Read and translate the text.

II. Answer the questions to the above text.

1. What are the advantages of Windows? 2. What is Windows? 3. Why do we call it Windows? 4. What is another feature of Windows? 5. What firm was the first to have some results developing the prototype of Windows?

III. Make all types of questions to the following sentence:

Windows interprets your actions and tells DOS and your computer what to do.

IV. Give English equivalents: програмне забезпечення, інтерфейс користувача, друкувати команди, бути легким у застосуванні, виконувати програму, додаток, чисельний, закрити програму, різноманітний, програма, що обслуговує (утіліта).

V. Write out five sentences with Present Simple and translate them.

VI. Match up:

software..... with computer
user..... information
to interact program
to make the computer.... disk
to delete..... program
to format..... easy to use
to paste interface
utility files

VII. Pick out the right definition:

1. User interface
a) a software package;
b) commands given to computer;
c) document-linking features.
2. Application
a) pasted data;
b) a device name;
c) a software package for a specific task.
3. To paste
a) to copy dissimilar document types;
b) to run a command;
c) to create a directory }K
4. A window
a) a command line;
b) a box or frame on the screen;
c) a seamless joining of different programs.
5. Paintbrush
a) a word processing program;
b) a communication program;
c) a drawing program.

VIII. Finish answering the questions:

1. What is the user interface for? – It's meant for
2. How do the user and the computer interact? – They interact with
3. What is the mouse for? – It's meant for
4. What does Windows owe its name to? – It owes
5. What do words "cut" and "paste" mean? – They mean
6. What handy programs supplied by Windows do you know? – They are
7. Was Xerox or Macintosh the first to produce the mouse? – It

IX. Put the words in brackets in the correct order:

1. supplied with/its own/programs/a few of/comes/ handy/ Windows.
2. open the next/one down/between/programs /switch/without having to close/ then/easily/can/and/you.
3. document/runs/that/its name/separate/it/owes/each program/or/ Windows /in its own/to the fact/ window.

X. Fill in the blanks:

Write, on the screen, handy programs, seamlessly joining, applications, user interface, interprets.

1. ... is an instrument to simplify the usage of your computer.
2. Windows ... your actions and tells DOS and your computer what to do.
3. Windows makes running your favorite ... easier
4. You can have numerous windows ... at a time, each containing its own program.

5. Windows provides the means for ... the capabilities of very different application programs.

6. Windows comes supplied with a few of its own

7. Windows has got a word processing program called

XI. Translate:

1. Microsoft Windows (or simply Windows) is a software program that makes your IBM PC (or compatible) easy to use by simplifying the computer's user interface.

2. DOS often isn't very intelligent at interpreting your commands and most people consider it awkward or intimidating as a user interface.

3. You can then easily switch between programs without having to close one down and open the next.

4. As more and more application programs are written to run with Windows, it'll be easier for anyone to learn how to use new programs.

XII. Translate:

1. Слово інтерфейс означає яким чином ви надаєте команди комп'ютеру, як ви взаємодієте з ним. 2. За допомогою Windows ви запускаєте програми, вносите й змінюєте данні, виконуєте операції в DOS, застосовуючи «мишку», вказуючи нею на об'єкти, що розташовані на моніторі. 3. Програма називається Windows, тому, що кожна програма чи документ мають власне «вікно». 4. Windows забезпечує сумісність можливостей різних прикладних програм. 5. Маловідомий факт полягає в тому, що всі ці дослідження проводилися компанією «Ксерокс» й завершилися появленням комп'ютера Xerox Star ще до появлення комп'ютерів від IBM та Macintosh.

XIII. Give summary of the text.

TEXT 7

Computers Concern You

When Ch. Babbage, a professor of mathematics at Cambridge University, invented the first calculating machine in 1812, he could hardly have imagined the situations we find ourselves in today. Almost everything in modern world is done with the help of computers – the complicated descendants of his simple machine. Computers are being used more and more extensively in the world today, for the simple reason that they are far more efficient than human beings. They have much better memories and can store great amount of information and they can do calculations in a fraction of the time required by a human mathematician. No man alive can do 500,000 sums in one second, but a modern computer can.

In fact, computers can do many things we do, but faster and better. They can control machines at factories, work out tomorrow's weather and even play chess, write poetry or compose music. Let's look now at some of the ways in which computers concern people in their daily lives and work. Many people associate computers with the world of science and mathematics, but they are also a great help to scholars in other subjects: in history, literature and so on. It is now possible for a scholar to find a book or an article he needs very quickly, when a million or more new books are published each year, which is quite an advantage. You tell the computer which subject you are interested in and it produces any microfiche you need in seconds.

There are also systems which are being developed to translate articles from foreign magazines by computer and to make up many lists of information which are needed in a modern library. So, computer can help us to deal with the knowledge explosion in many ways. One can imagine a time when libraries will be run by computers, without human beings at all.

Or, let's take another example. When a man drives a car for long distances he has two problems: to keep the car at a constant speed and watch that he does not run into the car in front of him. Engineers are now experimenting with a system which has a computer control of these two problems. The car's computer keeps the speed constant. At the same time the distance between the car and any other car in front of it is measured by a beam of light transmitted forwards. The beam meets the rear reflectors of the car in front and it is reflected back, which enables to measure the distance. This information is fed to the computer which adjusts its speed control accordingly.

ASSIGNMENT TO TEXT 7

I. Read and translate the text.

II. Answer the following questions: 1. What did Ch. Babbage invent in 1812? 2. Why are computers extensively used nowadays? 3. In what ways do computers help people in their everyday life?

III. Make all types of questions to the following sentence: Engineers are now experimenting with a system which has a computer control of these two problems.

IV. Give English equivalents: калькулятор, ефективний, запам'ятовувати, мить, пов'язувати із, перевага, цікавитись, бурхливе зростання знань, постійний, вимірювати відстань.

V. Give Ukrainian equivalents: to be used extensively, great amount of information, scholar, to be developed, to be run, to keep constant, a beam of light, to be fed.

VI. Write out five sentences with the Passive Voice and translate them.

VII. Match up:

to enablethe knowledge explosion
calculating.....the speed constant
complicated..... by computers
to store machine
to do descendants
to deal with to measure
to be runcalculations
to keep..... great amount of information

VIII. Put the verbs into the correct tense form and find the correct answer to the questions:

1. When (to invent) Ch. Babbage the first calculating machine?
 - a) In 1912.
 - b) In 1812.
 - c) In 1712.
2. What (to be) done with the help of computers?
 - a) Almost nothing.
 - b) Almost something.
 - c) Almost everything.
3. What (can) computers do better?
 - a) Read and write.
 - b) Store information and do calculations.
 - c) Understand and solve problems.
4. What systems (to be developed) nowadays?
 - a) To translate articles from foreign magazines.
 - b) To read articles from foreign magazines.
 - c) To write articles in foreign magazines.
5. How (can) a computer help the driver?
 - a) To keep the driver awake.
 - b) To control the speed and the distance.
 - c) To help the driver have a rest.

IX. Fill in the blanks: being developed, calculations, more and more extensively, associate, advantage.

1. It is an ... to find a book nowadays when there are millions of them published every year.
2. Computers are being used ... in the world today.
3. They can do ... in a fraction of the time required by a human mathematician.
4. Many people ... computers with the world of science and mathematics.
5. There are also systems which are ... to translate articles from foreign magazines by computer.

X. Translate:

1. When Ch. Babbage, a professor of mathematics at Cambridge University, invented the first calculating machine in 1812, he could hardly have imagined the situations we find ourselves in today.

2. They can control machines at factories, work out tomorrow's weather and even play chess, write poetry or compose music.

3. Computer can help us to deal with the knowledge explosion in many ways.

4. Engineers are now experimenting with a system which has a computer control of these two problems.

5. Engineers are now experimenting with a system which has a computer control of these two problems.

XI. Translate:

1. Майже все у сучасному світі здійснюється за допомогою комп'ютерів. 2. Фактично, комп'ютери можуть робити багато з того, що робимо ми, але швидше й краще. 3. Можна уявити час, коли книгарні будуть керуватися комп'ютерами без участі людини. 4. Коли людина тривалий час керує авто, постають дві проблеми: підтримувати постійну швидкість й запобігати зіткнення з авто, що їде попереду. 5. Ця інформація передається на комп'ютер, який здійснює контроль над швидкістю.

XII. Give summary of the above text.

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