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## **АНГЛИЙСКИЙ ЯЗЫК**

**ДЛЯ СТУДЕНТОВ, ОБУЧАЮЩИХСЯ  
ПО СПЕЦИАЛЬНОСТИ  
230 115 "ПРОГРАММИРОВАНИЕ В КОМПЬЮТЕРНЫХ СИСТЕМАХ"**

**МЕТОДИЧЕСКИЕ УКАЗАНИЯ  
ПО РАЗВИТИЮ НАВЫКОВ УСТНОЙ РЕЧИ**



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В данном пособии приведены оригинальные англоязычные тексты по компьютерной тематике, терминологическая лексика для запоминания, вопросы для обсуждения, практические задания для фронтальной, индивидуальной работы, работы в парах, творческие задания, направленные на развитие и совершенствование навыков устной речи, расширение лексического запаса студентов, закрепление грамматических конструкций.

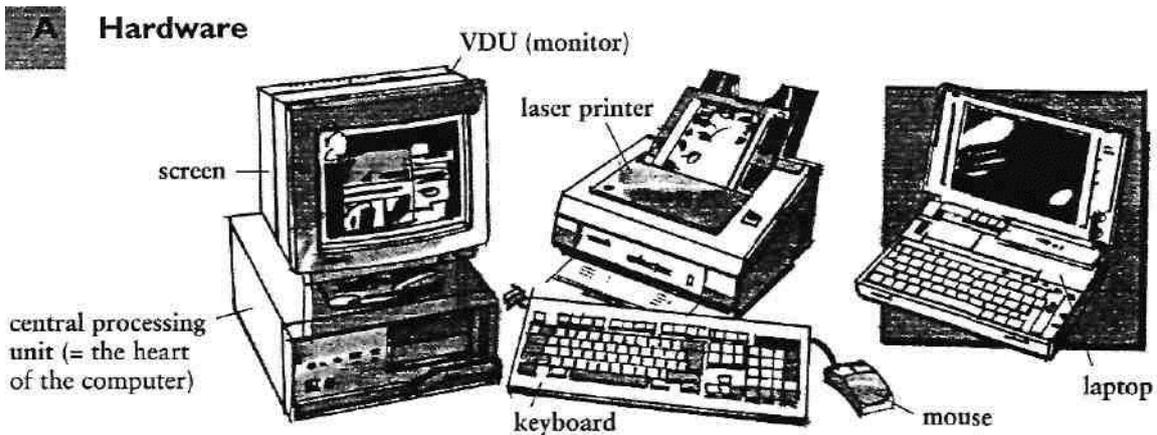
Предназначены для студентов 2-4 курсов, обучающихся по специальности "Программирование в компьютерных системах".

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## UNIT 1. COMPUTERS



As well as the **hardware** (= the machines), you also need **software** (= the programs needed to work the machines). These programs are on **disks**, e.g. the **hard disk** inside the computer, or **floppy disks** or on **CD-ROMs** (= Compact Disc Read Only Memory, a CD on which you can put a large amount of information).

### Operating a computer

Using the mouse, you can do a number of things by clicking on different icons (= moving the mouse to point at different pictures at the top of the screen).



open a new document    open an existing document    save the data in this document    print    cut    copy    paste

### What do people use computers for?

A **word processor** is a computer used to prepare documents or letters, or the software that is used for this purpose. Many people use their computers for **word processing**, e.g. writing letters and reports. A lot of business people use **spreadsheets** (= a program used to enter and arrange numbers and financial information) and **databases** (= programs which allow you to store, look at or change a large amount of information quickly and easily). Some people also use **graphics** (= the pictures and symbols a computer program can produce).

### Important vocabulary

More and more people are becoming **computer-literate** (= have experience of working with computers and know how to use them) as many programs and machines are so **user-friendly** (= easy to use). You can now connect your computer to computers all over the world using the **Internet** (= a system that allows computers to connect using telephone lines). People send each other **e-mail** (electronic mail) messages using this system or **network**. If your computer is slow it may need more **memory**. It may **crash** (= stop working) if there is not enough memory or if it has a **bug** (= a software problem; also a **virus**). Make sure you make a **back-up copy** of your work (= an extra copy on a floppy disk).

### *Exercises*

1. *Add another word, abbreviation, or part of a word, to complete common “computer” words and phrases.*

- |                  |                    |
|------------------|--------------------|
| 1 soft_____      | 7 a computer _____ |
| 2 a word _____   | 8 _____-ROM        |
| 3 floppy _____   | 9 laser _____      |
| 4 _____-friendly | 10 lap_____        |
| 5 _____-literate | 11 spread_____     |
| 6 key_____       | 12 _____-mail      |

2. *a) Complete this text about using a computer for word processing.*

I wrote a report on the (1)\_\_\_\_\_ this morning. When I finished, I (2)\_\_\_\_\_ out two copies – one for me and one for my boss. Then, without any warning, the computer went (3)\_\_\_\_\_, and I’m afraid I lost the whole document. This is very unusual because normally I (4)\_\_\_\_\_ the data while I’m writing and then make a (5)\_\_\_\_\_ copy when I have finished; this morning I forgot. Anyway I gave the report to my boss, hoping that she would not ask me to change it in any way. She did. She thought it was a bit long and said it would be better if I used more (6)\_\_\_\_\_ to illustrate some of the written information. She also thought it would make the report look more attractive. I went back and rewrote most of the report when the computer was OK, only I (7)\_\_\_\_\_ part of the middle section which was

rather repetitive, and I added extra (8)\_\_\_\_\_ as my boss advised. It did look better by the time I'd finished, and this time I remembered to (9)\_\_\_\_\_ it and make a (10)\_\_\_\_\_ copy.

b) What did he write on the computer? How many copies did he print?

What for? Did his boss like the report? What did she advise him to do?

Why did he have to rewrite the report?

c) What would (wouldn't) have happened...

- if he had saved the data?

- if he had added more graphics?

If he had saved the data he would...

d) Make if-sentences:

He didn't save the data → he rewrote the report.

He didn't use much graphics → the report looked not very attractive.

He didn't use much graphics → his boss didn't like the report.

The report was long → the boss asked him to change it.

He didn't make a back-up copy → he had to rewrite it.

e.g. If he had saved the data he wouldn't have rewritten the report.

### 3. *Ask and answer the questions*

1) Do you have a computer at home? If so, what is it? 2) Do you use computers at university? If so, what type? 3) What do you use them for? 4) Would you say you're computer-literate? 5) Do you find most computers user-friendly? 6) What software programs are you familiar with? 7) Do you use e-mail? 8) Have you used CD-ROM? If so, what for? 9) Do you think "The Internet" has an important influence on our daily lives? Do you think it's important in helping people from different countries to learn English?

4. *Work in pairs. Complete each sentence with one of the words in the list.*

disk disk drive display hard disk keyboard menu monitor

microprocessor modem mouse operating system printer RAM

(Random Access Memory) ROM (Read Only Memory) software

1) A \_\_\_\_\_ is what you use to put information into the computer. 2) The \_\_\_\_\_ is where you place the disks to start the program. 3) The \_\_\_\_\_ shows what you type and the computer's calculations. 4) The \_\_\_\_\_ is what you can actually see. 5) The \_\_\_\_\_ is a list of information that lets you choose what to do next. 6) The \_\_\_\_\_ is used for making hard copies of what you can see. 7) Information is stored outside the computer on \_\_\_\_\_. 8) Many modern computers have a \_\_\_\_\_, with which you can move an arrow to point at different parts of the screen. 9) The \_\_\_\_\_ is the heart of the computer and controls everything it does. 10) \_\_\_\_\_ is another term for the programs you on a computer. 11) A \_\_\_\_\_ is a device which connects a computer to a telephone line. 12) As an alternative to putting information on a floppy disk you can use a \_\_\_\_\_. 13) \_\_\_\_\_ are chips in the computer with permanent instructions and programs which you can't alter. 14) The \_\_\_\_\_ is a complex set of instructions which tells the computer how to carry out different tasks. 15) \_\_\_\_\_ is the facility the computer uses to store programming information temporarily. The bigger this is the more complicated the tasks the computer can carry out.

## **UNIT 2. SCIENCE AND TECHNOLOGY**

*You are probably familiar with the traditional branches of science e.g. chemistry, physics, botany and zoology. But what about these newer fields?*

**Genetic engineering:** the study of the artificial manipulation of the make-up of living things.

**Molecular biology:** the study of the structure and function of the organic molecules associated with living organisms.

**Cybernetics:** the study of the way information is moved and controlled by the brain or by machinery.

**Information technology:** the study of technology related to the transfer of information (computers, digital electronics, telecommunications).

**Bioclimatology:** the study of climate as it affects humans.

**Geopolitics:** study of the way geographical factors help to explain the basis of the power of nation states.

**Nuclear engineering:** the study of the way nuclear power can be made useful.

**Cryogenics:** the study of physical systems at temperatures less than 183° C.

**Astrophysics:** the application of physical laws and theories to stars and galaxies.

*The verbs in the sentences below are all useful in scientific contexts.*

He **experimented** with a lot of different materials before finding the right one.

The technician **pressed** a button and lights started flashing.

When she **pulled** a lever, the wheel began to rotate.

The zoologist **dissected** the animal.

When they were **combined**, the two chemicals **reacted** with each other.

After analysing the problem, the physicist **concluded** that there was a flaw in his initial hypothesis.

James Watt **invented** the steam engine and Alexander Fleming **discovered** penicillin.

After switching on the computer, **insert** a floppy disc into the disc drive.

You must **patent** your invention as quickly as possible.

### *Exercises*

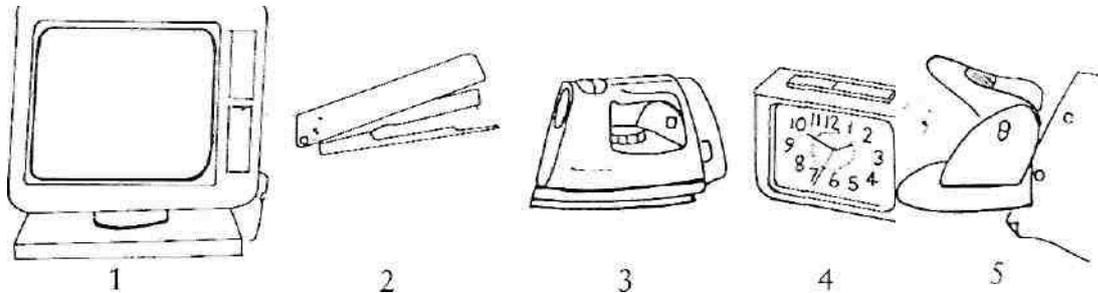
*1. Below you have some of the amazing achievements of modern technology.*

*Match the name on the left with the definitions on the right.*

- |                  |  |
|------------------|--|
| 1 video recorder | a kind of sophisticated typewriter using a computer  |
| 2 photocopier    | a machine which records and plays back sound   |
| 3 fax machine    | a machine which records and plays back sound and pictures                                      |
| 4 tape recorder  | a camera which records moving pictures and sound   |
| 5 modem          | a machine for chopping up, slicing, mashing etc.   |
| 6 camcorder      | a machine which makes copies of documents  |
| 7 robot          | a machine which makes copies of documents and sends them down telephone lines to another place |

- 8 word-processor      a machine which acts like a person
- 9 food processor      a piece of equipment allowing you to send information  
from one computer down telephone lines to another

2. Write descriptions like those in exercise 1, for the following objects.



3. What are the nouns connected with the following verbs?

- |            |            |           |              |           |
|------------|------------|-----------|--------------|-----------|
| 1 discover | 3 rotate   | 5 patent  | 7 dissect    | 9 combine |
| 2 invent   | 4 conclude | 6 analyse | 8 experiment |           |

### UNIT 3. MARCH OF THE IRON MEN

Read this article from a news magazine. Find the expressions which are used to describe what the authors see as similarities to what human workers used to do.

What do the following numbers refer to in the article?

1961   20,000   28,000   6 per 10,000   36 per 10,000   80,000   \$1 billion

Iron men have been on the march for more than a quarter of a century now. Since the first industrial robot joined the production line at General Motors in 1961, American manufacturers have recruited 20,000 steel-collar workers, replacing many times that number of blue-collar equivalents. In Western Europe, the robot population has increased even more – to an estimated 28,000 units today. But where western manufacturers seem to prefer their robots to be spread thinly through their workforces (around six per 10,000 industrial workers), Japanese firms have embraced them (36 robots per 10,000 industrial workers). In modern Japan more than 80,000 industrial robots are working around the clock.

Building robots has become a \$1 billion business. Until recently, the biggest customers for them were the motor manufacturers, who used robots mainly for

spot-welding and spraying paint. Now the electrical and electronics industries, especially in Japan, are the biggest buyers. In the process, the way robots are being used is becoming more complex. Electronics firms want robots to be able to pick up very small objects (like microchips and circuit boards) and join them together. They need to be much cleverer than earlier robots. The second-generation robots now joining production lines are being equipped with such senses as touch and sight. Their sensor let them pick up misplaced parts or make adjustments for inaccuracies in the objects they handle. For the first time they can start doing basic inspection jobs.

#### **UNIT 4. TALKING TO COMPUTERS**

*1. Read the passage quickly and say if it is: (a) an advert for a computer company; (b) an extract from a technology review; (c) an article from a general interest magazine.*

If you walk into your office one day and your colleagues are all talking to their computers, don't panic. There's nothing wrong with them, and there's nothing wrong with you. It's just that they have had enough of traditional keyboards and mice, and are moving on to the era of speech-recognition systems. Talking computers are not new. There was a lot of publicity about the early systems twenty years ago, but they never performed well. They had very limited vocabulary - about 1 000 words, and you need 10 000 words to carry out basic tasks. Now many systems deal with 30 000 words.

Everybody is using voice recognition today. If you make a telephone enquiry about a product or a service, or if you make an airline or car, rental booking, you may find you are talking to a computer. Soon we'll be able to send faxes vocally, and give instructions to our PCs. A central computer will store 50 numbers so that, when you want to phone your agent Maria in Costa Rica, you simply pick up the phone and say 'Maria', and Maria answers the phone. Interactive phone systems are also being used for automatic directory enquiries in Sweden and a recent experiment in a large company directs phone calls straight to the correct extension.

Mail order companies and financial services are interested in developing such systems.

New systems which can recognize 50 000 words are appearing on the market. They are useful for professionals who need to put large amounts of text into PCs but who can't type. For example, a system exists for lawyers in Canada where they can dictate documents directly into a computer. Doctors can record patient data easily. Even journalists will be able to read their articles straight into the computer. We all speak differently, so how does the machine cope? It recognizes individual voices after a short training period. Users have to read lists of words slowly into the machine. But isn't it all a bit inhuman? Supporters of the system say that such services are reliable, cost-effective and do not get tired and irritable.

*2. Read the text again. Are the following statements true or false?*

- 1) Voice recognition systems are better now than they were before because they recognize a lot more words.
- 2) Booking airline tickets without speaking to a human being is not possible.
- 3) Some people like using voice recognition systems because they can't use a keyboard.
- 4) Voice recognition systems are only useful with short texts.
- 5) Interactive phone services are a reasonable price.
- 6) Anybody can use voice recognition with any computer at any time.
- 7) People will lose their jobs because of the new systems.

### ***UNIT 5. A PRICE TO PAY***

*Read the article. Choose the most suitable heading from the list (A-I) for each part (1-7) of the article. There is one extra heading which you don't need to use.*

- |  |  |
|--|--|
| <i>A – When the problem disappears.</i>  | <i>F – Stop those computers now.</i>   |
| <i>B – Teachers watch for the signs!</i> | <i>G – How affected children act.</i>  |
| <i>C – How the habit is broken.</i>      | <i>H – The type of child at risk.</i>  |
| <i>D – The extent of the problem.</i>    | <i>I – Our children are in danger!</i> |
| <i>E – Parents on the lookout.</i>       |  |

## **Danger when a computer becomes your best friend**

(0\_\_\_I) Many of Britain's children are becoming computer addicts, according to leading education specialists. Such children then lose interest in anything else and become withdrawn and introverted.

(1\_\_\_) Up to one in ten youngsters – over half a million – are affected. The problem usually starts between the ages of nine and eleven and most often affects boys, who tend to get more involved with machines than girls. They spend up to 40 hours a week tapping away.

(2\_\_\_) “These children are unable to relate to friends and family or express their feeling,” says Mrs Noel Janis-Norton, a specialist at treating problem children and adults. They behave badly at school and at home – and when desperate parents forbid them to use computers, they find ways to use the computers in secret and deceive their parents. The result is that they often fail school tests and lose friends. But they do not care. The computer has become their best – and sometimes their only – friend.

(3\_\_\_) Mrs. Janis-Norton says children who have difficulty communicating are hit by this problem. “ A child who is energetic and outgoing is unlikely to become a computer addict, although any kind of child can enjoy the computer,” she says. “There's a very big difference between use and abuse. Often the problem continues into the late teens and sometimes into adult life, where the addict becomes increasingly shut off from reality.”

(4\_\_\_) Mrs. Janis-Norton adds: “The situation changes when they have less to be anxious about. Many grow out of it when they leave home. Like any other nervous condition, such as asthma, it hardly exists in the summer holidays.”

(5\_\_\_) Most children who have this kind of nervous complaint are not doing as well at school as they could. Now teachers are being asked to look for the more obvious patterns of behaviour. The National Union of Teachers has already warned its staff to identify pupils who become restless and agitated.

(6\_\_\_) Tony Miller, one of the teachers' union spokesmen, says parents should limit the amount of time their children spend at the machines. He adds:

“Very young children take to computers like fish to water. It seems to be like the problem of obsessive TV-watching.” One parent was woken at 5 a.m. by a strange bleeping noise. She later discovered it was her addict son at his computer.

(7\_\_\_\_) Mrs. Janis-Norton claims a high success rate with her unique system which involves teaching the parents as well as the child. It is a similar problem to gambling or drug addiction. She says: “With the parents, we examine all the issues which come up in a child’s day – food, bedtime, co-operation, homework, the tone of voice children use when talking to their parents, and sweets. We teach parents how to be in charge of the situation, how to be positive, firm and consistent. We give the child extra lessons in whatever subjects they’re weak in. by slowly getting the children off the machines, and replacing computers with other activities and more confidence, the habit is broken.”

*What is your opinion? Is it a real problem? Do you think this problem exists in Russia? Do you know anybody who has similar problems?*

### **UNIT 6. WHEN A COMPUTER ERROR IS A FATAL MISTAKE**

Our lives depend on computers. They control our money, transport, entertainment. Yet their programs are now so complex that no one can get rid of all the mistakes.

(0\_\_\_\_G) Life without computers has become unimaginable. They are designed to look after so many boring but essential tasks – from microwave cooking to flying across the Atlantic – that we have become dependent on them.

(1\_\_\_\_) But as the demands placed on computers grow so have the number of incidents involving computer errors. Now computer experts are warning that the traditional ways of building computer systems are just not good enough to deal with complex tasks like flying planes or maintaining nuclear power stations. It is only a matter of time before a computer-made catastrophe occurs.

(2\_\_\_\_) As early as 1889, a word entered the language that was to become too familiar to computer scientists: a “bug”, meaning a mistake. For decades bugs and “de-bugging” were taken to be part of every computer engineer’s job. Everyone

accepted that there would always be some mistakes in any new system. But “safety critical” systems that fly planes, drive trains or control nuclear power stations can have bugs that could kill. This is obviously unacceptable.

(3\_\_\_\_) One way to stop bugs in computer systems is to get different teams of programmers to work in isolation from each other. That way, runs the theory, they won’t all make the same type of mistake when designing and writing computer codes. In fact research shows that programmers think alike, have the same type of training – and make similar mistakes. So even if they work separately, mistakes can still occur. Another technique is to produce back up systems that start to operate when the first system fails. This has been used on everything from the space shuttle to A320 airbus, but unfortunately problems that cause one computer to fail can make all the others fail, too.

(4\_\_\_\_) A growing number of computer safety experts believe the time has come to stop trying to “patch up” computer systems. They say programmers have to learn to think clearly and to be able to demonstrate through mathematical symbols that he program cannot go seriously wrong. Until programmers learn to do this, we will probably just have to live with the results of computer bugs.

(5\_\_\_\_) Of course, more often than not the errors are just annoying, but sometimes they can come close to causing tragedies. On the Piccadilly line in London’s Underground a driver who was going south along a track got confused while moving his empty train through a cross-over point. He started to head north strait at a south-bound train full of people. The computerised signaling system failed to warn him of impending disaster and it was only his quick human reactions that prevented a crash.

### ***Exercises***

*1. Read the article and decide which of these two plans the writer followed.*

- |                                      |                           |
|--------------------------------------|---------------------------|
| A • Describe the situation.          | B • Ask a question.       |
| • Describe the problem.              | • Answer the question.    |
| • Describe unsatisfactory solutions. | • Give specific examples. |
| • State the problem again.           | • Ask another question.   |

2. *Read the article again and choose a heading for each paragraph from the list below. There is one extra heading which you do not need to use. The first one has been done for you.*

- A An old problem with serious consequences.
- B Two new approaches; but can they solve the problem?
- C A potentially tragic error.
- D But are they here to stay?
- E Experts say “Bring back maths!”
- F Old methods are no longer satisfactory.
- G We couldn’t live without them.

3. *Find words or phrases in the text with the following meanings:*

1) impossible to imagine; 2) needing support from; 3) long-established, conventional; 4) sudden great disaster; 5) often seen or heard; 6) not good enough; 7) separately; 8) support; 9) terrible events that cause great sadness; 10) about to happen.

## **UNIT 7. COMPUTER HACKING – HIGH-TECH CRIME**

1. *Read the text and think of the answers to the questions:*

*What’s your attitude to hacking? Do you think hackers must be punished? If so, in what way? What can be done to protect a computer from a hacker?*

You can rob a bank without leaving the house these days. Who needs stocking masks, guns and getaway cars? If you are a computer whizz-kid, you could grab your first million armed with nothing more dangerous than a personal computer, a telephone and a modem to connect them.

All you have to do is dial into the networks that link the computer in large organizations together, type in a couple of passwords and you can get the information that’s stored there to your hearts content.

Fortunately it isn’t always quite as easy as it sounds. But, as more and more information is processed and stored on computer, whether it’s details of your bank account or the number of tins of baked beans in the stockroom at the supermarket.

A couple of months ago a newspaper reported that five British banks were being held to ransom by a gang of hackers who had managed to break into their computer. The hackers were demanding money in return for revealing exactly how they did it. In cases like this, banks may consider paying just so they can protect themselves better in the future.

No one knows exactly how much money is stolen by keyboard criminals – banks and other companies tend to be very secretive if it happens to them. Some experts believe that only around a tenth of all computer crimes are actually reported. Insurance company Hogg Robinson estimate that computer frauds cost British companies an incredible 400 million pound a year.

Most computer crimes are “inside jobs”, where staff with access to the company’s computers fiddle with the records. A comparatively small amount are committed by the more glamorous – and headline-grabbing – hackers.

The true hacker, it seems, doesn’t do it for financial gain. The thrill appears to be, not in getting rich, but in beating the system. Two of Britain’s most notorious hackers are Nicolas “Mad Hacker” Whitely and Edward Singh. Whitely hacking days came to an abrupt halt in June, when 21-year-old was imprisoned for four months for damaging computer disks. Edward Singh first came to public attention after claiming that he had hacked into American and British government and military computers.

As with everything else, hackers start young in the States. A 12-year-old boy in Detroit was accused of entering a company’s credit rating computer and distributing the numbers he found there. His mother told reporters that he spent up to 14 hours on his computer during the weekend. “He didn’t bother me. I figured, computers, that’ the thing of the day”, she said.

Prevention is probably easier than detection, and many companies now spend lots of time and money devising programs using passwords and codes. Of course, all this is no use at all if computer users tell each other their password, stick it on their screen so they don’t forget it or use passwords like “password”.

There are plenty of software companies who specialize in writing software that make computers hacker-proof. One company in the States set out to prove that its system can defeat hackers by asking 2,000 of them to try to hack in. The hackers were given two weeks to discover the secret message stored on two PCs in offices in New York and San Francisco. The message reads: “The persistent hunter who wins his prize sooner or later becomes the hunted”. You’ll be relieved – or perhaps disappointed – to learn that no one hacker managed it.

*2. Read the text again and choose the best answer from the four suggested answers A, B, C or D.*

*1. When banks decide to pay computer criminals, they expect those hackers...*

- A. to give back the information they have stolen.
- B. to explain what their technique is.
- C. not to deal with these banks again.
- D. not to pass on the stolen information.

*2. Companies don't always report computer crimes because they...*

- A. know that the criminals are members of their staff.
- B. think that it would damage their reputation.
- C. don't expect the criminals to be caught.
- D. don't know about these crimes themselves.

*3. According to the text, the main motive of computer hackers is ...*

- A. to make a lot of money.
- B. to appear in the newspapers.
- C. to overcome a challenge.
- D. to become members of the staff of a large company.

*4. The mother of the 12-year-old hacker from Detroit said that ...*

- A. she had been worried about the time her son spent at his computer.
- B. she tried to prevent her son's criminal activity.
- C. she had been involved in her son's criminal activity.
- D. she thought her son's interest in his computer was normal.

*5. Which of the people described in the text was sent to prison?*

- A. Hogg Robinson
  - B. Nicholas Whiteley
  - C. Edward Singh
  - D. The boy from Detroit
6. *What was the result of one company's attempt to prove that its security systems were effective?*
- A. The results were ambiguous.
  - B. It was a failure.
  - C. It was a complete success.
  - D. It was a partial success.

## **UNIT 8. COPMUTER PERSONNEL**

### **A. Computer Manufacture**

There are two overall stages in the manufacture of computers, namely original equipment manufacture and the design and assembly of complete computer systems.

Integrated circuits are designed and developed by electronics engineers, and fabricated by highly skilled workers using sophisticated equipment. Computers are used in the design, manufacture and testing of these circuits.

The complete process of designing and constructing a computer is extremely complex, and involves the work of a number of people. The stages are generally as described in the following sections.

Most computer manufacturers have a research department, investigating new computer architectures, new hardware devices, new software techniques and new computer applications. Scientists, research engineers and technicians as well as highly skilled software engineers are among the staff of these departments.

The overall design of a new computer, or series of computers, is in the hands of computer architects. Modern computers are designed from both the hardware and the software point of view. Accordingly, systems programmers, who write the systems software for the computer, are also involved in the design process.

Highly skilled production workers are responsible for the various stages of construction and assembly of units. Production lines are not used. Generally, a team of workers is assigned to take a unit through all stages of construction and exhaustive testing.

One of the highest paid jobs in computing is that of computer salesman. Salesmen operate in an intensely competitive environment, where their level of pay depends to some extent on their sales figures. The process of selling a large computer system can take several months.

Field engineers are responsible for the installation and commissioning of new computer units, and the maintenance and repair of systems in operation. With many computers running 24 hours a day, this type of work often involves calls at unsocial hours.

## **B. A Data Processing Department**

Traditionally, an organisation which uses a computer has a data processing department containing all the staff who work directly with the computer. Other departments and individuals in an organisation relate to the data processing department as users of the computing equipment.

The description of a data processing department given here applies to in particular to banks, insurance companies, airlines and many central and local government departments.

In overall charge of a data processing department is a data processing manager. Responsibilities of a data processing manager include formulation of policy, approval of projects, staff recruitment and maintaining the relationship of the department with the rest of the company.

The work of a data processing department has two aspects, namely the program development aspect, and the operation aspect. On the program development side, systems analysts are responsible for steering each project through the data processing cycle.

Programmers, more properly called applications programmers in this context, are responsible for writing, correcting and maintaining programs and producing various items of documentation, explaining how programs are used.

On the operation side, there is an operation manager in charge of scheduling the use of the computer, arranging for maintenance and ordering supplies. A team of operators man the computer room, often working in shifts under shift leaders.

The flow of data to and from the computer is sometimes supervised by data controllers, who ensure that the right data is available at the right time. Data entry staff operate data entry terminals to keep up the supply of data to the computer. If the computer supports a database, then a database administrator is in charge of this aspect of work. If a data communication network is used, this is often under the overall charge of a network administrator.

In many organisations computers have become such an integral part of their operations that a separate data processing department is not required. The majority of the workers in such organisations make some use of their computer. Programming and systems design is often contracted out to software houses or standard software packages are purchased. An expanding computer application in this category is word processing.

This text has given a survey of the commonest jobs created by the use of computers. In spite of rising unemployment in many areas of work there is generally a shortage of workers in the computing industry. Salaries in the computing field are in the majority of cases extremely attractive.

### ***Exercises***

*1. Read the text. Are the following statements true or false?*

- 1) Integrated circuits are tested by computer.
- 2) Computer construction is complicated and involves the work of very few people.
- 3) Technicians are not concerned with research.
- 4) Only computer architects are involved in designing computers.
- 5) An assembly line is not used in the production of computer units.

- 6) Computer salesmen are paid according to their results.
- 7) When people purchase computer systems they tend to make up their minds very quickly.
- 8) Electronics engineers are responsible for installing computers.
- 9) Field engineers may be on call 24 hours a day.

2. Look at the following list of words and fill in the table below with either the infinitive or the present participle, whichever is appropriate, and attempt a simple definition.

*fabricate, commission, steer, repair, construct, relate to*

<b><i>Infinitive</i></b>	<b><i>Participle</i></b>	<b><i>Definition</i></b>
<i>to maintain</i>	<i>maintaining</i>	<i>to keep in good condition</i>

### **UNIT 9. SALES MEETING**

Mr. Abbey looked up, smiled. “Ah, Mrs. Ransom! This is a very impressive machine Mr. Keilner has here! I’m very stuck by the way it runs, but the proof of it is going to be whether it is as easily portable as he claims.”

Francesca went over to the workbench, said, “May I?” to Matt, then sat down and began to get out of the program they had been running. Once that was done, she withdrew the disk they had been working on, switched off the computer, unplugged it, coiled the lead into the base of the VDU, slid the carrying box over the screen, fitted the keyboard into a side pocket, locked the entire thing in place, lifted the handle and stood up. She walked to the door carrying the computer in its box while Mr. Abbey and Matt watched her.

At the door she turned. “Notice, it took me less than two minutes to get this far from actually being in the process of operating the computer,” she said to Mr. Abbey and handed him the box to demonstrate how light it was.

He took it and weighed it in one hand, nodding. “Amazing. But you would need a power source to operate it?”

“Or you can switch over to the rechargeable batteries.”

“Well, now. I don’t see many businessmen travelling the world with one of these in their luggage or taking along their secretary to operate the thing, and if we can’t sell it in sufficient numbers to the business community who do we sell it to, except as a toy?”

“Businessmen will carry it,” Francesca insisted. “It will be invaluable to them, both to key in information they need to record, which can later be transferred to the office computer, on disk – and so that while they are away they can send material directly to their office computer, via a telephone link. Let us show you...”

She politely relieved him of the prototype and Matt began to demonstrate that aspect of Porta.

*(from Runaway Wife by Charlotte Lamb)*

### ***Exercises***

*1. a) Suggest words from the passage which mean the same as:*

software, data, electricity, monitor, feature, to input, to work, to turn on, by means of

*b) Suggest words from the passage which mean the opposite:*

to fail, to plug, to switch on, to unlock, to buy, heavy, difficult, valuable

*2. a) Ask and answer the following questions.*

- 1) Who did Mr. Abbey have an appointment with?
- 2) What was he going to buy?
- 3) What aspects of Porta did Mrs. Ransom demonstrate?
- 4) What was Mr. Abbey’s reaction to this new portable computer?
- 5) Why was Francesca sure that businessmen would value the machine?

*b) Describe the process of packing up the computer.*

*3. Mark each sentence true or false.*

- 1) Mr. Abbey was sure that he was buying a product of high quality.
- 2) Francesca failed to answer all his questions.
- 3) The relationship between Mrs. Ransom and Mr. Abbey was more competitive than a respectful one.
- 4) Mr. Abbey didn’t want to see Porta in operation.

5) Porta was too expensive for Mr. Abbey to buy.

4. *Reproduce the dialogue between Mr. Abbey and Mrs. Ransom.*

5. *Here are some sentences from the conversation between a shop assistant and a customer. Work in pairs and decide who is speaking and what product they are discussing. Put the sentences in the correct order. Is it the beginning, the middle or the end of the conversation?*

- Amazing. But it looks a bit complicated to use.
- How fast is it?
- It's very economical, quiet and fast.
- Well, I like its compact design, but what about its features?
- It prints up to 14 pages per minute in black and up to 10 in colour.
- Yes. What about this one? It's ideal both for home and office use.

6. *Add some sentences before and after the dialogue. Discuss a print quality, media types, compatibility of cartridges and etc. Use the following phrases:*

I see

I'm not sure

All right

I can assure you

I'd like to know

Could you tell me ...

Certainly, that's no problem at all

I need the latest technology

You won't regret

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КОМПЬЮТЕРНЫХ СИСТЕМАХ"**

Методические указания по развитию навыков устной речи

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