МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ЖИТОМИРСЬКИЙ АГРОТЕХНІЧНИЙ КОЛЕДЖ

INFORMATION TECHNOLOGY AND COMPUTER SCIENCE

НАВЧАЛЬНИЙ ПОСІБНИК З ДИСЦИПЛІНИ
«ІНОЗЕМНА МОВА (АНГЛІЙСЬКА) ЗА ПРОФЕСІЙНИМ СПРЯМУВАННЯМ»

ЖИТОМИР
2020

УДК [[004+004.382]:[811.111: 651.4/.9]](075.8)

Навчальний посібник друкується за рішенням методичної ради Житомирського агротехнічного коледжу (м. Житомир),
Протокол № 5 від 28.05.2020 р.

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Навчальний посібник створений відповідно до нормативної програми з дисципліни «Іноземна мова за професійним спрямуванням», освітньої програми 122 «Комп'ютерні науки», галузі знань 12 «Інформаційні технології» та змін, що відбулися в лінгвістичних та соціально-психологічних концепціях, які лежать в основі неспеціалізованої методики навчання іноземних мов.

Посібник містить ефективну систему засобів, зокрема вправ і завдань, які сприяють формуванню комунікативної компетентності як пріоритетної мети оволодіння студентами іншомовним спілкуванням за професійним спрямуванням.

Посібник розрахований на фахівців з комп'ютерних наук та інформаційних технологій, наукових працівників, викладачів та студентів вищих навчальних закладів, технікумів і коледжів.

УДК [[004+004.382]:[811.111: 651.4/.9]](075.8)

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ВСТУП

Оновлення змісту навчання іноземних мов у вищих навчальних закладах пов'язується з деякими змінами в стратегічних напрямах розвитку сучасної вищої освіти – спрямуванням навчальної діяльності на вироблення у студентів необхідних життєвих компетентностей, що в майбутньому давали б можливість випускникам ВНЗ комфортно почуватися в сучасному світовому мультинаціональному просторі.

Запропонований посібник з англійської мови можна розглядати в якості носія змісту іншомовної освіти та засобу навчання іншомовного спілкування. Його метою є відображення певної моделі діяльності студентів, яка забезпечується на дидактичному і методичному рівнях за допомогою доцільно підібраних засобів навчання, що узгоджуються з комунікативно-діяльнісним підходом і сприяють успішному виконанню цілей, визначених чинною програмою.

Цей посібник – поліфункціональний та вигідно вирізняється серед інших видань як способами подання фактичного і мовного матеріалу, так і запропонованою методикою роботи з ним.

У змісті навчального посібника передбачена ефективна система засобів, зокрема вправ і завдань, які сприяють формуванню комунікативної компетентності як пріоритетної мети оволодіння студентами іншомовним спілкуванням за професійним спрямуванням.

. Завдання, запропоновані в посібнику, збагачують лексику студентів і націлюють їх на активне сприйняття тексту та цілеспрямований пошук інформації у ньому. Після текстові завдання дозволяють не лише перевірити розуміння і закріпити необхідні лексичні одиниці, але й дати студентам можливість висловити свою точку зору стосовно проблеми, спираючись на власний досвід і знання інших дисциплін. Як результат – висловлювання студентів набувають різнобічності і особистісної значущості.

Більшість текстових матеріалів у посібнику є автентичними, знайденими у друкованих джерелах виданих у Великій Британії та США а також у відкритому доступі в Інтернет мережі. Окремі тексти є авторськими перекладами. Завдання і вправи розроблено автором з урахуванням Загальноєвропейських рекомендацій з мовної освіти. Тестові завдання пропонуються у форматах, що відповідають міжнародним екзаменам (TOEFL, KET, PTE). Додатки до основної частини посібника у формі тематичного та термінологічного словників допоможуть майбутнім фахівцям засвоїти професійну лексику та оперувати спеціальною термінологією у процесі ділового спілкування з представниками інших країн.

Загалом, матеріали посібника стимулюють розвиток пізнавальних інтересів студентів та сприяють мотивації до вивчення англійської мови.

Посібник розрахований на фахівців з комп'ютерних наук та інформаційних технологій, наукових працівників, викладачів та студентів вищих навчальних закладів, технікумів і коледжів.

CHAPTER 1. INFORMATION TECHNOLOGY AND COMPUTER SCIENCE

ACTIVITY 1. Read the following article to find out what the difference between information technology and computer science is.

If you have an interest in computer hardware and software but you aren't sure which career path to choose, you probably want to learn about information technology (IT) and computer science. These two rewarding careers each require a slightly different set of skills, and they each appeal to a somewhat different type of person. An IT career involves installing, organizing and maintaining computer systems as well as designing and operating networks and databases. Computer science is focused entirely on efficiently programming computers using mathematical algorithms.

An IT career doesn't necessarily require a computer science (CS) degree, although a CS degree opens certain doors that otherwise wouldn't be available. IT professionals typically work in a business environment installing internal networks and computer systems and perhaps programming. Computer scientists work in a wide range of environment, ranging from businesses to video game design companies. Both of these careers have excellent growth potential and high salaries.

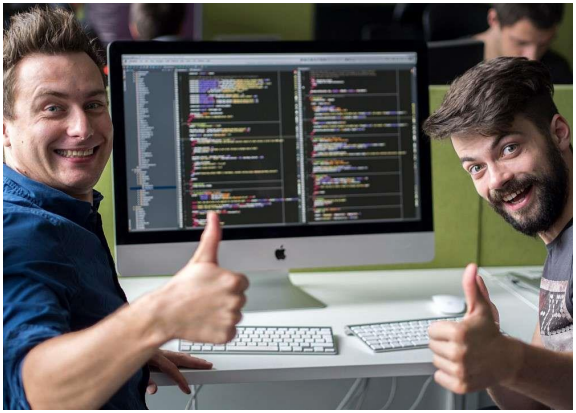
A computer science degree gives students a rigorous education in discrete mathematics and computer science theory. Most CS graduates go on to become software developers or Web programmers, and those who continue on to graduate-level schooling have the chance to do research or work in more specialized roles, such as advanced artificial intelligence programming.

With a four-year CS degree, students can find employment as programmers, software engineers or IT professionals. However, to become a software developer, graduates usually must teach themselves.

ACTIVITY 2. Find the meaning of the words given in bold print in the dictionary. Read the following article and do the activities that follow it.

THE PROFESSION OF A COMPUTER PROGRAMMER

When you leave school you understand that the time to choose your **future occupation** has come. It's not an easy task to decide what profession to choose. I have known for a long time that leaving school is the beginning of my **independent life**, the beginning of more serious examination of my **abilities and character**.



I am interested in **computer sciences** and want to **be a computer programmer**. We are living in the **age of information**. Millions of computers are already in daily used. I have a computer at home too and can spend hours working at it. It is a completely new world. Computers greatly simplify **day-to-day life**. It is much easier to do some things on the computer. People can work, go shopping or communicate sitting at their computers. Computers greatly increase man's **thinking capabilities** of planning, analyzing, and controlling. They can **solve** in seconds **the problem** generations of mathematicians would need days, weeks or even years to solve. It's therefore no wonder that computers **penetrate** almost into all spheres of our modern society, from nuclear energy production to weather forecasting and medical diagnoses. Today it's even hard to tell all the uses the computer may have in the future. So I think the profession of a programmer will give me many **opportunities**.

But computing is the most rapidly changing sphere of **a modern technology**. **Computer science** is the study of computers and **computational systems.** Unlike electrical and computer engineers, **computer scientists** deal mostly with **software** and **software systems**; this includes their theory, design, development and application. That's why I understand that I will have to study for all my life.

ACTIVITY 3. Discuss the following questions.

1. Is it difficult to choose the future occupation?
2. What is your choice?
3. Why do you think your job will give you many opportunities?
4. Do we know all the abilities of the computers?
5. Computing is the most rapidly changing sphere of a modern technology, isn't it?

ACTIVITY 4. Arrange the sentences in logical order according to the text from ACTIVITY 2. Then use them as a plan to retell it.

A. Computers greatly increase man's thinking capabilities of planning, analyzing, and controlling.
B. Today it's even hard to tell all the uses the computer may have in the future.
C. I think the profession of a programmer will give me many opportunities.
D. Computers greatly simplify day-to-day life.
E. It's not an easy task to decide what profession to choose.

1)	2)	3)	4)	5)

ACTIVITY 5. Fill in the gaps in these sentences with a suitable word. The first letter of each missing word is given. The words in the box bellow the text can help you.

E-COMMERCE

E-commerce (business conducted on the Internet) is becoming an ever more important part of our lives. Through its **w**_____, a company can offer computer **u**_____ the opportunity to order and pay for goods and services using their credit **c**_____ on the Internet. Graphics and desktop publishing (DTP) **p**_____ are important tools in professions such as publishing and advertising. Companies can also use computer-assisted **d**_____ (CAD)

programs to design and test new products without building a working **m_____.** Computers enable users to make notes, arrange appointments and index details of business contacts. Computers **r_____** the amount of paper used in an office.

There are many career choices in your future that cannot be available without computers skills. The growing use of computers increases the need for employees with computer knowledge and training. If you are a computer **l_____** person the career opportunities are **l_____** for you.

programs, limitless, reduce, model, cards, literate, users, design, website

ACTIVITY 6. Read the text below. Match choices (A – G) TO (1 – 5). There are two choices you do not need to use.

OFFICE ESSENTIALS

Most offices start with the basics: a telephone/fax machine combination, computer and a copying machine. A modern fax machine can be **1)_____,** telephone, digital memory, and error correction.

It is important that the computer suits the need of the user. There are Net Stations that do not **2)_____** and are specifically for web browsing. Computers are usually bundled with the software from which you can choose what you need. A network laser printer is economical and efficient, as office workers from many workstations can **3)_____.**

The latest copiers have digital functions, color capabilities, high quantity stacking capabilities.

Very often it is possible for every employer in an office to have a telephone extension at the desk. Workers can **4)_____**, through internal switch boards and telephones switching systems or calling centers. Calling centers have a great capacity, and can accommodate from hundreds of subscribers. It is possible to use voice mail to call a person if he or she is not available at the desk.

Another must in an office is a document shredder. Big offices generate a lot of waste paper, and shredder is particularly useful when **5)_____** to be shredded.

A – print from the same machine
B – accommodate from hundreds of subscribers
C – make direct calls from the own phones to anybody else in the office
D – have hard disks
E – there are checks, bank statements of other confidential materials
F – combined with a digital answering machine
G – usually bundled with the software

ACTIVITY 7. Test yourself. Match the following computer terms with their definitions.

1. Supercomputer	**a. -** is a device that is used for transferring printed documents and pictures in to computer system.
2. Server	**b. -** is a group of computers that are connected in order to share data or communicate.
3. Scanner	**c. -** is a device that is used by a computer to transfer ink onto paper.
4. Router	**d. -** is an electronic device that manipulates data.
5. Network	**e. -** is a computer that connects many computers to hardware.
6. Printer	**f. -** is a device that allows more than one computer to connect to a network at the same time
7. Computer	**g. -** is a large computer that is built to process large amounts of information at a higher speed than other computers can handle.

ACTIVITY 8. Find the meaning of the words given in bold print in the dictionary. Read the following article and do the activities that follow it.

THE COMPUTER

A computer is a machine that can take in information, perform different operations and provide answers. A computer can perform logical and mathematical operations such as **addition**, **subtraction, multiplication, division**, and some more **complex mathematical operations**.

Logical operations deal with **selecting, comparing, matching** and so on meeting different needs of the users.

All the operations of a computer are performed at **high speed** in some kind of language (marks or symbols).

The computer **has pervaded** most fields of human activity and may well be the most important **innovation** of our age. Born out of the technology of communication, it is capable of handling enormous **amounts of information at tremendous speeds**. What makes it so potent is the fact that a single mechanism can perform any information-processing task. The same mechanism can control industrial processes, guide space vehicles or help to teach children. This diversity of tasks is made possible by the simple idea of the **stored program**.

The trick is to control electronically the nature and sequence of **arithmetical and logical processes** that are themselves electronic. In other words, what determines whether an addition, **multiplication** or some other operation is executed, what determines **the inputs of the operation** and what determines the disposition of the result are not built into the machine but are part of the electronic process itself. A

program is the enumeration of these determining commands; it specifies the method used for **the solution of a problem** in detail. When the machine is in operation, both the commands and the numbers or symbols being processed are constantly being taken out of and put into **a depository of information** known as a memory.

The commands, numbers or symbols needed in a processing task — known collectively as words — are stored in the memory each with a certain "**address**". The address identifies the stores word and determines a definite physical location within **the memory device**. The power and universality of programming arise from capacity to address the memory selectively, that is, to direct a word into any address and **to retrieve** it in a very short time, regardless of how the address was previously used.

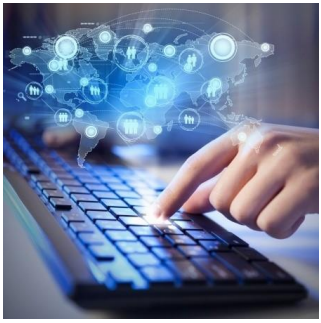
A) Choose the correct items to complete the sentences. Translate the following sentences into Ukrainian.

1. All the operations of a computer are performed at _____ in some kind of language.
2. The computer has pervaded _____ and may well be the most important innovation of our age.
3. A computer is a machine that can take in information, perform _____ and provide answers.
4. What makes it so potent is the fact that a single mechanism can _____ any information-processing task.
5. The address identifies the stores word and determines a definite _____ within the memory device.

B) Answer the questions.

1. What is a computer?
2. What can computers do?
3. Where computers have pervaded?
4. What is a memory?
5. What does the address identify?

ACTIVITY 9. Read the text below. Match choices (A – G) TO (1 – 5). There are two choices you do not need to use.



The types of computers available are as varied as the types of musical instruments. Trying to teach someone to **1)** _____ have the same type of computer. It would be senseless for a piano teacher to try to teach someone to play a trombone.

There is another similarity between trying to learn to play a musical instrument and trying to **2)** _____ in order to learn to use either a specific computer or a specific musical instrument properly, you must practice on a daily basis. One strength is that it

explains some of the differences likely to be found in computers and in computer applications and teaches some of the techniques necessary to help you more easily learn to use a computer.

The biggest flaw in most computer systems is the instruction book. The instruction book for a computer system is primarily a reference document; when the user gets into trouble, he can discover by reading the book what **3) _____** to get the computer operating properly. An instruction book can also be a manual that instructs a new user, in a step-by-step manner, how to run a computer system. Unfortunately, most computer system instruction books take either one approach or the other. They are either excellent reference books, leaving much to be desired by the first-time user who simply wants to get the computer working, or are written to be how-to-start-the-computer cookbooks with glaring deficiencies that become apparent when **4) _____** with the system.

Most users of a computer system routinely use only a very small part of the total features available to them. For example, one may have purchased a computer system that can compose music, write payroll checks, and trap burglars as they try to sneak in through the skylight. Although the computer can do all of these things if **5)_____**, most users are interested in only one thing, such as having the computer only write payroll checks.

A – he is doing wrong and what needs to be done
B – you buy the proper accessories for it
C – learn to use a computer
D – have hard disks
E – computer had a different binary-coded program
F – use a computer requires that both the instructor and the student
G – the user experiences trouble

ACTIVITY10. Do you know how computers can simplify office life? Read and translate the text about this. Complete the following sentences with the correct words.

USING COMPUTERS

A computer really **___1___** office life easier as it can do all sorts of different jobs. The same computer could **___2___,** for example, as a word processor, for filling, printing, working out static for the accounts department, communicating with other offices, web browsing.

When a company **___3___** to install a computer, it usually gets a system administrator **___4___** the ways in which the machine might best be used. If the

company is large one, the system administrator **___5___** be a full-time employee, looking after the continuous improvement and adaptation of the computer system. The system administrator will recommend what kinds of program and computer equipment **___6___.**

Many companies buy ready-written programs "off the shelf", or buy programs that can be tailored to specific needs but **___7___** mostly standard. This reduces the cost of the system, for programming is very expensive and time-consuming. Once **___8___** and running, a well-designed computer system can **___9___** much of the routine work and at the same time **___10___** accurate information about the business quickly and efficiently.

1	**A**	make	**B**	makes	**C**	made	**D**	making
2	**A**	use	**B**	be use	**C**	to be used	**D**	be used
3	**A**	decided	**B**	decide	**C**	decides	**D**	deciding
4	**A**	to study	**B**	study	**C**	to be studied	**D**	studied
5	**A**	must	**B**	may	**C**	need	**D**	should
6	**A**	required	**B**	be required	**C**	is required	**D**	are required
7	**A**	is	**B**	are	**C**	be	**D**	to be
8	**A**	is install	**B**	is installed	**C**	is installing	**D**	installed
9	**A**	take on	**B**	take in	**C**	take out	**D**	take over
10	**A**	provide	**B**	provides	**C**	provided	**D**	providing

ACTIVITY 11. Find the meaning of the words given in bold print in the dictionary and translate the following sentences.

1. My friend is a specialist in computer **hardware**.
2. The computer is already on the desk but the **keyboard** has not been unpacked yet.
3. It usually takes some time to learn to use **a mouse**.
4. Thanks to computers we can **process** information millions of times more quickly.
5. CPU stands for the central **processor unit**.
6. **Drivers** are one of the components of a computer.
7. How many letter **keys** are there on this computer keyboard?
8. You can buy a computer and the necessary **software** as well.
9. Nobody expected that **the application** of this device would be so wide.
10. This **remote** control needs 4 batteries to power it.
11. You can move the **pointer** on the **screen** with the help of the **mouse**.
12. Press the **button** to switch on the device.
13. A few figures were **displayed** on the screen.
14. You can type letters and other **characters** using this keyboard.
15. **A dot** is one of the two characters of the famous Morse code.
16. **Resolution** is one of the characteristics of the monitor.
17. Of course the computer is not working, you have not **plugged** it **in**.
18. Nobody knew how to set **a screen saver** to darken the monitor screen.

ACTIVITY 12. Match the given Ukrainian words with their English equivalents and make up your own sentences with them.

1.програм.забезпеч.	**A**	hardware	**B**	commands	**C**	instruction	**D**	software
2. обробляти	**A**	to access	**B**	to process	**C**	to display	**D**	to install
3. символ	**A**	letter	**B**	figure	**C**	character	**D**	key
4. застосування	**A**	software	**B**	resolution	**C**	amount	**D**	application
5. встановити	**A**	to type	**B**	to install	**C**	to access	**D**	to display
6. сумісний	**A**	compatible	**B**	suitable	**C**	convenient	**D**	remote
7. дисковод	**A**	driver	**B**	drive	**C**	board	**D**	remote
8. посилатись	**A**	to plug	**B**	to install	**C**	to access	**D**	to refer
9. напруга	**A**	access	**B**	strain	**C**	pointer	**D**	case

ACTIVITY 13. Read the text and do exercises after it.

LOCAL AREA NETWORK FOR A SMALL COMPANY

Such network consists of a central computer, with a number of other computers, laser printers, and other machines, such as might be used in a modern office. Each computer that is linked to the network is referred to as a network server. As each workstation has access to the files held on the hard disk system of the server, information held there can be obtained by any of the workstations, subject to the right password. Thus the accounts manager can obtain historical data about sales, for examples, and use his workstation to produce his statistics.

Wide area networks link offices in different parts of the country or of the world by special communication lines. Wide area networks link the same kinds of machine as local area networks, but you may find a facsimile machine can scan any document or photograph and transmit a copy of it to the machine at the other end of the link.

It is possible to transmit information over the normal 'speech' telephone lines, using a device called a modem.

A) Choose the correct items to complete the sentences. Translate the following sentences into Ukrainian.

1) Wide area networks link offices in different parts of the country or of the world by _____.

2) Each computer that is linked to _____ is referred to as a network server.

3) Wide area networks link the same kinds of machine as local area networks, but you may _____ at the other end of the link.

4) A local area network consists of _____, such as might be used in a modern office.

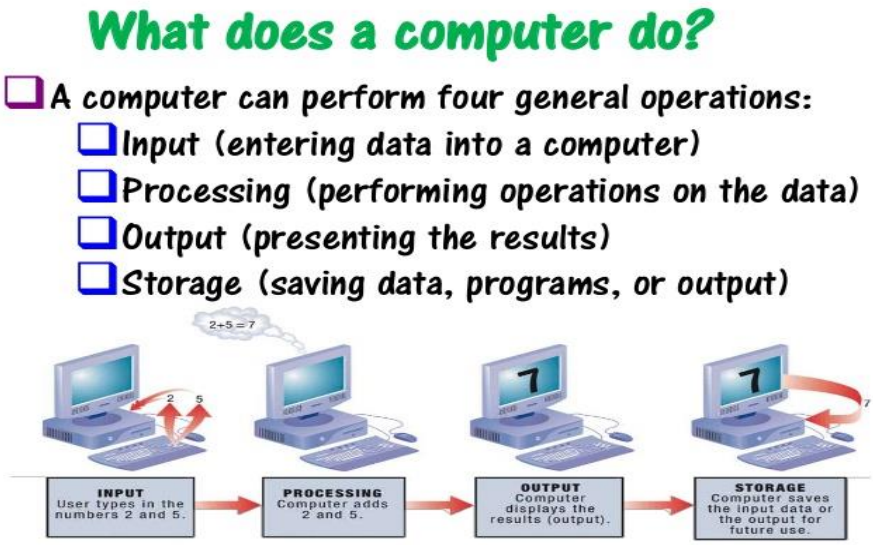
5) The accounts manager can obtain historical data and use _____ to produce his statistics.

B) Answer the questions.

1) What does a local area network consist of?
2) What can the accounts manager obtain?
3) How do wide area networks link offices in different parts of the country or of the world?
4) How does a local area network differ from a wide area network?

ACTIVITY 14. Test yourself. Match the following computer terms with their definitions.

1. Computer	**a**. - is a unit of a spreadsheet that holds a piece of information.
2. Cell	**b. -** is an electronic machine, which can be used to store, process and display data
3. Database	**c. -** are numbers that can be entered into a computer.
4. Document	**d.** - is a large group of data organized in a computer system. It allows you to see and find information easily.
5. Data	**e. -** is a file created on a word processing program.



ACTIVITY 15. Order the paragraphs (a – d) to build a text. Then read and translate it.

THE DIGITAL COMPUTER'S ERA

(A)_____ On November, 15 1971 the first microprocessor, the 4004, developed by Mercian E. Hoff for Intel, was released. It contains the equivalent of 2300 transistors and was a 4 bit processor. It was running at a clock rate of 108 KHz. This day became the beginning of the digital computer's era. Next year 8008 processor released by Intel itself. The great work just began and in 30 years we have 64-bit computers running at a clock rate of 3.5 GHz. The increase in raw processing speed over this time is striking.

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(B)_____ Modern digital computers are all conceptually similar, regardless of size. Nevertheless, they can be divided into several categories on the basis of cost and performance. The first one is the personal computer or microcomputer, a relatively low-cost machine usually of desktop size, some, called laptops, are small enough to fit in a briefcase. The second is the workstation, a microcomputer with enhanced graphics and communications capabilities that make it especially useful for office work; and the server computers, a large expensive machine with the capability of serving the needs of major business enterprises, government, departments, and scientific research establishments. The largest and fastest of these are called supercomputers

(C)_____ Digital computer is an electronic device that can receive a set of instructions that also is called a program, and then carry out them. Computers were invented last century and spread a lot for the last 30 years.

(D)_____ There probably isn't an area of human endeavor that has evolved as rapidly as computing technology has over the last 30 years. Along with that, we've also undergone some significant changes in terms of our understanding if the applications and effects of computing technologies.

1_____ 2_____ 3_____ 4_____

ACTIVITY 16. Find the meaning of the words given in bold print in the dictionary. Read and translate the following article.

A DIGITAL COMPUTER

A digital computer is not actually **a single machine**, in the sense that most people think of computers. Instead it is a system composed of five **distinct elements**: **a central processing unit**; **input devices; memory storage devices; output devices and a communications network,** called a «bus», which **links all the elements** of the system and connects the system itself to the external world.

The most **wide-spread computers** in our country are PC computers or IBM clones. There are two well-known **rival brands** in the micro processing market: AMD and Intel. Each brand is represented by several **generations** of PC microprocessors. Intel microprocessors can be roughly divided into eight generations. The first generation was represented by processing unit Intel 8086. The second generation central processing unit was represented by processing unit Intel 80286, used in IBM PC AT 286. The third generation is represented by Intel 80386, used in IBM PC AT 386 SX and DX. The microprocessors of the fourth generation were used in computers IBM PC AT 486 SX and DX. There are also central processing units of the fifth generation, used in Intel Pentium 60 and Intel Pentium 66, central processing units of the sixth generation, used in computers Intel Pentium 75, 90, 100 and 133. Recently central processing units of seventh and eighth generations appeared.

The PC chip race, both in price and performance, has been ratcheting up between Intel and AMD. While the initial Pentiums ran at 75MHz and 90MHz, systems with chips running at over 3GHz are commonplace now. The current race is to produce commercially viable 4GHz chips. It means that **this computer will be capable** of executing 4000 million **discrete operations** each second. Nowadays microcomputers can perform up to 3.6 million operations **per second**, and supercomputers used in research and defense **applications attain speeds** of many trillions of cycles per second. Also there is another technology to appear. It consists in two **core processors** and 64-bit microprocessors. It means that the average computer speed will remain the same but productivity might be doubled. 64-bit computer is the next step in the evolution of computing, extending the original **PC architecture** to a new level of computing performance and capability, evolved a standard technology from a 32- to a 64-bit architecture. 64-bit computing allows operating systems and software **to process more data** and **access a tremendous amount of memory**.

Humanity is at the threshold of new computer era, when **artificial intelligence** might be invented. There are no questions with «if», the only question is «when». And time will show us either computer becomes our best friends or our evil enemies as it is shown in some movies.

ACTIVITY 17. Answer the questions.

1. What is a digital computer?
2. What type of computers is the most wide-spread in our country?
3. What do you know about different generations of central processing units?
4. How many operations per second can computers perform nowadays?

ACTIVITY 18. Fill in the gaps in these sentences with a suitable word. The first letter of each missing word is given.

1. November, 15 1971became the beginning of the d_____ c_____ era.
2. Today we have 64-bit computers running at a c_____ r_____ of 3.5 GHz.
3. The increase in raw p_____ s_____ over this time is striking.
4. D_____ computer is an e_____ d_____ that can r_____ a set of instructions that also is called a program and then c_____ out them.
5. Modern digital computers can be d_____ into the several categories on the basis of cost and p_____.
6. Computers were i_____ last century and s_____ a lot for the last 30 years.
7. The most wide-spread computers in our country are PC computers or IBM c_____.
8. There are two well-known r_____ b_____ in the micro processing market: AMD and Intel.
9. Intel microprocessors can be r_____ divided into eight generations.
10. Recently c_____ p_____ u_____ of seventh and eighth generations a_____.

ACTIVITY 19. Test yourself. Match the following computer terms with their definitions.

3.Personal computer	**a**. - is a tiny processor on a single chip used in microcomputer.
4. Memory	**b. -** is a set of instructions composed for solving given problems by computer.
3. Microprocessor	**c. -** is a small scale computer using a single microprocessor chip in its architecture.
4. Microcomputer	**d. -** is a computer used for home and personal use.
5. Program	**e. -** is a part of computer which store information
6. RAM (Random Access Memory)	**f. -** is a program or instruction that makes a computer perform a specific task.
7. Software	**g. -** is memory that can be quickly accessed.

ACTIVITY 20. Complete the conversation.

Dan: They say, you have bought a new computer.	**A:** It goes without saying. Digital computers deal with numbers. All data: pictures, sounds, symbols, and words; are translated into numbers inside the computer.
Nick: 1…….	
Dan: That's fine. And what type of computer have you got?	**B:** You are welcome.
Nick: 2…….	
Dan: By the way, do you know what it means "a digital computer"?	**C:** Sorry, for interrupting you. I do know about it. work with a physical quantity in terms of another understand it?
Nick: 3…….	
Dan: Yes, you are right. Digital computers are so widespread that the word "computer" almost always refers to a digital computer. But there are 3 types of computers: digital, analog, and hybrid…	**D:** Yes, now I have got my own computer.
Nick: 4…….	
Dan: Yes, certainly, for example, they measure temperature in terms of the length of a thin line of liquid in a thermometer.	**E:** Take it easy. You may use my computer.
Nick: 5…….	
Dan: You see, I haven't got such a large amount of money.	**F:** The most common type, the digital one.
Nick: 6…….	
Dan: Thanks a lot.	**G:** Good for you. And when are you going to buy a co
Nick: 7…….	so much about computers.

ACTIVITY 21. Fill in the gaps in the text below with the words from the box. Use each word only once. Then answer the questions after the text.

DIFFERENT TYPES OF COMPUTER

Computers have become a vital part of everyday life. You can find them in business, science, medicine and in schools, and perhaps even at home. A computer is **___1___** which can be used to store, process and display data. There are many types of **___2___** and among them are: a personal computer (or PC), which can be a desktop with a tower case or a desktop computer with a desktop case, a laptop (that is smaller than a desktop), a notebook (that is like a laptop but is smaller), a

subnotebook (that is even smaller) and a handheld computer which is usually called **___3___.** There are embedded computers which are found **___4___** other machines such as fridges and cars, for example.

A computer is just a machine but **___5___** consists of two main elements: the machine and programs, or hardware and software. 'Hardware' refers to **___6___** of the system. These components are mechanical and electronic.

The central idea of computing system is that **___7___** is processed into output. Input is data which is entered into the computer, and **___8___** is the result of processing done by the computer, usually printed out or displayed on the screen. Different computer systems can be called computer platforms.

a palmtop, a computer system, input, an electronic machine, inside, output, computers, the physical components

1. What components does a computer consist of?
2. How can different computer systems be called?
3. What is a computer used for?
4. What types of components do you know?
5. Where can we find embedded computers?
6. What is the central idea of computing system?
7. What is input?

ACTIVITY 22. Find the meaning of the words given in bold print in the dictionary. Read the following article and do the activities that follow it.

UNIVERSAL ELECTRONIC COMPUTER

Without **calculating machines** normal life of modern society and continued progress in science and **technology** would be impossible. But even with the **aid** of mechanical, no electronic calculating machines people nowadays are no longer able **to deal with** extremely complicated problems posed by modern life. This led to the appearance of electronic computers.

At present the electronic computer became the most **powerful** calculating instrument. Electronic computers do deal instantly with **a flood of numbers**.

Unbelievably high speed of count is only one of the extraordinary properties of the marvelous machine, which can extract roots, integrate and solve the simplest **algebraic equations** as well as the most complex differential equations.

Machine tools, shops and factories are controlled by computers. There are computers that do the work of engineers, translators, teachers, etc.

Arrange the sentences in logical order according to the text from. Then use them as a plan to retell it.

A) Machine tools, shops and factories are controlled by computers.

B) Electronic computers do deal instantly with a flood of numbers.

C) Without calculating machines normal life of modern society and continued progress in science and technology would be impossible.

D) At present the electronic computer became the most powerful calculating instrument.

E) Unbelievably high speed of count is only one of the extraordinary properties of the marvelous machine.

1)	**2)**	**3)**	**4)**	**5)**

ACTIVITY 23. Test yourself. Match the following computer terms with their definitions.

1. Digital Computer	**a**. - is a computer that is small enough for you to carry around and use anywhere.
2. Hardware	**b. -** is a computer that is small enough to use at a desk, but too big to carry around
3. Operating System (OS)	**c. -** is a system composes of five distinct elements: a central processing unit; input devices memory storage devices; output devices and a communications network, called "bus", which links all the elements of the system and connects the system itself to the external world
4. Desktop computer	**d.** - is the software that controls a computer.
5. Laptop	**e. -** refers to the physical parts of a computer.
6. USB (Universal Serial Bus)	**f. -** is a name or code that identifies a person on a computer and allows person to access his or her files.
7. Username	**g. -** is a commonly used type of connection or port to connect peripheries to a computer.

ACTIVITY 24. Read the text below. Match choices (A – G) TO (1 – 5). There are two choices you do not need to use.

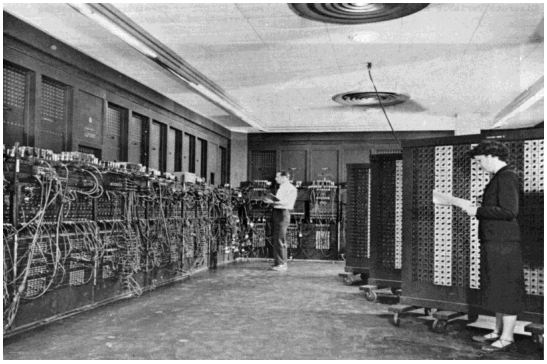
THE FIRST COMPUTER

Nothing epitomizes modern life better than the computer. For better or worse, computers have **1)_____** of our society. Today computers **2)_____:** scanners in supermarkets calculate our grocery bill while keeping store inventory; computerized telephone switching centers play traffic cop to millions of calls and keep lines of communication untangled, etc.

But everything started in 1940s with the onset of the Second World War when the rapidly advancing field of electronic computer in 1946 at the University of Pennsylvania. That device contained 18,000 vacuum tubes and had **3)_____.** Its program was wired into the processor and had to be manually altered. This way the first generations of computers appeared.

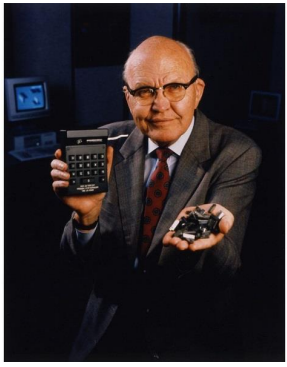
Governments **4)_____** exploit their potential strategic importance. This increased funding for computer development projects hastened technical progress. In fact, the first generation computers were characterized by the fact that each **5)_____** called a machine language that told it how to operate. This made the computer difficult to program and limited its versatility and speed. Other distinctive features of first generating computers were the use of vacuum tube and magnetic drums for data storage.

A – sought to develop computers to
B – accommodate from hundreds of subscribers
C – do much more than simply compute
D – have hard disks
E – computer had a different binary-coded program
F – a speed of several hundred multiplications per minute
G – infiltrated every aspect



ACTIVITY 25. Read the article and learn some more information about the history of the computer's development. Do exercises that follow the text.

THE COMPUTER'S DEVELOPMENT



The invention of the transistor greatly changed the computer's development. The use of the transistors in computer began in the late 1950s. It marked the advent of smaller, faster elements than it was possible to create with the use of vacuum-tube machines. As a result, the size of electronic machinery has been shrinking ever since. Coupled with early advances in magnetic-core memory, transistors led to the second generation of computers that were commercially successful. The second generation of computers was used in business, universities, and government.

Jack Kilby, an American engineer, developed the integrated circuit in 1958. The integrated circuit combined three electronic components onto a small silicon disc which was made of quartz. Scientists later managed to fit even more components on a single chip,

called a semiconductor. As a result, computers became ever smaller as more components were squeezed onto the chip. They were computers of the third generation. Another third-generation developed included the use of an operating system that allowed machines to run many different programs at once with a central program that monitored and coordinated the computer's memory.

A) Choose the correct items to complete the sentences. Translate the following sentences into Ukrainian.

1. The use of the transistors in computer _____ in the late 1950s. (begin, began, begun)
2. The second generation of computers was _____ in business, universities, and government. (use, uses, used)
3. The integrated circuit combined three electronic components onto a small silicon disc which was made _____ quartz. (with, from, of)
4. Scientists later managed _____ even more components on a single chip, called a semiconductor. (to fill, to fix, to fit)

B) Make a choice and connect two parts of the sentence.

1) The integrated circuit combined three electronic components onto	a) in the late 1950s.
2) Third-generation developed included the use of an operating system that allowed machines	b) changed the computer's development.
3) The use of the transistors in computer began	c) a small silicon disc which was made of quartz.
4) The invention of the transistor greatly	d) the second generation of computers that were commercially successful.
5) Coupled with early advances in magnetic-core memory, transistors led to	e) to run many different programs at once with a central program that monitored and coordinated the computer's memory.

ACTIVITY 26. Find the meaning of the words given in bold print in the dictionary. Read and translate the article about machine languages which were used at different times.

COMMUNICATION WITH COMPUTER

Men use language **in order to** communicate with each other. When the man wishes to communicate with the computer he used **in the same way** "languages" such as BASIC, PASCAL, ADA, FORTRAN, ALGOL, COBOL 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 PASCAL based language, but much more **comprehensive** than PASCAL. It was named after August 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 as a 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 them.

ACTIVITY 27. Find the meaning of the words given in bold print in the dictionary. Read the following article and do the activities that follow it.

PROGRAMMING A COMPUTER

Each family of **processors** has its own **instruction set** which is likely to differ from that of other processors. This means that a particular processor is only capable of understanding its own set of instructions in **binary code.**

The **computer's memory** can be considered as consisting of a number of **cells** capable of storing **binary patterns** representing program instructions or **data**. Each of these cells is uniquely numbered so that reference can be made to particular memory cells, either to select a program instruction or data, or to write data into a certain **memory cell.**

As an example of how programs are written in a **computer's own code** (machine code), it will be assumed that two numbers are held in memory cells 5 and 6, that these are to be added together, and the result stored in memory cell 8. The addition will be performed in a **storage location** called the **accumulator**, so the first instruction needs **to load** one of the numbers into the accumulator. The second instruction adds the other number to the number in the accumulator, which will then contain the sum of the two numbers. The third instruction stores the contents of the accumulator in the required memory cell.

The binary codes for these instructions for a typical processor are shown in Table.

Machine Code Instructions

Istruction	Machine Code
1. Load number held in memory cell 5 into accumulator	00111010 00000101 00000000
2. Add number held in memory cell 6 to number in accumulator	00100001 00000110 00000000 10000110
3. Store number held in accumulator in memory cell 8	00110010 00001000 00000000

Arrange the sentences in logical order according to the text from. Then use them as a plan to retell it.

A) As an example of how programs are written in a computer's own code (machine code), it will be assumed that two numbers are held in memory cells 5 and 6

B) The computer's memory can be considered as consisting of a number of cells capable of storing binary patterns representing program instructions or data

C) The third instruction stores the contents of the accumulator in the required memory cell.

D) The first instruction needs to load one of the numbers into the accumulator.

E) Each family of processors has its own instruction set which is likely to differ from that of other processors.

1)	2)	3)	4)	5)

ACTIVITY 28. Read the text filling in the gaps in the sentences with the correct words.

MODERN COMPUTER GENERATION

After the invention of integrated circuits, the only place to go was down – in size. In 1981, IBM introduced **___1___** personal computer for use in the office, home and schools. The 1980s saw an expansion in computer use, made the personal computer even **___2___** affordable. The number of personal computers in use **___3___** in 1982. Ten years later, 65 million PCs **___4___** used. Computers continued their trend toward a smaller size, working their way down from desktop to laptop computers, which are able to fit inside a breast pocket. In direct competition with IBM's PC was Apple's Macintosh line, **___5___** in 1984. Notable for its user-friendly design, Macintosh offered an operating system that allowed **___6___** to move screen icons instead of typing instructions. Users controlled the screen cursor using a mouse, a device that mimicked **___7___** of one's hand on the computer screen.

Defining the fifth generation of computers is somewhat difficult because the field is in its infancy. Using recent **___8___** advanced, computers may be able **___9___** spoken word instructions and imitate human reasoning. The ability to translate a foreign language is also a major goal of fifth generation computers. Computers today have some attributes of fifth generation computers.

In fact, the fifth generation of computers is **___10___** of artificial intelligence.

1	**A**	his	**B**	its	**C**	it's	**D**	it
2	**A**	many	**B**	much	**C**	more	**D**	most
3	**A**	doubling	**B**	doubles	**C**	double	**D**	doubled
4	**A**	was being	**B**	were being	**C**	were been	**D**	was been
5	**A**	introduce	**B**	introduces	**C**	introduced	**D**	introducing
6	**A**	user	**B**	users	**C**	use	**D**	used
7	**A**	movement	**B**	a movement	**C**	the movement	**D**	movements
8	**A**	engineer	**B**	engineer's	**C**	engineers	**D**	engineering
9	**A**	to accept	**B**	accept	**C**	accepted	**D**	accepting
10	**A**	the begin	**B**	begin	**C**	beginning	**D**	the beginning

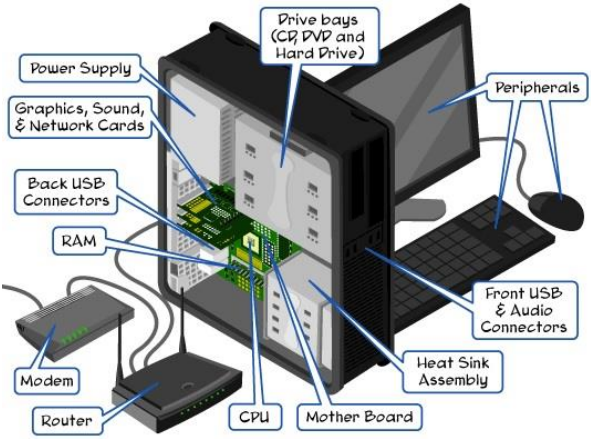
ACTIVITY 29. Test yourself. Match the following computer terms with their definitions.

1. PDA(Personal Digital Assistant)	**a**. - is a high level programming language. It is PASCAL based language, but much more comprehensive than PASCAL.
2. Code	**b. -** is internationally accepted programming language developed for general commercial use.
3. PASCAL	**c. -** is a set of words and signs that give instructions to a computer.
4. ADA	**d. -** is a general purpose high level programming language. It is named after the famous French mathematician, Blaise Pascal.
5. COBOL	**e. -** is a small computer that is used to organize a person's schedules and information.
6. VLE (A Virtual Learning Environment)	**f. -** is software creating text files (e.g., Microsoft Word)
7. Word Processor	**g. -** is a software system designed to help teachers in the management of educational courses for their students by creating a virtual classroom

ACTIVITY 30. Find the meaning of the words given in bold print in the dictionary. Read the article about the main components of the computer and do the activities that follow it.

THE MAIN COMPONENTS OF A COMPUTER

There are many **hardware pieces** in a computer system. The main of them are: **the system board, power supply, keyboard, mouse, hard drive, monitor** and **the video card** and its **drivers**.



The Case

The large metal box which is one of the main parts of the computer is called **a case**. The case and its **contents** (power supply, system board, etc.) is called **the system unit.** The case has several functions:

- it protects the delicate **electronics** inside;
- it keeps **electromagnetic emission** inside so TV and cordless phone don't go haywire when you **power up** the computer;
- it 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**. You type instructions and commands for the computer, and information **to be processed** and **stored** with it. Many of the **keys** on a keyboard are like those on a typewriter; letter keys, punctuation keys, **shift keys**, tab, and the **spacebar**. Your keyboard also has 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 are, 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.

If you sit in front of a monitor for long periods of time, eye strain can be reduced if you follow a few guidelines:

- Use the computer in a room with even lighting. Adjust the controls on the monitor to vary **the contrast** and **brightness** of the display to suit the lightning in the room.
- Keep **the screen** clean.
- Adjust your chair so that you are looking down at the screen at **a straight angle**.
- Turn the monitor away from windows and bright lights to avoid glare.

Some of the controls on the monitor change the size and position of the image. You should set them for the largest image without losing any part of it.

You can set **a screen saver** to appear on your monitor screen if the computer sits idle for a period of time. Screen savers can reduce wear on your screen. Windows includes a number of **screen savers**.

The Hard Drive

The hard disk drive is inside the computer's case and you cannot see it. Usually it is referred to as **a drive C**. Hard drives also hold **a lot of data**. A hard disk drive is **non-volatile memory** hardware device that permanently stores and retrieves data on a computer. Internal hard disks reside in **a drive bay**, connect to the motherboard using an **ATA** (advanced technology attachment), SCSI (small computer system interface), or **SATA** (serial AT attachment) cable, and are powered by a connection to the **PSU** (power supply unit).

All computers have a hard drive installed in them, which is used **to store files** for the operating system, software programs, and **a user's personal files**. A computer cannot function without a hard drive installed, as it requires one to function properly.

The CD-ROM Drive

A CD-ROM drive or optical drive is the device used to read **compact discs**. CD-ROM drives have speeds ranging from 1x to 72 x, meaning it reads the CD roughly 72 times faster than the 1x version. As you would imagine, these drives are capable of playing audio CDs and reading data **CDs**, including **CD-R** and **CD-RW disks**.

To operate the drive, press **the Eject button** to open **the tray**. Put a CD in the tray (label side UP!) and gently start **to push the tray in**. The motor takes over and pulls the tray the rest way in.

ACTIVITY 31. Make a choice and connect two parts of the sentence.

1) There are many hardware pieces	a) or is an expansion card plugged into your system board.
2) Many of the keys on a keyboard are like	b) the computer sits idle for a period of time.
3) The arrow is called	c) permanently stores and retrieves data on a computer.
4) The display adapter for your system is either built onto the system board	d) those on a typewriter; letter keys, punctuation keys, shift keys, tab, and the spacebar.
5) You can set a screen saver to appear on your monitor screen if	e) the Eject button to open the tray.
6) A hard disk drive is non-volatile memory hardware device that	f) a pointer, and the most important part is the very tip of its point.
7) To operate the drive, press	g) in a computer system.

ACTIVITY 32. Use the information from the text about the main components of a computer and complete the following sentences with the correct words.

1. All computers have _____ installed in them, which is used to store files for the operating system, software programs, and a user's personal files.
2. To operate the drive, _____ the Eject button to open the tray.
3. Some of the controls on _____ change the size and position of the image.
4. The display adapter for your system is either built onto _____ or is an expansion card plugged into your system board.
5. The arrow is called _____, and the most important part is the very tip of its point.
6. The instruction manuals for most _____ contain a section describing the functions of each key or combination of keys.
7. You communicate with your computer with _____.
8. The large metal box which is one of the main parts of the computer is called _____.
9. The main of _____ a computer system are: the system board, power supply, keyboard, mouse, hard drive, monitor and the video card and its drivers.

ACTIVITY 33. Answer the questions.

1. What hardware pieces in a computer system do you know?
2. What is a case?
3. What functions does the case have?
4. What is a pointer?
5. What should you do to use the mouse?
6. What is a monitor?
7. What are pixels?
8. How can eye strain be reduced?
9. Where is the hard disk drive situated?
10. What is a hard drive used to?
11. What is a CD-ROM drive used to?

ACTIVITY 34. Test yourself. Match the following computer terms with their definitions.

1. Electronic paper	**a**. - is a little arrow on the screen that moves when you move the mouse
2. Monitor	**b. -** delivers electricity to all parts of a computer.
3. Pointer	**c. -** is a special digital screen that can be read like paper.
4. Pixel	**d. -** is a file's type. Different files might not work in different programs.
5. Cursor	**e. -** is a picture that represents something on a computer.
6. Mouse	**f. -** is a set of buttons that is used to enter information into a computer.
7. Power supply	**g. -** is a screen that displays text, video, or images.

8. Keyboard	**h. -** is a small device that is used to move the cursor and select items on a computer screen.
9. Icon	**i. -** is one of the small dots that make up an image on a computer or television screen.
10. Format	**j. -** is a small arrow that lets a user choose what to do on a computer.
11. Microphone	**k. -** is a type of display that is created by liquid crystals and that used in thin monitors.
12. CD (Liquid Crystal Display)	**l. -** is a device that is used to record sound.

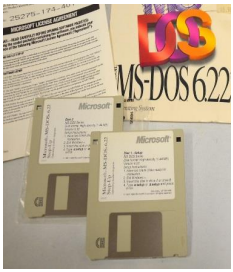
ACTIVITY 35. Read and translate the text below.

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 to 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 onto 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.

ACTIVITY 36. Skim the text to understand what it is about. Time your reading. It is good if you can read it for seven minutes.



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 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.

Directory

A directory is a table of contents for a disk. It contains the names of your files, their sizes, and 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 disk.

Drive Name

A computer *drive name* consists of a *drive letter* and a *colon.* When using a command, you may need a 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 *finaces.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.

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 diskcopy 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 massage*. Error massages apply to general errors (such as misspelling a command) or to device error (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 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.

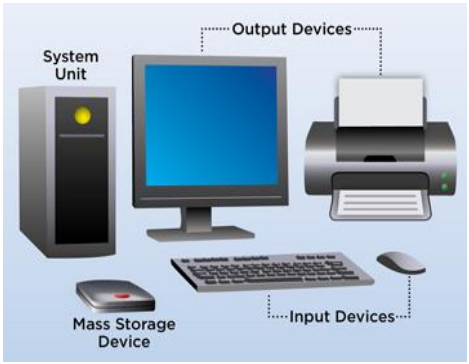
ACTIVITY 37. Answer the questions.

1. What allows you to communicate with your computer?
2. What is software?
3. What might file folders contain?
4. What do filename extensions consist of?
5. What does a directory contain?
6. What is volume label?
7. What is memory?
8. What is device name?

ACTIVITY 38. Read the article and learn some more information about input-output system. Do exercises, which follow the text.

The input-output system consists of three parts:

1.Input and output units.
2.Auxiliary units.
3.Peripheral equipment.



The input and output units are internal functional parts of the computer. The auxiliaries are links between the computer and the outside world. The peripheral equipment is needed to make the operation of the computer more efficient and more meaningful.

The input unit consists of an input register

plus associated input control circuits. The input unit receives signals from the control unit whenever a word or a group of words is to be entered into the machine. The input unit also makes incoming information more palatable than the rest of the computer.

The output unit consists of an input register plus associated output control circuits. The output unit receives signals from the control unit whenever a word or a group of words is to be removed from the machine. The output unit also modifies information so it can be more readily applied to the output auxiliaries.

Auxiliary devices either feed information into the computer or take information out of the computer. These auxiliary devices are of two general types: direct analog as well as digital, linked with external storage.

The direct-digital device communicates directly between man and machine. It may take the form of a keyboard for manually entering instruction or data words. It may be a printer which prints results of computations onto paper or a group of display lights on the control panel indicating the contents of internal registers.

The analog input auxiliary accepts analog information and converts it to digital form for entry into the input register. The analog output auxiliary receives digital information from the output register and converts it to analog form. The first device is called an analog-to-digital converter, the second being called a digital-to-analog converter.

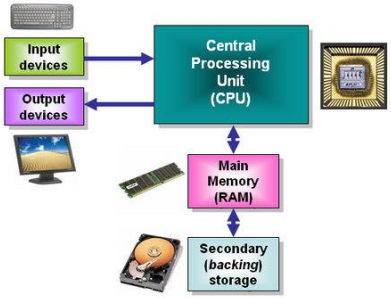
The input auxiliary linked with digital storage reads information from external digital storage and feeds it into the input register. The digital auxiliary accepts information from the output register and writes it into external storage. Examples of such input and output auxiliaries are magnetic tape, punched paper tape, and punched-card readers and writers.

The peripheral equipment is concerned mainly with external digital storage. Recorders are used by operators to place information into external storage. An example is a device which writes words onto magnetic tape when keys of a keyboard are operated. Converters transform information stored in one form to information stored in another form. An example is the punched-card-to-magnetic-tape converter. Communication devices are used to send information to or from external storage. An example is a teletype.

The input and output units are integral portions of the digital computer. Under direction of the control unit they determine the shape, sequence, speed, and time of arrival of bits and words as they are transferred between the computer and auxiliary devices.

A) Translate the following sentences into Ukrainian.

1. The auxiliaries are links between the computer and the outside world.
2. The input unit receives signals from the control unit whenever a word or a group of words is to be entered into the machine.
3. The output unit receives signals from the control unit whenever a word or a group of words is to be removed from the machine.



4. The output unit receives signals from the control unit whenever a word or a group of words is to be removed from the machine.

5. The digital auxiliary accepts information from the output register and writes it into external storage.

6. Converters transform information stored in one form to information stored in another form.

7. The input and output units are internal functional parts of the computer.

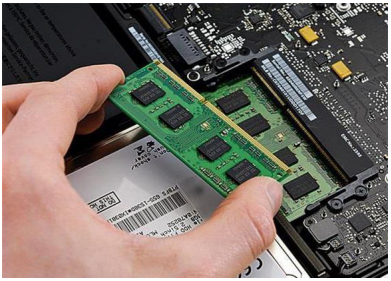
B) Make a choice and connect two parts of the sentence.

1) The input unit consists of	a) take information out of the computer.
2) Recorders are used by operators to place	b) external digital storage and feeds it into the input register.
3) Auxiliary devices either feed information into the computer or	c) information into external storage.
4) The input auxiliary linked with digital storage reads information from	d) associated output control circuits.
5) The output unit consists of an input register plus	e) an input register plus associated input control circuits.

ACTIVITY 39. Read the text below. Match choices (A – G) TO (1 – 5). There are two choices you do not need to use.

MEMORY

The electronic "memory" of a computer is a depot to store numbers and instructions. From this depot they are sent for processing to "the mathematical mill". The results obtained are returned to the "memory".



It may be said that the history of progress in high-speed computers coincides with **1)_____.** Quite recently the electron tube "memory was considered high-speed "memory". Next the ferrite-core "memory" was produced. The working speed of most up-to-date computers holds up to ten million bits. To increase **2) _____** are the most important aims of contemporary computer construction. Tunnel diodes, thin magnetic films — these so called microminiaturization elements are used to construct the "memory".

Memory consists of three elements: storage, read and write circuits, and address selection. But any storage system requires these three elements. What distinguishes a memory from other types of storage?

To answer this question, let us look at different classes of storage. Storage may be classified according to size. There is bit storage, as exemplified by the flip-flop; there is word storage, as exemplified by the register and counter; and there is multiword storage which is exemplified by systems of bulk storage.

Storage may **3) _____** to whether it is external or internal. External storage exists outside the computer; it is not a fundamental part of the computer. Internal storage is an integral part of the machine; without it the computer cannot function.

Storage may be classified according to whether it is fixed or erasable. The contents of fixed storage cannot be changed. The contents of erasable storage can be changed — it can be written into.

To be considered memory, storage must be:

1. Bulk storage. 2. Internal. 3. Erasable.

Obviously one bit or one word cannot constitute memory; we need a device which can store many words. Internal storage implies that there is **4) _____** between memory and the other functional units of the computer. Erasibility means 2-way access to words in memory, in as well as out.

To summarize, we may say that memory is accessible bulk storage which may be written into as well as read from.

External storage is used in the input and output systems. Fixed storage may be used in the control unit for storage of nonchangeable programs in special-purpose computers.

Modern science considers that many branches of knowledge depend to a great extent on **5) _____** and on the levels of development of artificial computer memory.

A – the capacity and data production speed
B – ready and quick communication
C – do much more than simply compute
D – the solution of the problem of human memory
E – computer had a different binary-coded program
F – be classified according
G – the history of the improvement of their "memory"

ACTIVITY 40. Read the text below. Match choices (A – G) TO (1 – 5). There are two choices you do not need to use.

Microsoft Windows (or simply Windows) is **1) _____** 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 consist 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 **2) _____** 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 **3) _____,** 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 **4) _____,** such as word processing. WordPerfect is an example of an application).

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 **5)_____.** 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 past 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.

A – at interpreting your commands
B – the means for seamlessly joining the capabilities of very different application programs
C – run programs, enter and move data around
D – have hard disks
E – a software program that makes your IBM PC (or compatible) easy
F – a speed of several hundred multiplications per minute
G – a software package that you use for a specific task

ACTIVITY 41. Read and discuss the text below.

IS WINDOWS A VIRUS?

With the recent problems being encountered by Windows users all across the country, people started asking themselves if Windows is a virus. In response to the high demand for an answer to that question a study was done and concluded the following.

1. Viruses replicate quickly.

Windows does this.

2. Viruses use up valuable system resources, slowing down the system as they do so.

Windows does this.

3. Viruses will, from time to time, trash your hard disk.

Windows does this.

4. Viruses are usually carried, unknown to the user, along with valuable programs and systems.

Windows does this.

5. Viruses will occasionally make the user suspect their system is too slow and the user will buy new hardware.

Same with Windows, yet again.

Maybe Windows really is a virus.

Nope! There is a difference!

Viruses are well supported by their authors, are frequently updated, and tend to become more sophisticated as they mature.

So there! Windows is not a virus!

ACTIVITY 42. Test yourself. Match the following computer terms with their definitions.

1.Formatting	**a**. - is a computerized version of a piece of paper.
2. Menu	**b. -** is the act of changing data so that no one can read it until it is changed again.
3. Password	**c. -** is a category in a database that holds a particular type of information.
4. Electronic page	**d.** - holds and organizes files and documents on a computer.
5. Processor	**e. -** is the design of the words on a document.
6. Folder	**f. -** is a computer program that lets you change different aspects of an image.
7. Program	**g. -** is the list of computer operations
8. Field	**h. -** is a set of letters and/or numbers that allow someone to use or access something on a computer.
9. Graphic editing program	**i. -** carries out the instructions of computer programs.
10. Encoding	**j. -** is a set of instructions composed for solving given problems by computer.

ACTIVITY 43. Read the text below. Match choices (A – G) TO (1 – 5). There are two choices you do not need to use.

THE USE OF COMPUTERS

The potential uses of computers are infinite. We can mention **1)_____** of computers in everyday life: personal, educational and commercial.

People use the Internet to explore their personal hobbies and interests, to find information, to access goods and services, such as **2)_____** or doing their banking online. Computer users make contacts and keep in touch with people all over the world using email or Internet telephony, send photos to family and friends through email attachments. In the world of leisure, computer games and multimedia (audio or video) are very popular. Many Internet users actually add to the Internet by making their own homepages using HTML code, the language which allows creating web pages. Other users write and publish blogs. A blog is **3)_____** that reflects the views of the writer. Internet users may also enjoy making their own podcasts for others to download and enjoy photos, music and video.

In schools and universities students use **4)_____** to write essays and projects, presentations and databases. The Internet is also an important educational tool, and is used in distance learning. Online learning is popular; it uses the Internet as a medium for instructions and educational development. A Virtual Learning Environment (VLE) is a software system designed **5)_____** for their students by creating a virtual classroom. It is a virtual place on the Internet where teachers and students can meet and use electronic learning tools such as videoconferences, online classrooms, whiteboards and chat rooms and so on.

A – a website where a user creates and regularly updates a journal

B – accommodate from hundreds of subscribers

C – to help teachers in the management of educational courses

D – use electronic learning tools

E – some of the most common current uses

F – word processing programs

G – booking a holiday or a flight, ordering books and DVDs

ACTIVITY 44. Arrange the sentences in logical order according to the text from ACTIVITY 43. Then use them as a plan to retell it.

A) Computer users make contacts and keep in touch with people all over the world using email or Internet telephony, send photos to family and friends through email attachments.

B) In schools and universities students use word processing programs to write essays and projects, presentations and databases..

C) A Virtual Learning Environment (VLE) is a software system designed to help teachers in the management of educational courses for their students by creating a virtual classroom.

D) We can mention some of the most common current uses of computers in everyday life: personal, educational and commercial.

E) Internet users may also enjoy making their own podcasts for others to download and enjoy photos, music and video.

1)	2)	3)	4)	5)

ACTIVITY 45. More and more people are using computers in their work. Some of them cannot imagine their lives without this invention of the 20th century. Read the following arguments and think of some more.

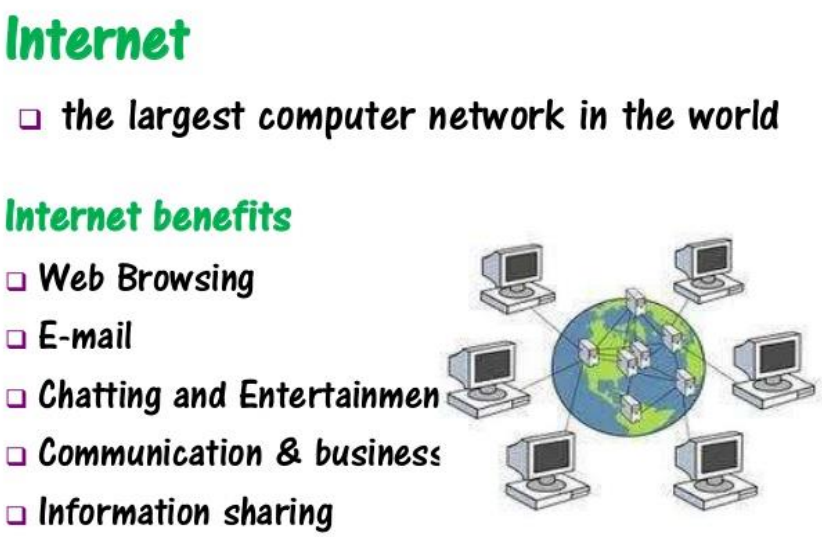
Computers are one of the greatest invention	Computers are one of the most dangerous invention
1. They save a lot of time.	1. They are dangerous for your health.
2. They can do calculations and other things which people do not find interesting.	2. People waste a lot of time playing computer games.
3. They help you to process information.	3. You can lose your work if something goes wrong with the computer.
4. You can learn a lot of 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.

ACTIVITY 46. Fill in the gaps in these sentences with a suitable word. The first letter of each missing word is given. The words in the box bellow the text can help you.

Home computers are the latest vogue **t_____.** Millions of people around the globe have personal **c_____** nowadays. And it is not something **s_____** as it used to be in the very beginning.

In the very beginning, computer systems were only occasionally networked, later they were **n_____** using a number of completely different protocols to connect one system with another. It became the biggest minus for the systems used that time that is why a unified standard was introduced and today we use only **s_____** protocols. Today the Internet is a **c_____** thing. It's on television, in magazines, newspapers, advertisement, our mobile **p_____,** cars etc. Everybody knows that the Internet is a global computer network, which embraces hundreds of millions of **u_____** all over the world and helps us to communicate with each other. Today even using your cell phone you can **c_____** to the Internet and send e-mails, pictures and some music compositions. E-mail is the most widely used Internet **a_____.** For some people, it is their most frequent form of **c_____.**

standardized, connect, special, users, common, today, networked, application, phones, computers, communication



ACTIVITY 47. Read the text filling in the gaps in the sentences with the correct words. Then answer the questions after it.

THE HISTORY OF THE INTERNET

The history of the Internet **___1___** in the United States in 1969. It **___2____** a military experiment, designed to help to survive during a nuclear war, when everything around might **___3___** by radiation and it would be dangerous to get out for any living being to get some information to anywhere. Information **___4___** over the internet takes the shortest and safest path available from one computer to another. Because of this, any two computers on the net will be able **___5___** in touch with each other as long as there is a single route between them. This technology **___6___** packet switching.

Invention of modems, special devices allowing your computer **___7___** the information through the telephone line, has opened a door to the Internet for millions people.

Most of the internet host computers are in the United States of America. It is clear that the accurate number of users can **___8___** fairly approximately, nobody knows exactly how many people use the Internet today, because there are hundreds of millions of users, and their number is constantly growing.

1	**A**	begin	**B**	began	**C**	begun	**D**	beginning
2	**A**	is	**B**	was	**C**	were	**D**	been
3	**A**	be polluted	**B**	is polluted	**C**	was polluted	**D**	polluted
4	**A**	sending	**B**	send	**C**	sent	**D**	was sent
5	**A**	stay	**B**	stayed	**C**	to stay	**D**	to staying
6	**A**	was call	**B**	called	**C**	call	**D**	was called
7	**A**	to send	**B**	send	**C**	to be sent	**D**	sent
8	**A**	count	**B**	be count	**C**	be counted	**D**	be counting

1. When and where did the history of the Internet begin?
2. What was the Internet design for?
3. What has opened a door to the Internet for millions people?
4. How many do people use the Internet today?

ACTIVITY48. Order the paragraphs (a – d) to build a text. Then read and translate it.

THE ADVANTAGES AND DISADVANTAGES OF THE INTERNET

(A)_____ Other very serious problems are Spam, control and viruses. Scientists try to solve this problem but vainly. Their efforts sink in the deep ocean of competition of defensive and offensive technologies.

(B)_____ In many countries, the Internet could provide businessman with a reliable, alternative to the expensive and unreliable telecommunications systems its own system of communications. Commercial users can communicate cheaply over the Internet with the rest of the world.

When they send e-mail messages, they only have to pay for phone calls to their local service providers, not for international calls around the world, when you pay a good deal of money.

(C)_____ However, there are some problems. The most important problem is security. When you send an e-mail, your message can travel through many different network and computers. The data is constantly being directed towards its destination by special computers called routers. Because of this, it is possible to get into any of the computers along the route, intercept and even change the data being sent over the Internet. But there are many encoding programs available. Notwithstanding, these programs are not perfect and can easily be cracked.

(D)_____ But saving money is only the first step and not the last one. There is a commercial use of this network and it is drastically increasing. Now you can work through the Internet gambling and play through the net.

(E)_____ Today the Internet is so widespread service that it starts forcing out TV, newspapers and radio from our ordinary life. It is cheaper for press agencies, news agencies or advertising agency to work in the net because it is much more cheaper and easier to maintain and support an Internet site than, for example, an agency and the whole staff. It doesn't mean that the Internet will abolish TV, newspapers or advertisement. Nothing of the kind. The Internet has started incorporating these services and in the future they will become an incorporated part of the Internet itself. Frankly saying these services have already became an incorporated part of the Internet shops, can close out or open accounts in the banks etc.

1_____ 2_____ 3_____ 4_____5_____

ACTIVITY 49. Make up questions the answers to which are the words indicated in italics. Start your questions with the words in brackets.

1. Nowadays the most popular Internet service is *e-mail.* (**What**)
2. When you send e-mail messages, you only have to pay for phone calls to *your service provider*. (**Whom**)
3. Very serious problems of the Internet *are* spam and viruses. (**Are**)
4. It is *cheaper* for press agencies, news agencies or advertising agency to work in the net. (**Is**)
5. *The use of IP telephony* is no longer limited today. (**What**)
6. The Internet could provide businessman with *a reliable, alternative to the expensive and unreliable telecommunications systems its own system of communications*. (**What**)
7. The most important problem is *security*. (**What**)
8. Now you can *work* through the Internet *gambling and play through the net*. (**What**)

ACTIVITY 50. Complete the conversation.

Nick: Dan, this new computer is absolutely great.	**A:** But I do not even know how to get in the Internet!
Dan: 1…….	
Nick: I can help you. What's the matter?	**B:** OK. I see.
Dan: 2…….	
Nick: Come on, Dan. What's up? We are friends for years. Let me help you. You are a student and the Internet is very helpful because it's a huge database of knowledge, from the pictures to an analysis of quantum mechanics. You are to have the Internet because of its near instantaneous communication and huge database of knowledge.	**C:** Thank you, Nick. See you tomorrow at 2 p.m.
Dan: 3…….	
Nick: I'll show you. It is easy. Then you should practice it and after couple days you'll be a professional user.	**D:** Deal, Nick!
Dan: 4…….	
Nick: No. I am serious. Cheer up!!! To go on the Internet and do a search for information one needs, firstly we should buy and connect a modem. Look here. It is easy to connect. Let's go and I'll show you how I have connected my computer to the Internet. Look here.	**E:** My parents bought it for me to my birthday. The only problem is that I have a computer but I haven't got the Internet connection yet. I do know no how to connect.
Dan: 5…….	
Nick: So. Done this, you should install an Internet Explorer.	**F:** What?
Dan: 6…….	
Nick: It is so-called «browser». It helps you to connect and Surf the Net. In fact, there are several browsers: Explorer, Netscape Navigator, Opera, Mozilla, etc. You can choose whatever you want. They work on the same principle. There are two ways to connect to the Internet: dial-up and broad band connections. We'll use dial-up connection. It is cheaper. I am not going to explain you how to make a dial up connection. I'll give you the book Windows XP and you'll read it there on your own. Ok?	**G:** Oh, Nick. It sounds well, but I need to practice it.

Dan: 7…….	
Nick: So, you have an internet connection and Internet Explorer installed on your computer. What are you going to do then?	**H:** Are you kidding?
Dan: 8…….	
Nick: You click on the Internet Explore icon. Right here and wait while the program is loading and then you should be connected to the Internet at once. If not, you have to connect to our dial-up service. Finally, if you want to do a search for data on the Internet, you are to type in the browser you use the address of this data. Also you can simply use the existing search-programs: the Google, Rambler, or Yahoo search programs. You can also send and receive e-mail or get some news from the Internet. There are many news servers in the web.	**I:** What is that?
Dan: 9…….	
Nick: OK. Here it is the book I promised you. Tomorrow I'll come and help you to connect to the Internet.	**J:** You know I do need the Internet connection but I do not want to bother you.
Dan: 10…….	
Nick: See you.	

ACTIVITY 51. Read the text below. Match choices (A – G) TO (1 – 5). There are two choices you do not need to use.

With the raise of the Internet, information technology **1)_____** more influence on education. Two areas which are becoming more and more significant are 'blogs' and 'wikis'.

The word 'blog' is short for 'Web log'. A blog is an online diary or 'log' of **2)_____.** Anyone can create their own 'blog' and blogging is becoming extremely popular – type 'blog' into Google and you'll get over 500 million results. For educational purposes, academics, teachers, and students **3)_____:** places to work together and share information and ideas. Some universities even give their students and staff free space on a server to start their own blogs.

'Wikis' are websites where anyone can **4)_____,** so that the site becomes a group creation – 'wiki' stands for 'what I know is'. These sites can be a valuable source of information and opinion for students, tough the information may not be totally accurate – some academics refuse to use them. Perhaps the best-known wiki is the online encyclopedia Wikipedia which has more than 1 million entries in over 100 languages. Wikipedia **5)_____** is completely accurate, so students will be able to use it with confidence, and there's no doubt that that it is an incredible resource.

A – create blogs as personal online study sites
B – accommodate from hundreds of subscribers
C – is now beginning to have much
D – is working hard to makes sure that is information
E – some of the most common current uses
F – someone's life, thoughts, or opinions
G – add content and make changes

ACTIVITY 52. Test yourself. Match the following computer terms with their definitions.

1. IP (Internet Protocol) address	**a. -** is the way that a web page looks.
2. Email	**b. -** is a website where a user creates and regularly updates a journal that reflects the views of the writer.
3. Appearance	**c. -** is the programming language that makes up a website.
4. Downloading	**d. -** is any business conducted on the Internet.
5. The Internet	**e. -** is copying information from a website to your own computer.
6. E-commerce	**f. -** is electronic messages sent to someone over the Internet.
7. ISP (Internet Service Provider)	**g. -** is the language which allows to create web pages.

8. Blog	**h. -** is a network of computers all over the world, joined by phone lines, satellite or cable.
9. HTML code	**i. -** is a group of numbers that identify a computer on a network.
10. Coding	**j. -** is a company that gives its customers access to the Internet email addresses and data storage.

ACTIVITY 53. Fill in the gaps in the text below with the words from the box. Use each word only once. Then answer the questions after the text.

Only a few years ago, a «web log» was a little-known way of keeping an **___1___** diary. At that time, it seemed like «blogs» were only for serious computer geeks or obsessive. This didn't last long, though, and within a very short **___2___** of time, blogs exploded — blogs were everywhere, and it seemed that almost everyone read blogs, or was a **___3___.**

The enthusiasm for blogging of a couple of years ago (when it was estimated that ten new blogs were started somewhere in the world every minute) now seems to have died down a bit — yet thousands of blogs (probably the best ones) remain. Blogs are now seen as important and influential sources of **___4___** and opinions. So many people read blogs now that it has even been suggested that some blogs may have been powerful enough to influence the result of the recent US election.

Blogs are very easy to set up — all you need is **___5___,** an Internet connection and the desire to write something. The difference between a blog and a traditional Internet **___6___** is that a blog is one page consisting mostly of text (with perhaps a few pictures), and — importantly — space for people to respond to what you write. The best blogs are similar to online discussions, where people write in responses to what the blogger has written. Blogs are regularly updated — busy blogs are **___7___** every day, or even every few hours.

Not all blogs are about politics, however. There are blogs about music, films, sports, books — about any **___8___** you can imagine! So many people read blogs now that the world of blog writers and blog readers has its own name — the «blogosphere».

period, subject, a computer, updated, news, blogger, site, online,

1. What is a blog?
2. What is the main difference between a blog and a traditional Internet site?
3. How often are blogs updated?
4. What are blogs written about?

ACTIVITY 54. Test yourself. Match the following computer terms with their definitions.

1. Windows	**a**. - is the material on a web page, including text and graphics.
2. Wikis	**b. -** is a set of words and letters that identify a company or address on the Internet.
3. Content	**c. -** is the system of web pages, information, pictures, etc. that is available on the Internet.
4. www (World Wide Web)	**d.** - with the help of this the user can divide the screen into different areas. You can move them around the display screen, and change their shape and size at will.
5. Domain name	**e. -** are websites where anyone can add content and make changes, so that the site becomes a group creation – "wiki" stands for "What I Know is".

ACTIVITY 55. Read the article and learn some more information about the Internet and information revolution. Do exercises that follow the text.

In 1969, the US Defence Advanced Research Projects Agency needed a system for computers "to talk" to each other via the telephone. They created a network of computers called DARPANET. In 1984, the US National Science Foundation started the NSNET network, a system of five supercomputer centres.

More and more people and agencies wanted to join the network. NSNET became known as the Inter-Net-Network. People started calling in the Internet.

Today, there are millions of computers all over the world which are connected to the Internet.

The World Wide Web is the most popular area of the Internet. The Web is a huge collection of documents, from all over the world. It contains a mixture of texts, images and sounds.

The Internet is a source of information that is accessible through a computer. It consists of millions of pages of data about very possible subject. Twenty-five million people surf the Internet every day. The Internet is already the biggest source of information of the planet. It will soon be the main source of material for students and teachers of many different subjects.

To access the Internet, you need a service provider, a company which can bring the Internet to your computer screen. Then you access the information via your telephone line.

If you have the website address of a company or service that you want, you simply type it and you arrive automatically at the page you want. If you haven't got a particular website address, there are several directories or search engines which can help you, such as Alta Vista, Yahoo! or Infoseek. There are then two ways to find information-directories and key-word searches.

A) Mark the correct variant.

1. What is exactly the Internet?
   A a system of five supercomputer centres.
   B a system of four supercomputer centres.
   C a system of six supercomputer centres.
   D a system of six supercomputer centres.

2. What kind of information you can find there?
   A It consists of every specific information.
   B It consists of millions of pages of data about every possible subject.
   C It consists of hundreds of pages of data.
   D It consists of a few of pages of data.

3. How can you access the information?
   A You can access the information via your TV set.
   B You can access the information via your radio phone.
   C You can access the information via your telephone line.
   D You can access the information via sputnik.

4. In what country did the Internet start?
   A In Great Britain **B** In the USA
   C In France **D** In Spain

5. What was the original purpose?
   A the US Defence Advanced Research Projects Agency needed a system for computers "to talk" to each other via the telephone.
   B the US National Science Foundation needed a system for computers "to talk" to each other via the telephone.
   C The NASA needed a system for computers "to talk" to each other via sputniks.
   D The US Military Service needed a system for computers "to talk" to each other via the mobile telephone.

6. When did NSF start the NSNET network?
   A in 1989 **B** in 1987
   C in 1980 **D** in 1984

7. What is called WWW?
   A World Wide Web **B** World Wide Word
   C World War Web **D** World Web War

8. What does the Web contain?

A The Web contains the coded information.
B The Web contains a mixture of texts, images and sounds.
C The Web contains the whole library.
D The Web contains music.

9. How many people surf in the Internet every day?
A twenty million people **B** twenty-five million people
C thirty million people **D** thirty-five million people

10. Who is called a service provider?
A a company which can bring the Internet to your computer screen
B an international firm which access the Internet
C a local company which serves your computer
D an international company which serves your computer

B) Mark if the following statements are true (T) or False (F)

1. The Internet is a source of information that is accessible through a cable TV.
2. You can access the Internet without a service provider.
3. The first network of computers was called DARPANET.
4. You can't do a key-word search without knowing website address.
5. The Internet consists of millions of pages of data about different subjects.
6. More and more people and agencies wanted to join the network.
7. The World Wide Web is the most popular area of the Internet.
8. The Internet is a source of information.
9. The Web is a small collection of documents from all over the world.
10. There are several directories or search engines which can help you.

ACTIVITY 56. Answer the questions.

1. What role does a computer technology play in our society?
2. How do you define a computer technology?
3. How has it improved out life?
4. How has it made out life worse?
5. Can you present any examples of its positive and negative impact?
6. Would you rather live in a world with everything entirely dependent on a computer technology or without it whatsoever? Why?

ACTIVITY 57. Test yourself. Match the following computer terms with their definitions.

1. Email address	**a**. - is a small camera that connects to a computer. It broadcasts sound and video on the Internet.
2. Information security	**b. -** is a collection of related pages on the Internet that contains information, pictures, etc. and is usually published by a person, group, or company.
3. Navigation	**c. -** is a company that provides the space for a web site on the Internet.
4. Search Engine	**d.** - is the act or practice of determining how a website looks.
5. Webcam	**e. -** is a system linking millions of documents stored on the internet computers around the world.
6. Web design	**f. -** is a computer program that allows people to search for part of information, products, etc. on the Internet.
7. Functionality	**g. -** is the act of using and finding things on a website.
8. Web	**h. -** is the act or process of keeping information safe preventing others from seeing it.
9. Web host	**i. -** is a location to which electronic messages can be delivered.
10. Website	**j. -** is the ability of different elements of a website to work together.

ACTIVITY 58. Fill in the gaps in the text below with the words from the box. Use each word only once.

THE FUTURE OF CYBERSPACE

Peter Taylor finds out how computers and the Internet are going to affect our lives.

In the last fifty years, the Internet has **___1___** dramatically. In 1983, there were only 200 computers connected to the Internet; now there are millions and this growth is clearly going to continue.

Some **___2___** are pessimistic about the future. One worry is the activities of cybercriminals. Even now, young hackers can get into the computers of banks and governments. In the future, cyber **___3___** may "attack" the world's computers, cause chaos, and make planes and trains crash.

However, many people are **___4___** about the future of the Internet. Already, users can buy books, find out about holiday offers, book tickets, and get all sorts of information from the Internet. "In the next few years," says Angela Rossetto of *Cyberia* magazine, "it is clear that we are going to see an explosion of shopping on the Internet." She also

believes that, in the future, we will get **___5___** from the Net and that television will probably disappear. The postal service may also disappear with the increasing use of e-mail.

Some specialists see our future in virtual **___6___**– the use of computers with sounds and images that make you feel as if you are in a real situation. "Personally, I think virtual reality will be become part of modern life," says Australian expert Peter Wojciechowski. "I see people living and working in a **___7___** world. We will work in virtual offices, shop in virtual supermarkets, and we will even study in virtual **___8___**."

experts, optimistic, schools, terrorists, reality, entertainment, virtual, grown

ACTIVITY 59. Arrange the sentences in logical order according to the text from ACTIVITY 58. Then use them as a plan to retell it.

A. Some specialists see our future in virtual reality.

B. In the future, cyber terrorists may "attack" the world's computers.

C. In the last fifty years, the Internet has grown dramatically.

D. We will work in virtual offices, shop in virtual supermarkets, and we will even study in virtual schools.

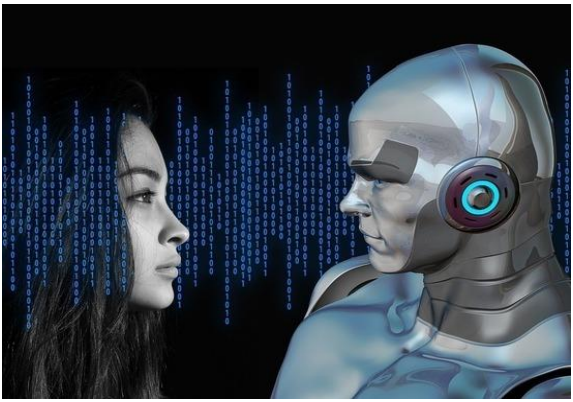
E. Many people are optimistic about the future of the Internet.

1)	2)	3)	4)	5)

ACTIVITY 60. Test yourself. Match the following computer terms with their definitions.

1. Videoconference	**a**. - is a part of an Internet address that allows a computer to connect to the site.
2. Web browser	**b. -** is a program that receives, sends and stores email on a computer.
3. Web development	**c. -** is a meeting or conversation between two or more people in different locations using computer technology.
4. http	**d. -** is a computer program that allows people to look at web pages on the Internet.
5. Email client	**e. -** is the act or practice of determining how a website works.

CHAPTER 2. EXTENSIVE READING



TEXT 1. IBM

International Business Machines Corporation is headquartered in Armonk, NY, USA. The company manufactures and sells computer hardware, software, and services. It is in operation since 1888. IBM's history dates back decades before the development of electronic computers — before that it developed punched card data processing equipment. It originated as the Computing Tabulating Recording (CTR) Corporation, which was incorporated on June 15, 1911 in Binghamton, New York. Thomas Watson Sr., the founder of IBM, became General Manager of CTR in 1914 and President in 1915. In 1917, the Computing-Tabulating-Recording Company entered the Canadian market under the name of International Business Machines Co., Limited. On February 14, 1924, CTR changed its name to International Business Machines Corporation.

In the 1950s, IBM became a chief contractor for developing computers for the United States Air Force's automated defense systems.

IBM was the largest of the eight major computer companies through the 1960s.

IBM had over 330,000 employees worldwide and revenues of $96 billion in 2004. IBM is the largest information technology company in the world, and one of the few with a continuous history dating back to the 19th century. It has engineers and consultants in over 170 countries and development laboratories located all over the world, in all segments of computer science and information technology. As of 2005 it employs about 195,000 technical professionals. IBM Research has eight laboratories, all located in the Northern

Hemisphere. IBM employees have won five Nobel Prizes.

In 2004, IBM announced the proposed sale of its PC business to Chinese computer maker Lenovo, which is partially owned by the Chinese government, for USD650 million in cash and USD600 million in Lenovo stock. The deal was approved in March 2005, and completed in May 2005.

Answer the questions:

1. Where is International Business Machines Corporation headquartered?
2. Who is the founder of IBM?
3. When was IBM sold to Chinese computer maker Lenovo?

TEXT 2. DVD TECHNOLOGY

DVD is sometimes called «Digital Versatile Disc» or «Digital Video Disc». It is an optical disc storage media format that can be used for data storage, including movies with high video and sound quality. DVDs resemble compact discs as their physical dimensions are the same — 12cm in diameter but they are encoded in a different format and at a much higher density, using the Universal Disk Format (UDF) file system.

In the early 1990s two high density optical storage standards were being developed: one was the Multimedia Compact Disc (MMCD), backed by Philips and Sony, and the other was the Super Density Disc (SD), supported by Toshiba, Time-Warner, Matsushita Electric, Hitachi, Mitsubishi Electric, Pioneer, Thomson, and JVC. Later IBM's president, Lou Gerstner, acting as a matchmaker, led an effort to unite the two camps behind a single standard, anticipating a repeat of the costly format war between VHS and Bet Amax in the 1980s.

Philips and Sony abandoned their MMCD format and agreed upon Toshiba's SD format with two modifications that are both related to the servo tracking technology.

The first DVD players and discs were available in November 1996 in Japan, March 1997 in the United States, 1998 in Europe and in 1999 in Australia. The first DVD movie appeared in 1996. The movie had the first test for 2.1 surround sound. In 1999 Independence Day was the first movie to introduce 5.1 surround sounds.

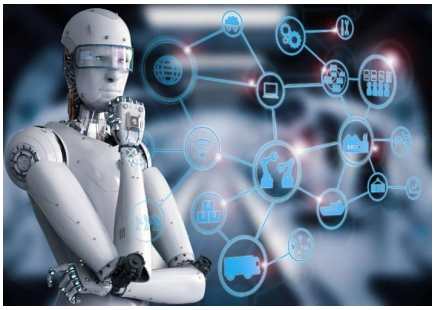
By the spring of 1999 the price of a DVD player had dropped below the US $300. As a result Wal-Mart began to offer DVD players for sale in its stores.

As of 2006 DVD sales make up the bulk of gross sales and VHS is a slim minority. The price of a DVD player has dropped significantly. Many modern computers are sold with DVD-ROM drives stock.

Answer the questions:

1. What is DVD?
2. What file system format is used in a DVD disc?
3. What is SD?

TEXT 3. THE ROBOT'S NERVOUS SYSTEM



Robots, in order to perform many functions, need a nervous system and organs of sense as well as a brain. A human being has to have eyes and ears, a nose, a mouth and a sense of feel. Depending on the task it is to perform, a robot can have any of these built into it.

A robot's eyes, for example, are generally made up of photoelectric cells. A robot eye can consist of one cell, or of hundreds of cells placed close together. A one-cell eye isn't able to do much more than tell the difference between light and dark, while some of the more complex ones are able to see colour and detect movement.

Robots can be taught to hear various types of sounds. Usually they are made so that they can hear only those sounds which are important to them. For instance, a robot designed to hear the sound of a jet aircraft would have no reason to hear the voice of a bird. Robot ears are better than human ears for a given single function because they are not distracted by unimportant sounds.

Robot hearing is possible because sound is a form of energy. It comes in waves. Some sound waves have high frequency, others have low frequencies. A robot can be adjusted to detect differences in frequency. If sounds of a given frequency are important to a robot's job, it acts on them. Otherwise the brain ignores the sound.

Robot noses can detect different odours because the elements that make up those odours change the composition of the air that carries them. Robot noses are adjusted to analyze air passing through their nostrils and from the air composition tell what that air smells like.

Robots feel in the same way that humans do. Tiny wire fingers can go across a surface and, from the way the surface pushes the wires around, the robot can tell whether the surface is smooth or rough. Robots can also tell the difference between two temperatures. Another kind of robot feel sensor can feel the exact temperature more accurately than any thermometer.

Answer the questions:

1. What are a robot's eyes generally made up?
2. Why is robot hearing possible?
3. What do you know about robots feel?

TEXT 4. PERIPHERAL EQUIPMENT

The microcomputer has to communicate with the outside world, so that programs and data can be entered into its memory and processed information can be displayed or transmitted in some form to the microcomputer user.

There are various types of peripheral equipment that attached to microcomputers including keyboards and paper tape readers for input, and visual display units (VDUs) and printers for output. Information may be output from the microcomputer on to magnetic tape or disk for storage and re-entered when required.

Different sensors and actuators may be linked (interfaced) to the microcomputer for controlling instruments and machines.

A keyboard consists of a number of switches which are activated by pressure or simply by touching them. The keys are arranged as a matrix, so that the depression of any key can be detected by scanning the rows and columns of the matrix. Hardware may be used to sense which key has been pressed or this may be carried out by a software routine.

Answer the questions:

1. What types of peripheral equipment do you know?
2. What does a keyboard consist of?
3. How are the keys arranged?

TEXT 5. INPUT, PROCESS, STORE, OUTPUT

There are four steps that any computer uses in doing its job. These are (1) inputting of data into the computer, (2) processing of the data that has been input, (3) storage of data, and (4) production of some kind of useful output.

In business computers, this four-step process is very easy to see. In order to produce a bill for a customer, we would have to input the information about what the customer bought. Once all of this information had been input, the computer would process this information and would print the information for the customer's bill. Throughout this cycle, the computer would be storing (1) the data that had been input, (2) the data produced during intermediate processing steps, and (3) the data being printed out. Apart from processing data, computer systems are being increasingly used to store data; such storage has the advantage of allowing data to be rapidly retrieved.

In manufacturing, computers are used to control robots. If you think about it, any robot has to use some sort of a computer as the basis for its "intelligence". If we were to build a robot to be used in the assembling of automobiles, and if our robot had the specific task of mounting wheels on the car, the instructions for this process would be input into the computer. In addition, the robot would still have to be able to determine where the car and the wheel were. Various types of sensors, such as a television camera, would enable the robot to "see" the position of the wheel and the car. In this case, we would not have to type information into a computer for the robot to act. We do have to have some means of getting the data into the computer, like a television camera. If we were to build this robot correctly, it would use the television camera to tell where the car was, where the wheel was, and even where the lug nuts were. The television camera would be the input. The process would be the calculations required to determine how to get the wheel on the car, and the output would be the robot's response to these calculations: mounting the wheel on the car, putting on and then tightening the lug nuts, and checking to see if the tire were properly mounted. The basic steps — input, store, process, and output — would be taking place with our robot even though no data was typed into the robot's computer.

Answer the questions:

1. What four steps that any computer uses in doing its job do you know?
2. How are computers used in manufacturing?
3. What's the basis for robot's "intelligence"?

TEXT 6. MENU SYSTEM

To help a person control the bookkeeping system by computer, the computer can be programmed with what is known as a menu system. This menu system for a program or for data selection enables the person running the computer to see a list of the things he can do next. Each item on the menu can, if necessary, select its own menu; and that menu can, in turn, call still other menus. For example, the person who is trying to manage a company's accounting system may sit down at the business computer and be shown a menu that would let him select accounts payable, accounts receivable, general ledger, inventory, or payroll. The computer operator might then select payroll, whereupon the computer would then respond with the payroll menu, showing items necessary to guide the computer operator. One such item might be "enter hours worked". Selecting this item would allow the computer operator to input to the computer the number of hours that each employee had worked during the pay period.

Another item might be "print paychecks". Once all of the information had been input and the computer operator was satisfied that the information was correct, the computer could be directed to actually print the employee paychecks.

Answer the questions:

1. What is a menu system?
2. What does menu system for a program or for data selection enable the person?
3. What can the person who is trying to manage a company's accounting system do?

TEXT 7. AGE OF THINKING MACHINES

It goes without saying that the electronic computer is one of the most remarkable achievements of the 20th century, which marked the emergence of man into the era of automation of mental work. The following trends in the development of electronic computation may be defined according to Academician Viktor Glushkov.

Firstly, it's an increase in the volume of the machine memory. The memory system of the future machines will store the entire wealth of knowledge accumulated by man in all the sciences, in culture and in every aspect of human life, the potential in this field being infinite.

Secondly, it's microminiaturization. This is associated with the progress of radio electronics. In the designing of electronic computers we have passed from radio valves to transistors, which are smaller in size, and recently to solid circuits, where various portions of a tiny piece of synthetic crystal are imparted the necessary electro-physical properties by appropriate treatments.

Microminiaturization is found to make it possible to construct extremely complex computers of small size and weight, but consisting of a tremendous number of elements.

The electronic machines will affect radically the work of scientists. In effect, the machine will by itself accumulate process and supply new data. By this method some new types of codes have been found, their discovery necessitating the testing and comparisons of approximately one thousand million operations. Thanks to the high rate of processing the computers have found new codes independently.

Answer the questions:

1. What is one of the most remarkable achievements of the 20th century?
2. How may the trends in the development of electronic computation be defined?
3. What will the electronic machines affect?

TEXT 8. GENERAL AND SPECIAL PURPOSE COMPUTERS

The general-purpose computer is a machine capable of performing many different kinds of problems. It is sufficiently flexible so that it can communicate with all parts of the machine. It can execute a long list of instructions. A program may be prepared at will, stored in the memory, and then executed.

Not so with the special-purpose computer. As its name implies, the special-purpose computer is built to perform only one job or a group of special jobs, internal communication being restricted. It may possess a shorter instruction repertoire. Its program may be fixed; in other words, the same sequence of events may occur during a repetitive cycle.

The advantage of a general-purpose computer is that it can be programmed to perform many different problems, being flexible enough. The advantage of the special-purpose computer is that it can be tailored to do a specific job in the most straightforward way.

Most computers are neither completely general-purpose machines nor completely special-purpose machines. Many so-called general-purpose computers are known to have features which restrict their use to certain general problem areas. The programs of many special-purpose computers may be modified by switches on the control panel, by plug boards, or by other means.

The general-purpose machine is as a rule more complicated. It should be easy to apply the principles of general- purpose machines to the understanding of special-purpose machines.

Answer the questions:

1. What is the difference between a general-purpose computer and a special-purpose one?
2. What is the advantage of a general-purpose computer?
3. How may computers may be modified?

TEXT 9. PROGRAMMING

Any problem is expressed in purely mathematical terms. It contains formulae, equations, calculations. But the problem is for the computer a thing beyond its understanding. The computer cannot handle formulae, equations or calculations. The computer does not know what man asks of it. The programmer is the connecting link between the computer and the problem it has to solve. He has first to visualize then to subdivide any complex problem into a sequence of simple instructions that the computer could cope with. He has to realize in the computer all information transmission routes necessary for the execution of a certain sequence of operations.

Every problem, even the simplest one, contains numerous instructions. Naturally, the more complicated is the problem, the longer is the list of instructions. The compilation of programmes is a very difficult job requiring high qualification. When the problem is compiled and laid into the computer, the latter sets to work. The purpose of the programme is to provide instructions for the opening of a certain group of valves while keeping the others closed. The work of the computer is governed by the control block, the main element of the computer. This block exercises control over different parts of the computer, tells each part when it should go into action, what and how it should do. The control block concentrates in itself all the internal communications and "processes", all commands which control such a complex automation as the high-speed electronic computer.

The operator switches on the computer and inserts a programme containing a list of instructions that have to be performed in sequence in order to solve the programme. The programme in a computer is executed in sequence — in cycles, step by step — operation after operation.

An instruction has been received by the control device. It immediately "opens" the appropriate group of valves and makes the computer carry out the instruction.

Suppose the instruction is: add the umber in register B to the number in register A, send the sum to register C. Other valves will be needed for subtraction, etc.

The computer should open the group of valves which transmit numbers over the adder.

Each instruction consists of two parts: it tells "what to do" and "where to do it"— the operation and the address part or simply address.

Without the programme the electronic computers, even those capable of millions of operations per second are, at best, merely items of furniture of institute and factory offices. The entire line of calculations in the computer, the so-called processing of information from input to output, is organized by the programme. It's the programme that ensures the execution of all operations assigned to the computer.

The programmers prepare whole series of standard programmes for the solution of typical problems. The greater the problem file provided for the computer the better it is adapted for work, the easier is its contact with the user, the greater are the facilities for its use and the greater is its value.

Programme compilation has become a sort of an industry for the mathematical provision of computers. This mathematical provision is a complex – literally a multitude – of programmes compiled in special libraries. They enable the computer to operate efficiently, to carry out the solution of pogrammes.

Those who think of becoming programmers should study mathematics thoroughly.

Answer the questions:

1. Why should programmers study mathematics thoroughly?
2. What does every problem contain?
3. What two parts does each instruction consist of?

TEXT10. TYPES OF INSTRUCTIONS

Communication between man and machine may be accomplished automatically or manually. In the automatic method a complete program of instruction words and a list of required data words are prepared beforehand. This information is then loaded into the machine which then executes the instructions in proper sequence. The manual system of communication is accomplished by means of switches and controls on the front panel of the machine. Instruction words and data words may be fed individually into the machine; and instruction sequences may be modified. The machine keeps the operator up to date on events within the computer by means of display lights which indicate the informational content of various registers and whether any arithmetic errors or component malfunction have occurred.

In keeping with the general organization of the computer, several different types of instructions are used by man to communicate with the machine.

Most of the actual arithmetic work of the machine is performed by the arithmetic unit. We inform the machine to do these operations by means of arithmetic instructions which include: add, subtract, multiply, divide, square root, and shift right. Some of these instructions such as add and subtract refer to addresses in memory where operands are located. Other instructions, such as shift right, do not refer to memory. The first type of instruction requires an address portion. The second type does not require an address.

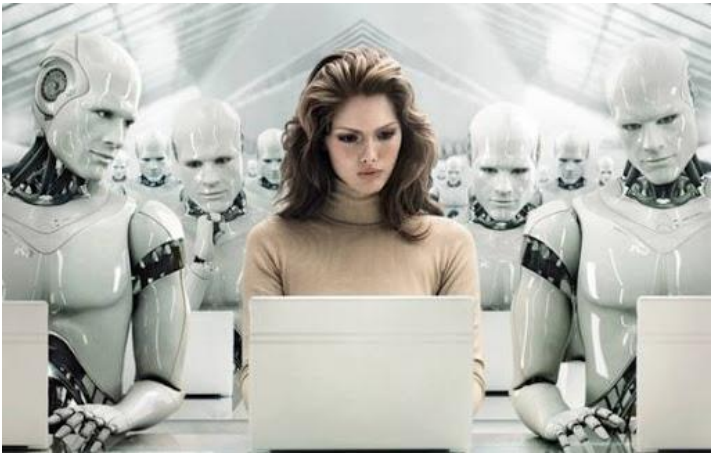
Before operations can be performed by the arithmetic unit, operands must be transferred to it. After the arithmetical unit has performed its work, results must be removed from it. Information must also be fed into and out of other registers in the computer. Man instructs the machine to perform these operations by means of transfer instructions. Transfer instructions may be of two types: read or write. In the first, a word is read out of memory into another register in the machine. In the second, a word is taken from another register and written into the memory. The memory location in both cases is given by the address portion of the instruction.

As long as the computer is performing simple arithmetic operations, transfer and arithmetic instructions are sufficient for communication. But the great advantage of the digital computer is that it can follow one sequence of instructions under one set of conditions and another sequence of instructions under another set of conditions. An instruction which asks the computer to do this is called a branch instruction. The branch instruction enables man to communicate with the computer's control unit to modify the sequencing of computer instructions.

Answer the questions:

1. How can communication between man and machine be accomplished?
2. What is performed by the arithmetic unit?
3. What is the advantage of the digital computer?

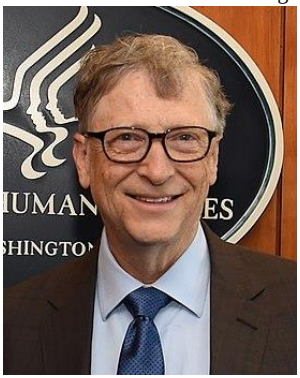
CHAPTER 3. TEST YOURSELF



TEST 1

Read the text below. For questions (1—5) choose the correct answer (A, B, C or D).

William Henry Gates III was born on 28 October 1955. He is one of the world's richest people and perhaps the most successful businessman ever. He confounded the software giant *Microsoft* and turned it into the world's largest software company. He is the best-known entrepreneur of the PC revolution. He has also written two best-selling books and started his own charity with his wife.



Gates was fascinated with electronics from a young age. In 1975 he read about a small technology company. He contacted them to see if they were interested in a computer program he had written. This led to the creation of *Microsoft*. Gates later struck a deal with IBM that put *Microsoft's Windows* on IBM computers. This deal made *Microsoft* a major player in the IT industry.

Gates was in charge at *Microsoft* from 1975 until 2006. He was an active software developer at the beginning. He had a vision that computers could change everyone's life. He helped to make this vision come true and developed many products that are now part of modern life. His management style has been studied and copied around the world.

Gates stepped down as *Microsoft* CEO in June 2008. Time magazine voted Gates as one of the biggest influences of the 20th century.

1. **What is the best title for this text?**

A) The Creation of *Microsoft.*

B) Gate's Family Life.
C) Bill Gates: the Story of Success.
D) Bill Gates: the Early Years.

2. **Bill Gates _____**
A) is the world's richest man.
B) founded the software giant *Microsoft.*
C) turned *Microsoft* into the world's largest software company.
D) has written many best-selling books.

3. **When did Gates start being interested in electronics?**
A) When he was rather young.
B) After he read about a small technology company.
C) Since 1975.
D) While studying at the University.

4. **According to the text, *Microsoft* became a major player m the IT industry due to _____**
A) Gate's interest in electronics.
B) cooperation with a small technology company.
C) the development of the IT industry.
D) the contract with IBM that put *Microsoft's Windows on* IBM computers.

5. **Gates believed that _____**
A) software doesn't need further development.
B) computers could influence people's life.
C) the importance of computers is doubtful.
D) he wasn't competent enough to be in charge at *Microsoft.*

TEST 2

Read the text below. Match choices (A-H) to (1-5). There are three choices you do not need to use.

WINDOWS

Microsoft Windows (or simply Windows) is **1)** _____ 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 consist 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 **2) _____** 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 **3) _____,** 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 **4) _____,** such as word processing. WordPerfect is an example of an application)

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 **5)_____.** 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 past 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.

A – at interpreting your commands
B – the means for seamlessly joining the capabilities of very different application programs
C – run programs, enter and move data around
D – have hard disks
E – a software program that makes your IBM PC (or compatible) easy
F – portions of one document into another
G – a speed of several hundred multiplications per minute
H – a software package that you use for a specific task

TEST 3

Read the texts below. Choose from (A-H) the one which best fits each space (1-6) . There are two choices you do not need to use.

The universal symbol of Internet era communications, the @ sing used in e-mail addresses. **1)_____,** is actually a 500-year-old invention of Italian merchants, a Rome academic has revealed. Giorgio Stabile, a science professor at La Sapienza University, claims **2)_____** of the symbol's use , as an indication of a measure of weight of volume. He says the sing represents an amphora, a measure of capacity based on the terracotta jars used **3)_____** in the ancient Mediterranean world.

The professor unearthed the ancient symbol in the course of research for a visual history of the 20th century, **4)_____.** The first know instance of its use, he says, occurred in a letter written by a Florentine merchant on May 4, 1536. He says the sign made its way along trade routes to northern Europe, where it came **5)_____,** its contemporary accountancy meaning.

Professor Stabile believes that Italian banks may possess even earlier documents bearing the symbol lying forgotten in their archives. "The oldest example could be of great value. It could be used for publicity purposes and **6)_____**," he says. The race in on between the mercantile world and the banking world.

A – to signify the word "at"
B – to represent "at the price of"
C – to see who has the oldest documentation of @
D – to transport grain and liquid
E – to have stumbled on the earliest know example
F – to be published by the Treccani Encyclopedia
G – to learn how popular it has become
H – to enhance the prestige of the institution that owned it

TEST 4

Read the text below. Match choices (A-H) to (1-5). There are three choices you do not need to use.

FIVE WAYS TO TELL IF YOU ARE ADDICTED TO THE INTERNET

Internet addiction is a relatively new thing. After all, the Internet has only become commonplace in the last few years.

How many of these signs of internet addiction do you have?

1) _____ This happens when you absolutely need to check your emails every few minutes "just in case" you miss something important. Even though most of the time it's spam or trivia.

2) _____ When you wake up, you head straight for your computer, even before you brush your teeth or say "good morning" to other members of your household.

3) _____ This happens when the "I'll just be a few minutes" turns into hours of surfing the web. You either start to miss meals or eat at your keyboard.

4) _____ Which may be a blessing in disguise if they spend all their time hunched over a computer screen. But seriously, if the majority of your "friends" only exist on Facebook then it's time to

get out more.

5) _____ The virtual worlds that exist and that you're part of are so much more enticing than the real world you live in. You can meet all sorts of new people and have adventures with them.

If you think you're addicted to the Internet, don't panic. Help is at hand. And you can even get the help you need online! Find out how to curb your internet addiction and start to live a normal life again.

A – Your Second Life becomes more important than your first life
B – You never meet your friends
C – Constant email checking
D – You must get on-line
E – You create new accounts
F – You start to skip lunch or dinner
G – You swap email addresses with people you meet
H – You become restless and moody when you're apart from your computer

TEST 5

Read the text below. For questions (1—5) choose the correct answer (A, B, C or D).

ARE YOU A BLOGGER, TOO?

Only a few years ago, a «web log» was a little-known way of keeping an online diary. At that time, it seemed like «blogs» (as they quickly became known) were only for serious computer geeks or obsessive. This didn't last long, though, and within a very short period of time, blogs exploded — blogs were everywhere, and it seemed that almost everyone read blogs, or was a blogger.

The enthusiasm for blogging of a couple of years ago (when it was estimated that ten new blogs were started somewhere in the world every minute) now seems to have died down a bit — yet thousands of blogs (probably the best ones) remain. Blogs are now seen as important and influential sources of news and opinions. So many people read blogs now that it has even been suggested that some blogs may have been powerful enough to influence the result of the recent US election.

Blogs are very easy to set up — all you need is a computer, an Internet connection and the desire to write something. The difference between a blog and a traditional Internet site is that a blog is one page consisting mostly of text (with perhaps a few pictures), and — importantly — space for people to respond to what you write. The best blogs are similar to online discussions, where people write in responses to what the blogger has written. Blogs are regularly updated — busy blogs are updated every day, or even every few hours.

Not all blogs are about politics, however. There are blogs about music, films, sports, books — about any subject you can imagine! So many people read blogs now that the world of blog writers and blog

readers has its own name — the «blogosphere».

But how influential, or important, is this blogosphere? One problem with blogs is that many people who read and write them seem only to communicate with each other. When people talk about the influence of the blogosphere, they do not take into account the millions of people around the world who are not bloggers, never read blogs, and don't even have access to a computer, letting alone a good Internet connection.

Sometimes, it seems that the blogosphere exists only to influence itself, or that its influence is limited to what is actually quite a small community. Blogs seem to promise virtual democracy — in which anyone can say anything they like, and have their opinions heard — but who is actually listening to these opinions? There is still little hard evidence that blogs have influenced people in the way that traditional mass media (television and newspapers) have the ability to do.

1. According to the first paragraph, a «web log» or «blog» _____

A) didn't last long.
B) is a kind of an online diary.
C) is read or written by everyone.
D) is only for serious computer geeks or obsessive.

2. Which of the following can be inferred from the text?

A) The popularity of blogging has recently declined.
B) The enthusiasm for blogging has increased for the last two years.
C) At present ten new blogs are started somewhere in the world every minute.
D) Most blogs are about politics.

3. What is the main difference between a blog and a traditional Internet site?

A) There's no difference.
B) A blog can never have any pictures.
C) An Internet site consists mostly of text.
D) There's space for people to respond in a blog.

4. What does the author mean by saying that «Blogs are now seen as important and influential sources of news and opinions »?

A) Blogs are a means of a political control.
B) Blogs can have an effect on the popular beliefs and social processes in the community.
C) Blogs seem to promise virtual democracy.
D) Blogs have influenced people in the way that traditional mass media do.

5. According to the text, which of the following statements is TRUE?

A) The best blogs are similar to intercommunication conversations.
B) Blogs are rarely updated.
C) Not all people in the world read blogs and have access to a computer.
D) The blogosphere exists to influence society.

TEST 6

Read the texts below. Match choices (A-H) to (1-5). There are three choices you do not need to use.

1)_____ Safe, comfortable and, above all, green. Electric-powered cars will not produce any substances which are dangerous for either people or the environment. In 10-20 years all cars will have their own built in computers. These computers will help choose the best way to go and avoid accidents. You can even sit back and let the computer do the driving!

2)_____ As you know, personal computers use a lot of power. In fact, with their printers and monitors, computers in the USA use each year as much electricity as the whole state of Oregon. Not to waste electricity, new "green" computers are being developed by more than a hundred personal computer firms in the USA. When left on but unused for more than a few minutes, they go down to a standby, using 80 per cent less energy. At a command the PCs return to full power.

3)_____ Nowadays, people working in offices use computers, which contain hundreds of documents. Do you know how much space these documents would take up, if they were printed on paper? They'd occupy whole rooms! In many offices computers are linked in a network. This way, employees can exchange information and messages without moving from their tables.

4)_____ Technology has allowed more and more people to work from the place where they live. Using a modem on a telephone line connected to their computer, everyone can be linked to the company computer. In this way, they don't waste so much time, because they don't have to go to the office every day. It also means less pollution in the atmosphere caused by transport.

5)_____ Good-bye, pencils! Farewell, sheets of paper! These days' cartoons are being made with a computer. The first-ever cartoon to be created by computer was "Toy Story" produced by Steve Jobs. A typical Walt Disney cartoon usually needs up to 600 designers. "Toy Story" was made using only 100. So, like so much of modern life, today's cinema seems to be falling more and more into the hands of the computer.

A – An Office at Home
B – Computers for Making Films
C – "No" to Computer Games
D – Computers for Building up Team Spirit
E – Saving Energy
F – Saving Space
G – Driving in the Future
H – Computers for Making Music

TEST 7

Read and complete the text below. For each of the empty spaces (1-10) choose the correct answer (A, B, C, or D).

THE INTERNET HAS BECOME A COMMONPLACE

The Internet has become a commonplace for us. While **1)**_____ the Internet, we should not **2)**_____ the alarm bells sounding in our ears, reminding us of keeping **3)**_____ for on-line crimes. Last year, the Melissa and Explore Zip virus caused chaos **4)** _____ the Internet. Last week the "I love you" bug played havoc **5)** _____ the world. What will be the next? No one knows.

Many on-line crimes are not so different to **6)** _____ seen in the real world, the spreading of fake data, cheating and blackmail, **7)** _____ property rights infringements and privacy violations. But computer hackers also create new forms of crime **8)** _____ the Internet changes the world into a "global village".

With the **9)** _____ of e-business, on-line crimes cause great damage to **10)** _____**.**

1	**A**	surfing	**B**	operating	**C**	reaching	**D**	exploring
2	**A**	neglect	**B**	overlook	**C**	omit	**D**	ignore
3	**A**	guard	**B**	careful	**C**	alert	**D**	aware
4	**A**	in	**B**	on	**C**	inside	**D**	with
5	**A**	over	**B**	on	**C**	across	**D**	through
6	**A**	which	**B**	that	**C**	them	**D**	those
7	**A**	intellectual	**B**	intelligence	**C**	knowledge	**D**	cultural
8	**A**	until	**B**	before	**C**	as	**D**	after
9	**A**	blossom	**B**	gloom	**C**	blooming	**D**	booming
10	**A**	persons	**B**	individuals	**C**	country	**D**	society

TEST 8

Read and complete the text below. For each of the empty spaces (1-5) choose the correct answer (A, B, C, or D).

THE PROGRESS OF COMPUTING TECHNOLOGY

Having developed everything from scanners to text-to-speech synthesizers, one artificial intelligence expert predicted that a computer **1)** _____ the world chess champion, a feat that was achieved in 1997 **2)** _____ Deep Blue defeated Garry Kasparov.

Now Kurzweil has claimed that **3) _____** 2029, computers will be able to interact with us on a far more **4) _____** -like level. Sophisticated voice recognition, speech synthesis and natural language processing **5) _____** to a whole new generation of machines capable of cracking jokes, learning from their experiences and engaging in everyday conversation like a real person.

1	**A**	beats	**B**	beat	**C**	will beat	**D**	would beat
2	**A**	when	**B**	unless	**C**	till	**D**	while
3	**A**	by	**B**	at	**C**	on	**D**	for
4	**A**	humanist	**B**	human	**C**	humanly	**D**	humanistic
5	**A**	gives rise	**B**	has given rise	**C**	is giving rise	**D**	will give rise

TEST 9

Read and complete the text below. For each of the empty spaces (1-10) choose the correct answer (A, B, C, or D).

There exist **1) _____** different kinds of computer games. Usual games are quick and easy to play. People can choose and play the game **2) _____** they have a spare minute or two. You can find them on your mobile phone, on your computer and **3) _____** on your television. They include popular games like Solitaire and Spider. **4) _____** type of games is serious games. These games are designed to teach players **5) _____** useful. One of the longest running serious games are the Microsoft Flight Simulator. It was made in 1982 and since then, many **6) _____** have used it to learn to fly planes. Other games teach police and fire fighters what to do in a(n) **7) _____** case.

Language learning software does not typically fall into this **8) _____** , however. These are educational games. In recent years, an **9) _____** number of games have been created to improve the player's skills and knowledge. They help younger kids learn to count and spell, and **10) _____** older kids mathematics and technology.

1	**A**	lots	**B**	many	**C**	much	**D**	most
2	**A**	whenever	**B**	soon	**C**	while	**D**	during
3	**A**	only	**B**	just	**C**	even	**D**	already
4	**A**	another	**B**	other	**C**	different	**D**	one
5	**A**	everything	**B**	something	**C**	nothing	**D**	anything
6	**A**	poets	**B**	stewards	**C**	pensioners	**D**	pilots
7	**A**	emergency	**B**	security	**C**	safety	**D**	disadvantage
8	**A**	game	**B**	group	**C**	system	**D**	way
9	**A**	increase	**B**	increasingly	**C**	increasing	**D**	increases
10	**A**	know	**B**	study	**C**	learn	**D**	teach

TEST 10

Read and complete the text below. For each of the empty spaces (1-10) choose the correct answer (A, B, C, or D).

IT'S AS EASY AS APP

What are the basic skills that **1) _____** child starting school should learn? For many centuries the obvious answer was: reading, writing and arithmetic. Quite recently computer classes (ICT) have been made an obligatory part of national curriculums to teach students how to use basic programmes. These days, **2) _____,** more and more countries are starting to realize thet to succeed in the 21st century pupils should be able to create their own software.

In fact, some schools in the UK are planning to get rid of ITC lessons and replace them **3) _____** programming classes that would involve building websites, designing games and mobile phone apps. They hope that today's generation of children, who are already familiar with using smartphones and practically living in the world of social media, will soon become the designers of the future.

Education authorities have no problem convincing students' parents that **4) _____** skills are important. A recent survey shows that 94% of them believe that computer skills are **5) _____** for the job market. Examples of British teenagers who have managed to sell their apps to big corporations also help make the decision easy. After all, who wouldn't want their child to become a millionaire?

1	**A**	some	**B**	all	**C**	any	**D**	no
2	**A**	although	**B**	however	**C**	despite	**D**	in case
3	**A**	for	**B**	with	**C**	from	**D**	on
4	**A**	so	**B**	this	**C**	such	**D**	that
5	**A**	essential	**B**	unnecessary	**C**	modern	**D**	interested

KEY ANSWERS

	Tasks									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Test 1	**C**	**C**	**A**	**D**	**B**					
Test 2	**E**	**A**	**C**	**H**	**B**					
Test 3	**A**	**E**	**D**	**F**	**B**	**H**				
Test 4	**C**	**D**	**F**	**B**	**A**					
Test 5	**B**	**A**	**D**	**B**	**C**					
Test 6	**G**	**E**	**F**	**A**	**B**					
Test 7	**A**	**D**	**A**	**A**	**C**	**D**	**A**	**C**	**D**	**D**
Test 8	**D**	**A**	**A**	**B**	**D**					
Test 9	**B**	**A**	**C**	**A**	**B**	**D**	**A**	**B**	**C**	**D**
Test 10	**C**	**B**	**B**	**C**	**A**					

APPENDIX

DEFINITIONS OF COMPUTER TERMS

ADA is a high level programming language. It is PASCAL based language, but much more comprehensive than PASCAL.

Appearance is the way that a web page looks.

Attachment is a file that is sent with an email.

Banner is a rectangular graphic on a website that advertises a business.

Blog is a website where a user creates and regularly updates a journal that reflects the views of the writer

Case is an enclosure that holds the computer's components.

Cell is a unit of a spreadsheet that holds a piece of information.

Cell phone is a telephone that you take with you to make calls anywhere.

COBOL is internationally accepted programming language developed for general commercial use.

Code is a set of words and signs that give instructions to a computer.

Coding is the programming language that makes up a website.

Computer is an electronic machine, which can be used to store, process and display data (A computer is an electronic device that manipulates data.)

Content is the material on a web page, including text and graphics.

Contrast is the amount of difference between the dark areas and light areas of an image.

Cursor is a little arrow on the screen that moves when you move the mouse.

Data are numbers that can be entered into a computer.

Data processing is the act of entering, using or manipulating data with computer.

Database is a large group of data organized in a computer system. It allows you to see and find information easily.

Desktop computer is a computer that is small enough to use at a desk, but too big to carry around.

Desktop publishing software is a computer program that is used to make page layouts.

The DHCP (Dynamic Host Configuration Protocol) is a system for computer networks to receive IP addresses and other configuration information.

Digital certificate is an electronic document that proves an online business or person is who that business or person claims to be.

Digital Computer is a system composes of five distinct elements: a central processing unit; input devices memory storage devices; output devices and a communications network, called “bus”, which links all the elements of the system and connects the system itself to the external world.

Disk drive reads information from a magnetic spinning disc.

Document is a file created on a word processing program.

Document sharing is a feature of some videoconferencing systems. It allows everyone participating in the videoconference to look at and edit the same document.

Domain name is a set of words and letters that identify a company or address on the Internet.

Downloading is copying information from a website to your own computer.

To drag files, folders or icons is to move them around on a desktop.

E-commerce is any business conducted on the Internet (E-commerce is the purchase or sale of items on the Internet).

Email is electronic messages sent to someone over the Internet.

Electronic page is a computerized version of a piece of paper.

Electronic paper is a special digital screen that can be read like paper.

Electrostatic printing is a method that uses the forces of electricity to print.

Email address is a location to which electronic messages can be delivered.

Email client is a program that receives, sends and stores email on a computer.

Encoding is the act of changing data so that no one can read it until it is changed again.

Expansion card is extra circuit board that is used to increase the functions of a computer.

Fan moves cool air onto computer components inside the case.

Field is a category in a database that holds a particular type of information.

Folder holds and organizes files and documents on a computer.

Format is a file's type. Different files might not work in different programs.

Formatting is the design of the words on a document.

Formula is any mathematical calculation that you perform in a spreadsheet.

Function is a mathematical instruction that performs a specific calculation in a spreadsheet such as adding a set of values.

Functionality is the ability of different elements of a website to work together.

Graphic editing program is a computer program that lets you change different aspects of an image.

Graphics are images on a computer, in a book or magazine, etc.

Hardware refers to the physical parts of a computer.

HTML code is the language which allows to create web pages.

Hyperlink is a word or image on a web page that you can click on to go to a different web page.

http is a part of an Internet address that allows a computer to connect to the site.

Icon is a picture that represents something on a computer.

Information security is the act or process of keeping information safe preventing others from seeing it.

The Internet is a network of computers all over the world, joined by phone lines, satellite or cable.

IP (Internet Protocol) address is a group of numbers that identify a computer on a network.

ISP (Internet Service Provider) is a company that gives its customers access to the Internet email addresses and data storage.

JPEG (Joint Photographic Experts Group) is a kind of computer file used it to store picture on a computer.

Keyboard is a set of buttons that is used to enter information into a computer.

Laptop is a computer that is small enough for you to carry around and use anywhere.

Layout is the way that items are arranged on a document.

LCD (Liquid Crystal Display) is a type of display that is created by liquid crystals and that used in thin monitors.

Macro is a short keystroke that performs a predetermined action.

Meta tag is text that is used in the codes of a web page to provide information about the site to search engines.

Microphone is a device that is used to record sound.

To minimize a window is to make it leave the screen without closing the window.

Memory is a part of computer which store information.

Menu is the list of computer operations.

Monitor is a screen that displays text, video, or images.

Motherboard is a firm slotted board onto which computer circuitry is attached.

Mouse is a small device that is used to move the cursor and select items on a computer screen.

Navigation is the act of using and finding things on a website.

Network is a group of computers that are connected in order to share data or communicate.

Online. If a computer is online, it is connected to the Internet.

Operating System (OS) is the software that controls a computer.

Operator is a symbol in a formula that performs a particular calculation, such as a plus sign (+).

Page layout is the process of arranging text and graphics on a page.

Page view is a request from a computer to load a page of a web site. They can be counted to analyze the number of people viewing a website.

PASCAL is a general purpose high level programming language. It is named after the famous French mathematician, Blaise Pascal.

Password is a set of letters and/or numbers that allow someone to use or access something on a computer.

PDA (**Personal Digital Assistant)** is a small computer that is used to organize a person's schedules and information.

Peripheral is a device that can be connected to a computer.

Pixel is one of the small dots that make up an image on a computer or television screen.

Pointer is a small arrow that lets a user choose what to do on a computer.

Pointing device is a device, such as mouse or trackball, that allows the user to select object on the display screen.

Power supply delivers electricity to all parts of a computer.

Printer is a device that is used by a computer to transfer ink onto paper.

Processor carries out the instructions of computer programs.

Program is a set of instructions composed for solving given problems by computer.

Quality assurance is the act of checking products for problems.

Query is a search that locates all information of a specific type in a database.

RAM (Random Access Memory) is memory that can be quickly accessed.

To resize is to make an image on a computer bigger or smaller.

Resolution is the ability of a computer or camera to produce a clear and detailed image.

Router is a device that allows more than one computer to connect to a network at the same time.

Scanner is a device that is used for transferring printed documents and pictures in to computer system.

Search Engine is a computer program that allows people to search for part of information, products, etc. on the Internet.

Server is a computer that connects many computers to hardware.

Shortcut is an icon that has been moved to a desktop to make opening a file or program.

Software is a program or instruction that makes a computer perform a specific task.

To sort is to arrange the information in a database in a specific way.

Spell check is a function-that reviews a document for spelling errors.

Spreadsheet is a computer program that organizes information and performs calculate.

Supercomputer is a large computer that is built to process large amounts information at a higher speed than other computers can handle.

Table is a single collection or arrangement of information in a database.

Touch screen is a monitor that lets users interact with the computer by touching the screen.

USB (Universal Serial Bus) is a commonly used type of connection or port to connect peripheries to a computer.

Username is a name or code that identifies a person on a computer and allows person to access his or her files.

Videoconference is a meeting or conversation between two or more people in different locations using computer technology.

VLE (A Virtual Learning Environment) is a software system designed to help teachers in the management of educational courses for their students by creating a virtual classroom.

Web is a system linking millions of documents stored on the internet computers around the world.

Web browser is a computer program that allows people to look at web pages on the Internet.

Web design is the act or practice of determining how a website looks.

Web development is the act or practice of determining how a website works.

Web host is a company that provides the space for a web site on the Internet.

Website is a collection of related pages on the Internet that contains information, pictures, etc. and is usually published by a person, group, or company.

Webcam is a small camera that connects to a computer. It broadcasts sound and video on the Internet.

Wikis are websites where anyone can add content and make changes, so that the site becomes a group creation – "wiki" stands for "What I Know is".

Windows with the help of this the user can divide the screen into different areas. You can move them around the display screen, and change their shape and size at will.

Wireless Local Area Network (WLAN) is a network that connects computers to a network without cables.

Workstation is a very fast computer that runs powerful work programs.

Word Processor is software creating text files (e.g., Microsoft Word).

www (World Wide Web) is the system of web pages, information, pictures, etc. that is available on the Internet.

VOCABULARY FOLDER

digital memory	цифрова пам'ять
error	помилка
web browsing	web- навігація
web	павутина
software	програмне забезпечення
hardware	апаратне забезпечення
to process	обробляти
to install	встановлювати
to display	показувати, демонструвати
to access	отримати доступ
keyboard	клавіатура
system board	системна плата
drive	дисковод
driver	програма управління пристроями
key	клавіша
application	застосування
remote	віддалений
arrow	стрілка
screen	екран
pointer	вказівник
button	кнопка
device	пристрій
character	символ
dot	крапка
resolution	розрішуюча здатність
a screen saver	режим відключення екрану при паузах в роботі
compatible	сумісний
to refer	посилатись
strain	навантаження, напруга
database	база даних
digital computer	цифровий комп’ютер
generation	покоління
laptop	ноутбук
tablet	планшет
integrated circuit	інтегральна схема
bus	шина
semiconductor	напівпровідник
programming language	мова програмування
system board	системна панель
contents	вміст
system unit	системний блок
data processing equipment	обладнання для обробки даних
defense system	система захисту
versatile	універсальний

to encode	кодувати, шифрувати
store	запам’ятовуючий пристрій зберігання (даних)
to range	класифікувати
video resolution	відеовирішення
video content	відеодані
sound tracks	звукові доріжки
background	задній план, фон; непомітна позиція
playback	відтворення
transfer rate	швидкість передачі даних
to recycle	повторно використовувати
internal	внутрішній
clock cycle	тактова частота (процессора, шини)
core	ядро (процессора)
improved	вдосконалений
to replace	заміняти(by, with — чим/ким-л.); витісняти
EDO RAM (Extended Data Out RAM)	пам’ять з розширеними можливостями виводу
RAM (Random Access Memory)	оперативна пам’ять
graphics bus	графічна шина
socket	гніздо
slot-based	на слотовій основі
cache	кеш, над оперативна пам'ять
stable	стійкий, міцний
to recall	відкликати
trial	пробний; контрольний
clock rate	тактова частота; частота тактових імпульсів
die	матриця
twins	близнюки, копії
motherboard	материнська плата
applications	додатки
encoder	кодуючий пристрій
to clock	працювати з певною частотою
entry	вхід
output	вивід
text editor	текстовий редактор
hard disk	жорсткий диск

КАТАЛОГ РЕСУРСІВ

Друковані матеріали

1. Валігура О., Давиденко Л. Англійська мова. Комплексна підготовка до зовнішнього незалежного оцінювання. – Тернопіль: Підручники і посібники, 2019. – 592 с.
2. Мартинюк А. П., Набоова І. Ю., Свердлова І. О., Юрченко А. А. Exam Trainer. Посібник з підготовки до ЗНО з англійської мови. – Київ: Dinternal-Books, 2017. – 84 с.
3. Валігура О., Давиденко Л. 121 English Topics for Discussion. 121 усна тема з англійської мови. – Тернопіль: Підручники і посібники, 2003. – 192 с.
4. Константинова О. М. Англійська мова. Комплексне видання для підготовки до ЗНО та ДПА. – Київ: Видавничий дім «Освіта», 2019. – 224с.
5. Доценко І. В., Євчук О. В. Англійська мова. Тренажер для підготовки до зовнішнього незалежного оцінювання. – Тернопіль: Підручники і посібники, 2014. – 160 с.
6. Євчук О. В., Доценко І. В. Англійська мова. Збірник тестових завдань. – Кам'янець-Подільський: ФОП Сисин О. В., 2017. – 500 с.
7. Карпова Т.А. Английский язык для технических вузов. – Москва: Кнорус, 2014. –352 с.
8. Карп'юк О. Д. Англійська мова. Підручник для 10-го класу загальноосвітніх навчальних закладів. Рівень стандарту. – Тернопіль: «Видавництво «Лібера Терра», 2016 – 224 с.
9. Кубарьков Г.Л. Английский язик без проблем. – Донецк: БАО, 2011. – 480 с.
10. Мансі Є. О., Гончарова Т. В. Radio Engineering and Computing Technique. Тексти до підручника з англійської мови для студентів і аспірантів немовних факультетів та студентів мовних факультетів, які вивчають англійську як другу іноземну мову у вищих навчальних закладах. – Київ: Арій, 2009. – 80 с.
11. Мясоєдова С. В. Англійська мова. Типові тестові завдання. Збірник. – Київ: Літера ЛТД, 2011.– 128с.
12. Письменная О.А. Английский для офиса. – Москва: ООО «ИП Логос», 2008. – 224 с.
13. Michalowski B., Petrechko M., Mckean S., Kirby K. Focus On Exam. Ready For ZNO. – Pearson, 2019. – 32 p.
14. Harris M., Mower D., Sikorzynska A. New Opportunities. Pre-Intermediate. Student's Book. – Pearson Longman, 2008. – 128 p.

Інтернет – ресурси

1. https://www.computersciencedegreehub.com
2. https://undergrad.cs.umd.edu