SỞ GIÁO DỤC VÀ ĐÀO TẠO HÀ NỘI

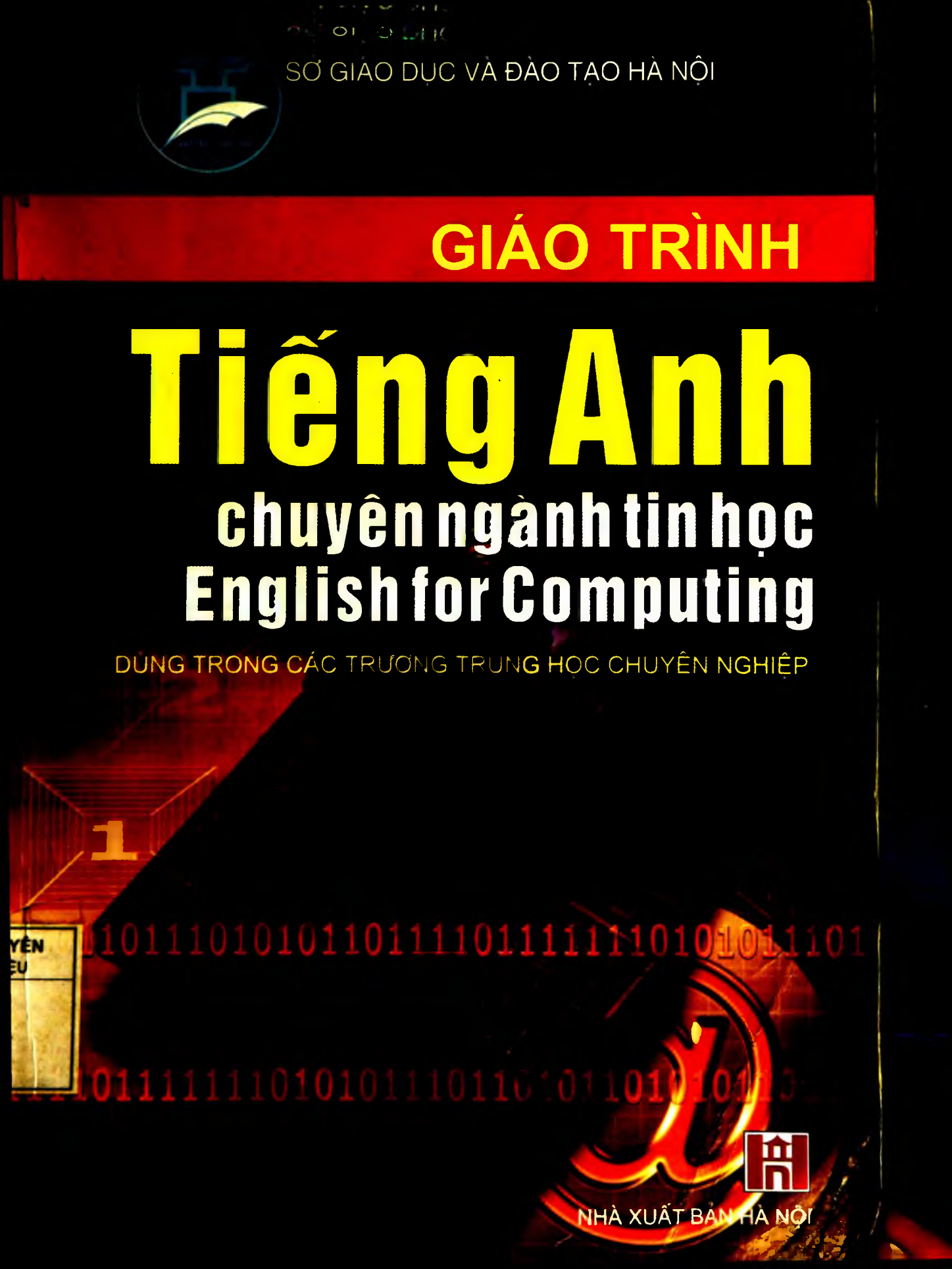
GIÁO TRÌNH

Tiếng Anh

chuyên ngành tin học

English for Computing

DÙNG TRONG CÁC TRƯỜNG TRUNG HỌC CHUYÊN NGHIỆP



NHÀ XUẤT BẢN HÀ NỘI

SỞ GIÁO DỤC VÀ ĐÀO TẠO HÀ NỘI

NGUYỄN THỊ VÂN (*Chủ biên*)
TRẦN THỊ PHƯƠNG MAI

GIÁO TRÌNH
TIẾNG ANH
CHUYÊN NGÀNH TIN HỌC
ENGLISH FOR COMPUTING

(Dùng trong các trường THCN)

NHÀ XUẤT BẢN HÀ NỘI - 2007

Lời giới thiệu

Nước ta đang bước vào thời kỳ công nghiệp hóa, hiện đại hóa nhằm đưa Việt Nam trở thành nước công nghiệp văn minh, hiện đại.

Trong sự nghiệp cách mạng to lớn đó, công tác đào tạo nhân lực luôn giữ vai trò quan trọng. Báo cáo Chính trị của Ban Chấp hành Trung ương Đảng Cộng sản Việt Nam tại Đại hội Đảng toàn quốc lần thứ IX đã chỉ rõ: "Phát triển giáo dục và đào tạo là một trong những động lực quan trọng thúc đẩy sự nghiệp *công nghiệp hóa, hiện đại hóa*, là điều kiện để phát triển nguồn lực con người - yếu tố cơ bản để phát triển xã hội, tăng trưởng kinh tế nhanh và bền vững".

Quán triệt chủ trương, Nghị quyết của Đảng và Nhà nước và nhận thức đúng đắn về tầm quan trọng của chương trình, giáo trình đối với việc nâng cao chất lượng đào tạo, theo đề nghị của Sở Giáo dục và Đào tạo Hà Nội, ngày 23/9/2003, Ủy ban nhân dân thành phố Hà Nội đã ra Quyết định số 5620/QĐ-UB cho phép Sở Giáo dục và Đào tạo thực hiện đề án biên soạn chương trình, giáo trình trong các trường Trung học chuyên nghiệp (THCN) Hà Nội. Quyết định này thể hiện sự quan tâm sâu sắc của Thành ủy, UBND thành phố trong việc nâng cao chất lượng đào tạo và phát triển nguồn nhân lực Thủ đô.

Trên cơ sở chương trình khung của Bộ Giáo dục và Đào tạo ban hành và những kinh nghiệm rút ra từ thực tế đào tạo, Sở Giáo dục và Đào tạo đã chỉ đạo các trường THCN tổ chức biên soạn chương trình, giáo trình một cách khoa học, hệ

thống và cập nhật những kiến thức thực tiễn phù hợp với đối tượng học sinh THCN Hà Nội.

Bộ giáo trình này là tài liệu giảng dạy và học tập trong các trường THCN ở Hà Nội, đồng thời là tài liệu tham khảo hữu ích cho các trường có đào tạo các ngành kỹ thuật - nghiệp vụ và đông đảo bạn đọc quan tâm đến vấn đề hướng nghiệp, dạy nghề.

Việc tổ chức biên soạn bộ chương trình, giáo trình này là một trong nhiều hoạt động thiết thực của ngành giáo dục và đào tạo Thủ đô để kỷ niệm "50 năm giải phóng Thủ đô", "50 năm thành lập ngành" và hướng tới kỷ niệm "1000 năm Thăng Long - Hà Nội".

Sở Giáo dục và Đào tạo Hà Nội chân thành cảm ơn Thành ủy, UBND, các sở, ban, ngành của Thành phố, Vụ Giáo dục chuyên nghiệp Bộ Giáo dục và Đào tạo, các nhà khoa học, các chuyên gia đầu ngành, các giảng viên, các nhà quản lý, các nhà doanh nghiệp đã tạo điều kiện giúp đỡ, đóng góp ý kiến, tham gia Hội đồng phản biện, Hội đồng thẩm định và Hội đồng nghiệm thu các chương trình, giáo trình.

Đây là lần đầu tiên Sở Giáo dục và Đào tạo Hà Nội tổ chức biên soạn chương trình, giáo trình. Dù đã hết sức cố gắng nhưng chắc chắn không tránh khỏi thiếu sót, bất cập. Chúng tôi mong nhận được những ý kiến đóng góp của bạn đọc để từng bước hoàn thiện bộ giáo trình trong các lần tái bản sau.

GIÁM ĐỐC SỞ GIÁO DỤC VÀ ĐÀO TẠO

INTRODUCTION

Aims of the course

English for computer is a course book in English designed for students who are learning course on computing application. The book covers the four language skills of listening, speaking, reading and writing, as well as improving pronunciation and building vocabulary. Particular emphasis is placed on reading. The primary goal of the course is to provide grammatical knowledge, some technical terms, words belonging to the computing area, that is, to better the students' ability to use the language according to the professional situations and apply to practical job.

Course length

The course contains 180 classes in the two last semesters in the college. There are 75 theoretical classes, 95 practical classes and 10 tests for the whole course.

The content of the course

The book is divided into 15 main units and 3 review units. Each main unit focuses on a topic related to a professional situation and follows the same teaching sequence.

1. Structure of a main unit

Presentation includes suggested questions aiming to provide useful information involved in the topic given in the unit and to develop vocabulary as well as speaking skill.

Language Study The new grammar of each unit is presented and is followed by practice activities. Different kinds of exercises for speaking and grammatical drills such as pair work, group work, or role-play provide more opportunity for student practice of the new language items that have just been presented.

Vocabulary develops students' vocabulary through a variety of interesting tasks, such as word map and collocation exercises. Vocabulary activities are

usually followed by written or oral practice that helps students understand how to use the vocabulary in context.

Listening the listening activities develop a wide variety of listening skills, including listening for gist, listening for details and inferring meaning from context. Charts or graphics are often accompany red with these task-base exercises to lend support to students.

Speaking teaches students how to present an issue. Speaking tasks involve the use of the new structures and words at the same time concentrate on the topic of the unit.

Reading the reading has two parts: a text and introduction to different kinds of computer and their component. The Readings develop a variety of reading skills, including reading for details, skimming, scanning and making inferences. Sometimes included are pre-reading and post-reading questions in which the topic of the reading is used as a springboard to discussion.

Writing the writing exercises include practical writing tasks that extent and reinforce the teaching points in the unit and help develop students' writing skills.

2. Review units

The review units consolidate the students' knowledge learned from four previous units with a variety of practical exercises.

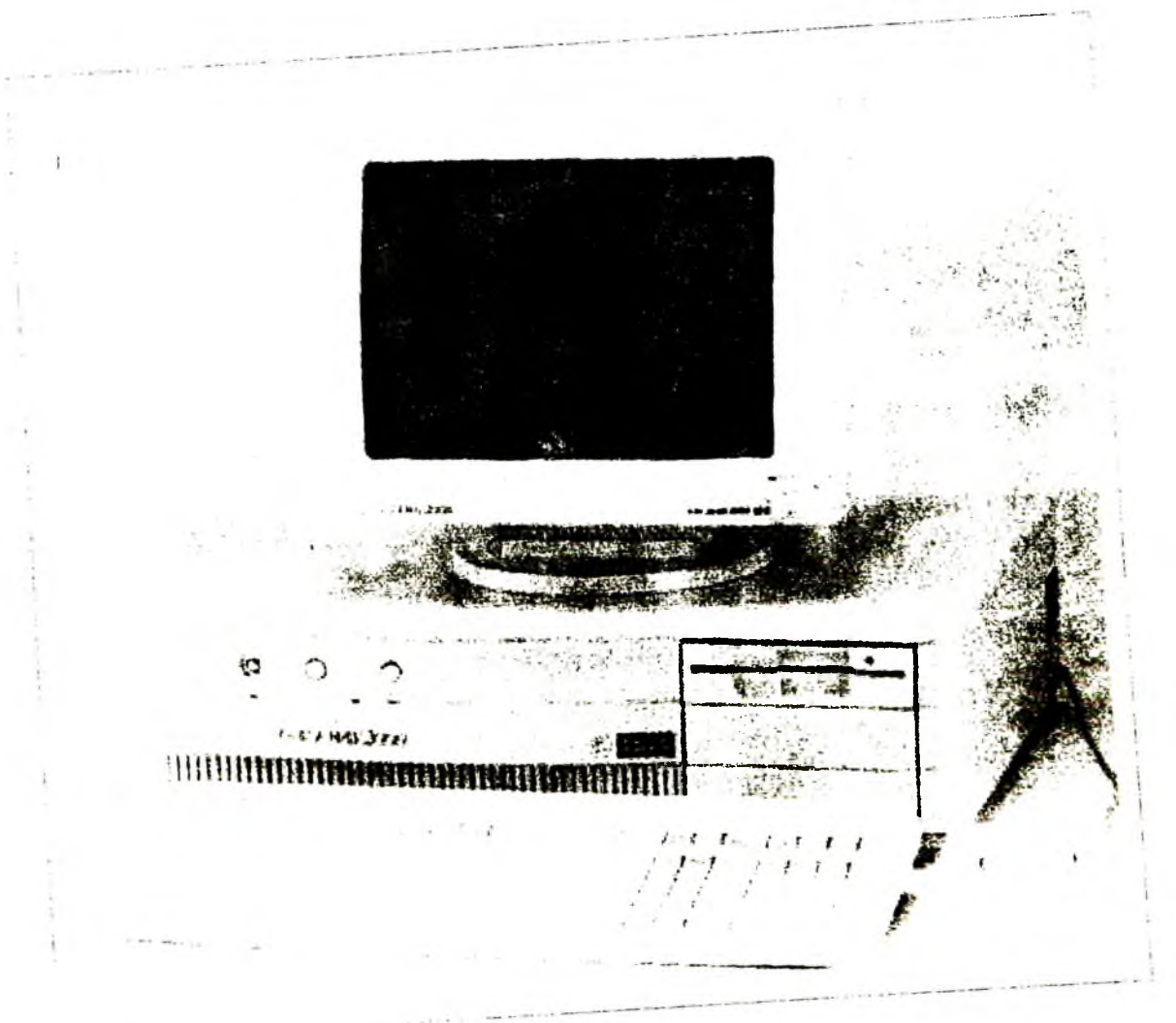
Keys, wordlist and appendix are at the back of the book as the reference for teachers and students.

The method of study

English for computer teaches students how to use English for very popular professional situations. Students are provided with useful language from the course book. In addition, students have the opportunity to personalize the language they have learnt, make use of their own language and experiences and express their ideas and opinions. In order to learn the most effectively, students must be hard-working, active, try to read more references and to memorize vocabulary as well. Outside the classroom practice is also a good method learning.

Section 1

COMPUTERS



Unit 1

WHAT IS A COMPUTER?

Objectives

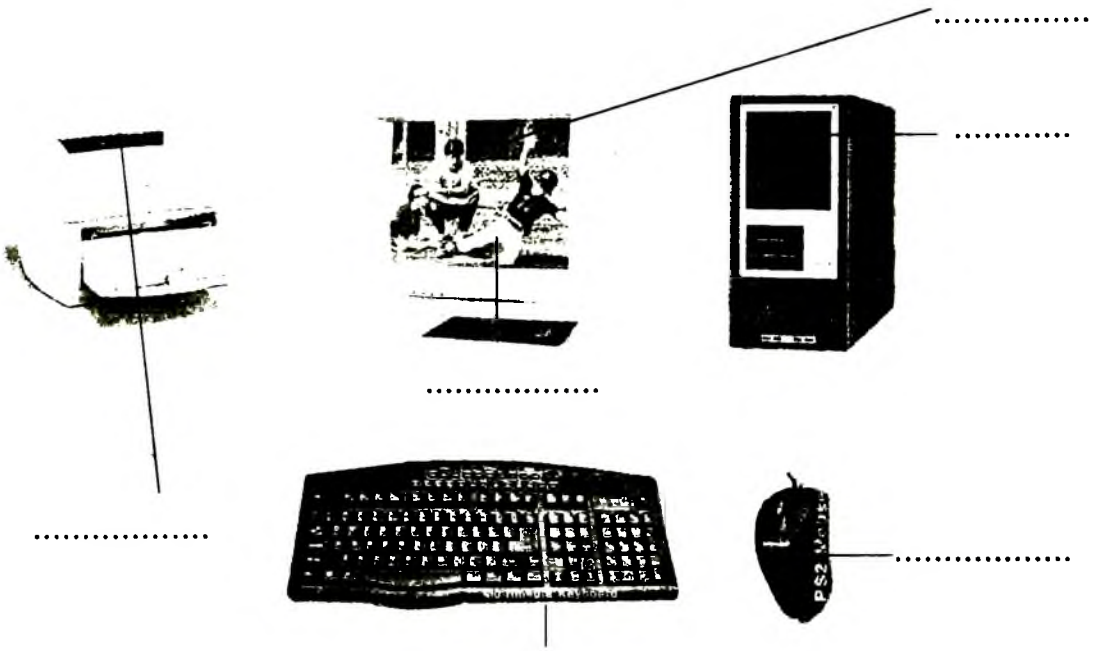
- Understand and know how to use words and expression related to computer
- Can use the passive form well.
- Can describe a computer system by using words , expressions and grammartical structures.

Contents

Reading:	Read about some background of computer.
Listening :	Listen to people talking about how they use computers at work
Speaking :	Discuss how computers are used at home, outside work
Writing :	Complete a paragraph about computer uses.
Language study:	The passive

WARM UP ACTIVITY

In pairs, label the elements of this computer system. Then read the text to check your answer.



READING

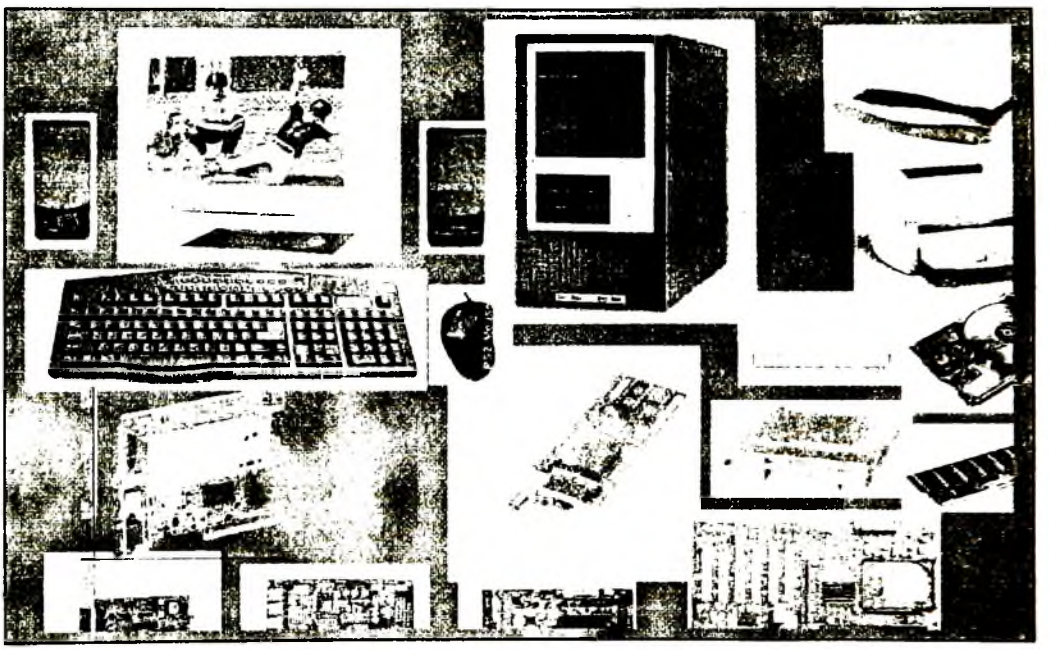
Read the following text and do the exercise.

A computer is a machine with an intricate network of electronic circuits that operate switches or magnetize tiny metal cores. The switches, like the cores, are capable of being in one of two possible states, that is, on or off; magnetized or demagnetized. The machine is capable of storing and manipulating number, letters, and characters. The basic idea of a computer is that we can make the machine do what we want by inputting signals that turn certain switches on and turn others off, or that magnetize or do not magnetize the cores.

The basic job of computer is the processing of information. Three basic steps are involved in the process. *First,* data is fed into the computer's memory. *Then,* when the program is run, the computer performs a set of instructions and processes the data. *Finally,* we can see the results (the output) on the screen or in printed form. Information in the form of data and

programs is known as **software,** and the electronic and mechanical parts that make up a computer system are called **hardware.**

Computers have many remarkable powers. However, most computers, whether large or small have three basic capabilities. First, computer has circuits for performing arithmetic operations, such as: addition, subtraction, division, multiplication and exponentiation. Second, computer has a means of communicating with the user. After all, if we couldn't feed information in and get results back, these machines wouldn't be of much use. However, certain computer (commonly minicomputers and microcomputers) are used to control directly things such as robots, aircraft navigation systems, medical instruments. etc. A standard computer system consists of three main sections: The centre processing unit (CPU) , the main memory and the peripherals.



Task 1

Decide whether the following statements are true or false (T/F) by referring to the information in the text. Then make the necessary changes so that the false statement becomes true.

1. A computers can store or handle any data even if it hasn't received information to do so. F

2. All computers accept and process information in the form of instructions and characters.
3. The information necessary for solving problems is found in the memory of the computer.
4. Not all computers can perform arithmetic operations, make decisions and communicate in some ways with the user.
5. Computers can still be useful machines even if they can't communicate with the user.
6. There are many different devices used for feeding information into a computer.
7. There aren't as many different types of devices used for giving results as there are for accepting information.
8. Computers can make any type of decision they are asked to.
9. Computers can work endlessly without having to stop to rest unless there is a breakdown.

LISTENING AND WRITING

Task 2

Before listening, answer these questions

1. Have you got a computer at home, school or work? What kind is it?
2. How often do you use it? What do you use it for?

Task 3

Listen to these people talking about how they use computers at work and write each speaker's job in the table.

Electrical engineer	*secretary*
librarian	*composer*

Speaker	*Job*	*What they use computer for*
1		
2		
3		
4		

Task 4

Now listen again and write what each speaker uses their computer for.

SPEAKING

Task 5

The article states that 'many computers in people's homes are just used to play computer games'. Discuss the following questions:

WRITING

Task 6

Match the places in column A with the computer uses in column B.

A	B
Banks	***control machines***
Factories	calculate the bill
Homes	look after patient records and medicine
Hospitals	provide entertainment and information
Shops	control our money

Task 7

Now read the paragraph and use the phrases in column B to fill in the gaps.

Computers are now part of our everyday life. In shops, they (1) ..... In factories, they (2) ..... In (3) .....they look after patient records and medicines. When we have a bank account, a computer (4) ..... In our homes, computers (5) .....

LANGUAGE STUDY

The passive

Passives are very common in technical writing where we are more interested in facts, processes, and events than in people. We form the passive by using the appropriate tenses of the verb to be followed by the past participle of the verb we are using.

Examples

Active

1. We sell computers, (simple present)
2. Babbage invented ' The Analytical Engine', (simple past)

Passive

1 Computers **are sold**

2 "The Analytical Engine" **was invented** in 1830.

Task 8

Read the text below, which describes the insurance company's procedure for dealing with PC-users' problems. Fill in the gaps using the correct form of the verb in brackets.

All calls ..... are registered ..... (register) by the Help Desk staff. Each call .....2 ..... (evaluate) and then .....3 ..... (allocate) to the relevant support group. If a visit ..... 4 ..... (require) , the user .....5 ..... (contact) by telephone, and an appointment ..... 6 ..... (arrange) . Most calls .....7 ..... (deal with) within one working day. In the event of the major problem requiring the removal of a user's PC, a replacement can usually .....8 .....(supply).

Task 9

Fill in the gaps in the following sentences using the appropriate form of the verb in brackets.

1 The part of the processor which controls data transfers between the various input and output devices ...are called..... (call) the control unit.

2 The address bus ...is used..... (use) to send address details between the memory and the address register.

3 The pixel positions ..... (pass on) to the computer's pattern recognition software.

4 An operating system ...is stored..... (store) on disk.

5 Instructions written in a high-level language ..... (transform) into machine code.

6 In the star configuration, all processing and control functions ..... (perform) by the central computer

7 When a document arrives in the mail room, the envelope ..... (open) by a machine.

8 Once the index ..... (store) , a temporary key number ..... (generate) and ..... (write) on the document.

Task 10

Fill in the gaps in the following sentences using the appropriate form of the verb in brackets.

1. Microsoft was founded (found) by Bill Gates.

2. C language ..... (develop) in the 1970s.

3. During the period, enormous advances ..... (make) in computer technology.

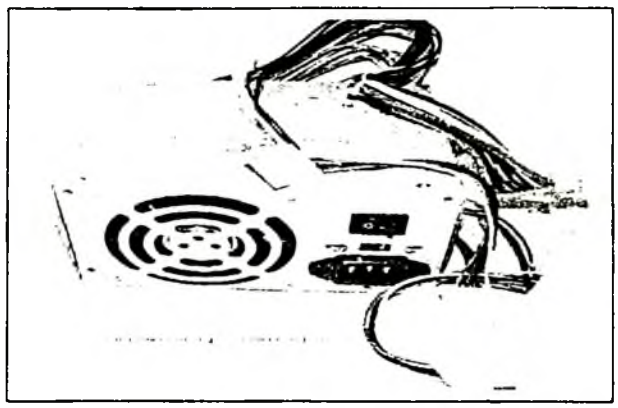
4. The following year, twice as many PCs ..... (sell) .

5. In the 1980s, at least 100.000 LANs ..... (set up) in laboratories and offices around the world.

6. The first digital computer ..... (build) by the University of Pennsylvania in 1946.

7. Last year, more software companies ..... (launch) than ever before.

8. IBM's decision not to continue manufacturing mainframes ..... (reverse) the year after it ..... (take).



PRACTICE

Task 11

Fill in each blank with the appropriate form of the words

1. operation, operate, operator, operational, operationally, operating

a. A computer can perform arithmetical ..... very quickly.

b. One of the first person to note that the computer is malfunctioning is the computer .....

c. The job of a computer operator is to..... the various machines in a computer installation.

d. The new machines in the computer installation are not yet.....

2. acceptable, accept, acceptance , accepted, acceptably

a. A computer is a device which ..... processes and gives out information.

b. The students are still waiting for their ..... into the Computer Science program.

c. It is.....to work without a template if the flowcharts are not kept on file.

3. solution solve solvable solver

a. It may take a lot of time to find a.....to a complex problem in programming.

b. A computer can.....a problem faster than any human being.

c. A computer has often been referred to as a problem.....

4. remark remarkable remarkably remarked

a. Today's computers are .....faster than their preescessors.

b. System analysts will often make.....about existing programs so as to help make the operations more efficient

c. There have been.....developments in the field of computer science in the last decade.

5. communication communicate communicable communicative communicably

a. A computer must be able to.....with the user.

b. Fiber optics is a new development in the field of.....

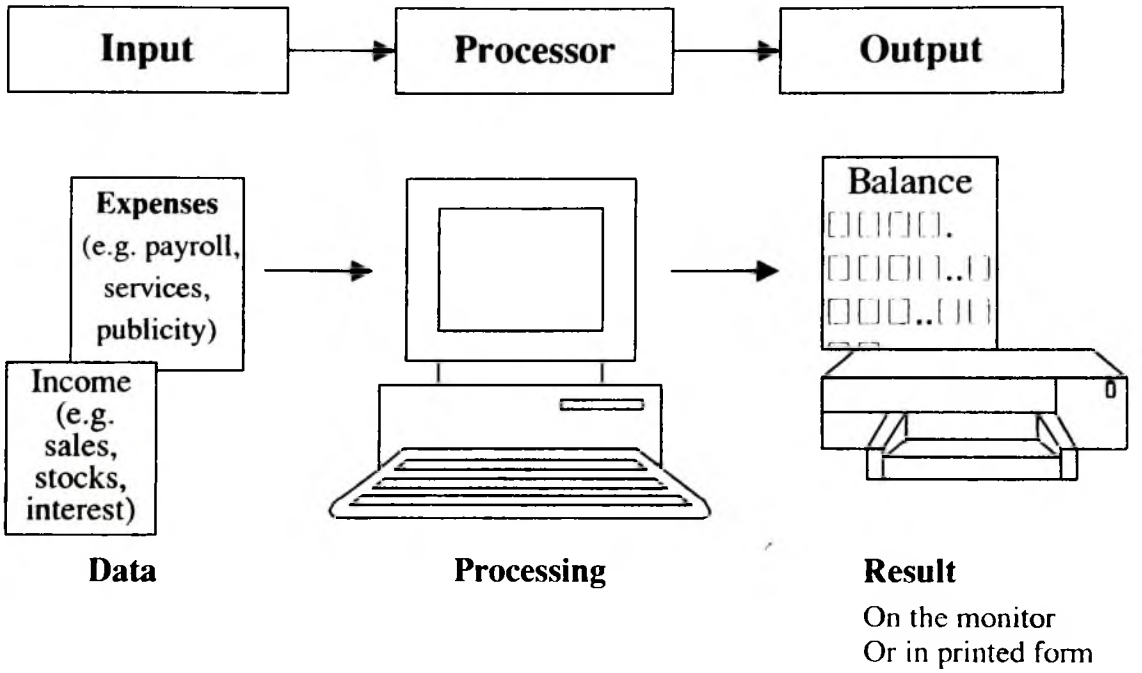
c. Some people working in computer installations aren't very..... because they are shy

Task 12

Fill in the gaps in this paragraph with a/ an or the where necessary.

The Walsh family have ..... computer at home. Their son uses ..... computer to help with.....homework

and to play..... computer games. Their students daughter uses.....computer for .....projects and for .....email. All.....family use it to get.....information from.....Internet.



Task 13

Use the information in the text and the diagram to help you match the terms in the box with the appropriate explanation or definition below

software	*peripheral devices*	*monitor*
floppy disk	*hardware*	*input*
port	*output*	*center*
processing	*unit*	

1. The brain of the computer.
2. Physical parts that make up a computer system.

3. Programs which can be used on a particular computer system.
4. The information which is presented to the computer.
5. Results produced by a computer.
6. Hardware equipment attached to the CPU.
7. Visual display unit
8. Small device used to store information. Same as 'diskette'.
9. Any socket or channel in a computer system into which an input/output device may be connected.

Task 14

Fill in the blanks with the correct form of the verbs in brackets.

1. Various terminals (connect) ..... to this workstation.
2. Microcomputers (know) .....as 'PCs'.
3. Magazines (typeset) .....by computers.
4. When a particular program is run, the data (process) ..... by the computer rapidly.
5. Hard disks (use) ..... for the permanent storage of information.
6. The drug- detecting test in the Tour de France (support) ..... by computers.
7. All the activities of the computer system (coordinate) ..... by the central processing unit.
8. In some modern systems information (hold) ..... in optical disks.

Task 15

Complete the following passage with correct form a suitable verbs from the box.

worry	*write*	*own*	*take*	*be*	*forget*
predict	*do*	*bring*	*learn*	*talk*	*ask*
arouse	*continue*	*decide*			

Nowadays, computers play an increasingly important role in all fields. And so, good or bad, computers..... now part of our daily lives. With the price of a small home computer now as low as $.500, experts ..... that before long all schools and businesses and most families in the richer parts of the world will.....a computer of some kinds.Among the general public, computers ..... strong feelings people either love them or hate them.

The computer- lovers ..... about how useful computers can be in business, in education and in the home, apart from all the games you can.....your accounts on them, learn languages from them, ... letters on them, use them to control your central heating, and in some places even do your shopping with them. Computers, they can say, will also.....more leisure, as more and unpleasant jobs are.....over by computerized robots.

The haters, on the other hand, argue that computers bring not leisure but unemployment. They.....,too, that people who spend all their time talking to computers will .....how to talk to each other. And anyway, they....., what's wrong with going shopping, using pens and paper and typewriters, and..... languages in classrooms with real teachers? But their biggest fear is that computers may eventually take over from human beings all together.

And so the arguments..... . Have you..... which side are you on ?

Task 16

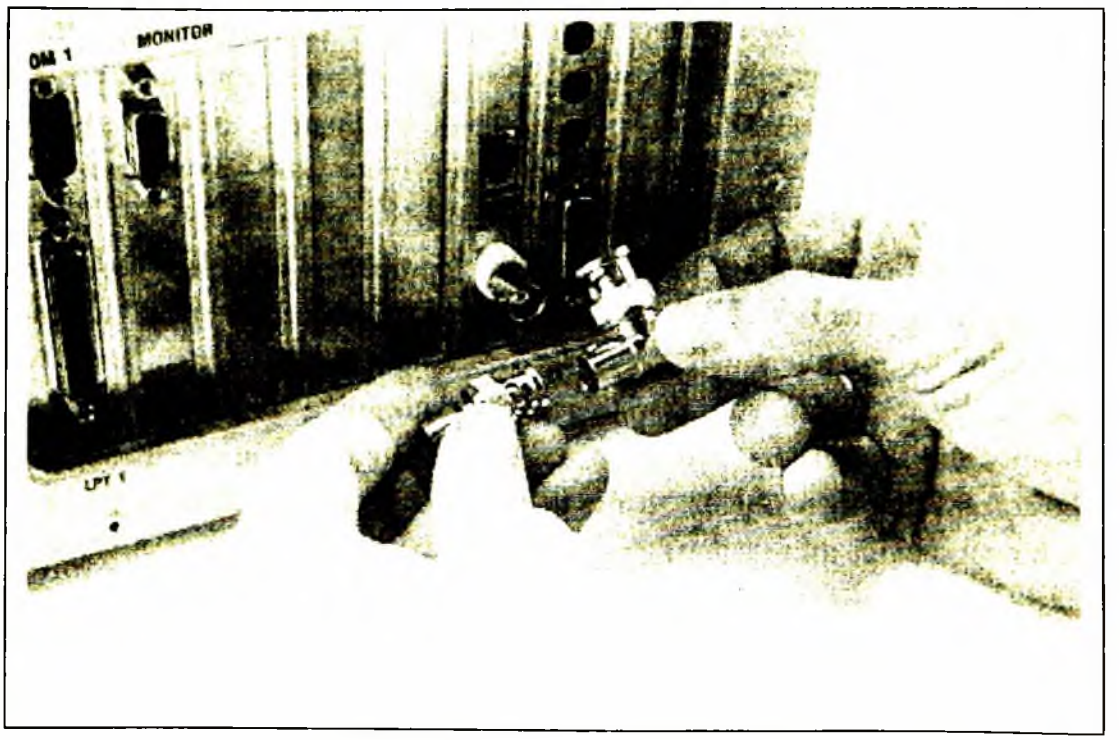
Translate into Vietnamese

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

Task 17

Translate into English

Trong những thập niên vừa qua , khoa học và kỹ thuật đã thay đổi cuộc sống của con người một cách đáng kể. Máy tính, điện thoại, vô tuyến truyền thanh, vô tuyến truyền hình và những thành tựu khoa học to lớn khác đã ảnh hưởng sâu sắc đến cuộc sống hằng ngày của chúng ta. Tuy nhiên điều quan trọng là chúng ta phải luôn luôn ứng dụng những thành tựu này vì mục đích hoà bình và vì lợi ích của toàn nhân loại.



NEW WORDS

intricate (Adj)	rắc rối, phức tạp
magnetize (v)	từ hoá
demagnetize (v)	khử từ
state (n)	trạng thái
core (n)	lõi
character (n)	ký tự

input (v)	nhập
output (v)	xuất
data (n)	dữ liệu
screen (n)	màn hình hiển thị
software (n)	phần mềm
hardware (n)	phần cứng
circuit (n)	mạch
arithmetic (n)	số học
exponentiation (n)	luỹ thừa
navigation (n)	không quân
centre processing unit (CPU)	bộ xử lý trung tâm
peripheral devices (n)	thiết bị ngoại vi
instruction (n)	lệnh
evaluate (n)	đánh giá
LAN (n)	mạng cục bộ
digital computer (n)	máy tính kỹ thuật số
mainframe (n)	dàn máy chủ
flowcharts (n)	biểu đồ tiến trình
fiber optics (n)	sợi quang
processor (n)	bộ xử lý
monitor (n)	màn hình
floppy disk (n)	ổ đĩa mềm
diskette (n)	đĩa mềm
hard disk (n)	đĩa cứng
connect (v)	kết nối
workstation (n)	mạng cục bộ
optical disk (n)	đĩa quang học
leisure (n)	rảnh rỗi
fraction of time (n)	chia nhỏ thời gian
accuracy (n)	chính xác
storage capacity (n)	khả năng lưu trữ

Unit 2

WHAT IS INSIDE A COMPUTER?

Objectives

- Understand and know how to use words and expression related to computer components
- Identify each component' capability and function.
- Know how to use relative clause with '*which*'

Contents

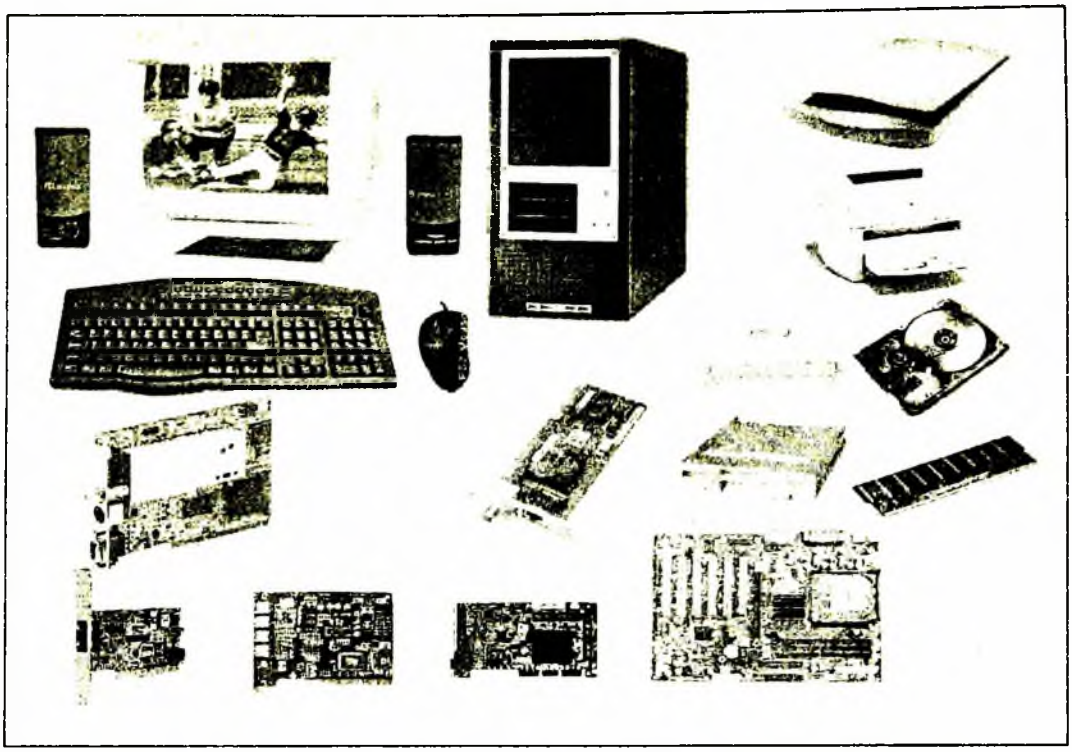
Reading: Read about computer components '*hardware*'

Listening : Listen and complete the diagram of computer system.

Speaking : Talk about computers

Writing : Write about computer components

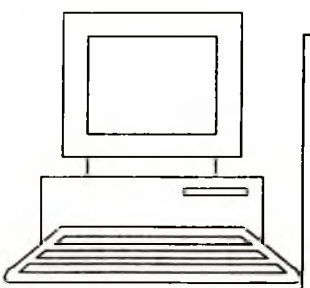
Language study: Relative clauses



WARM UP ACTIVITY

A. Read the advertisement and translate the technical specifications into your own language.

Ulysses 2001



- Intel 500 MHz Pentium III microprocessor
- 64 megabytes of RAM, upgradable to 768
- 9 GB hard disk
- Comes with Microsoft Windows

B. Try to answer these questions (If necessary look at the Glossary).

1. What is the main function of a microprocessor?
2. What unit of frequency is used to measure processor speed?
3. What does 'RAM' stand for?

READING

Task 1

Read the text and do exercise below.

The nerve centre of a microcomputer is the central processing unit or CPU. This unit is built into a single microprocessor chip- an integrated circuit- which executes program instructions and supervises the computer's overall operation. The unit consists of three main parts:

The **control unit**, which examines the instructions in the user's program, interprets each instruction and causes the circuits and the rest of the components- disk drives, monitor, etc.- to be activated to execute the functions specified;

The arithmetic logic unit (ALU) , which performs mathematical calculations (+, -, etc.) and logical operations (and, or, etc) ; **the registers**, which are high-speed units of memory used to store and control information. One of these registers control information. One of these registers is the program counter (PC) which keeps track of the next instruction to be performed in the main memory. Another is the instruction register (IR) which holds the instruction that is currently being executed.

One area where microprocessors differ is in the amount of data- the number of bits- they can work with at a time. There are 8,16, 32 and 64 bit processors. The computer's internal architecture is evolving so quickly that the new 64- bit processors are able to address 4 billion times more information than a 32- bit system.

The programs and data which pass through the central processor must be loaded into the main memory (also called the internal memory) in orderto be processed. Thus, when the user runs an application, the processor looks for it on secondary storage devices (disks) and transfers a copy of the application into the RAM area. RAM (random access memory) is temporary, i.e. its information is lost when the computer is turned off. Howerver, the ROM section (read only memory) is permanent and contains instructions needed by the processor.

Most of today's computers have internal expansion slots that allow users to install adapters or expansion boards. Popularadapters include high resulution graphics boards, memory expansion boards, and internal modems.

The power and performance of a computer is partly determined by the speed of its microprocessor. A clock provides pluses at fixed intervals to measure in MHz (megahertz) and refers to the frequency at which pulses are emitted. For example, a CPU running at 500 MHz (500 million cycles per second) is likely to provide a very fast processing rate and will enable the computer to handle the most demanding applications.

Central processing unit (CPU)

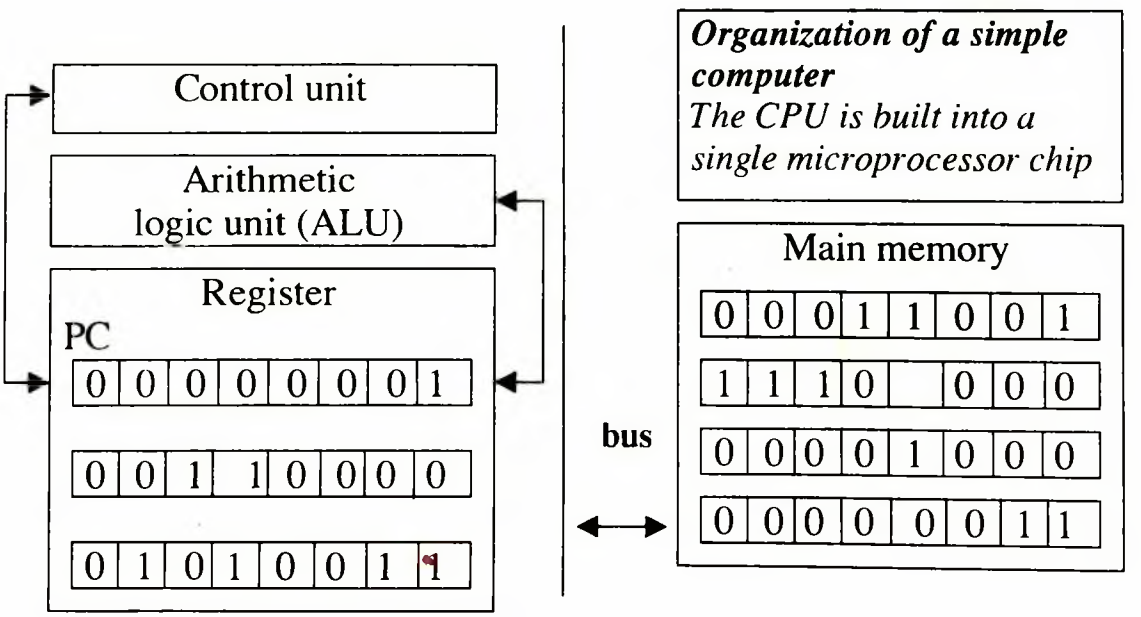


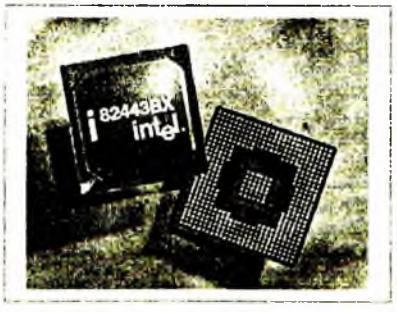
Figure 1

Task 2

Tick (✓) in the box if the statement is true and cross (x) if it is false by referring to the information in the text

CPU

RAM



CHIP

1 The CPU directs and coordinates the activities taking place within the computer system. ☐

2. The arithmetic logic unit performs calculations on the data . ☐

3. 32- bit processors can handle more information than 64-bit processors.

4. A chip is an electronic device composed of silicon elements containing a set of integrated circuits. ☐

5. RAM, ROM and secondary storage are the components of the main memory. ☐

6. Information cannot be processed by the microprocessor if it is not loaded into the main memory. ☐

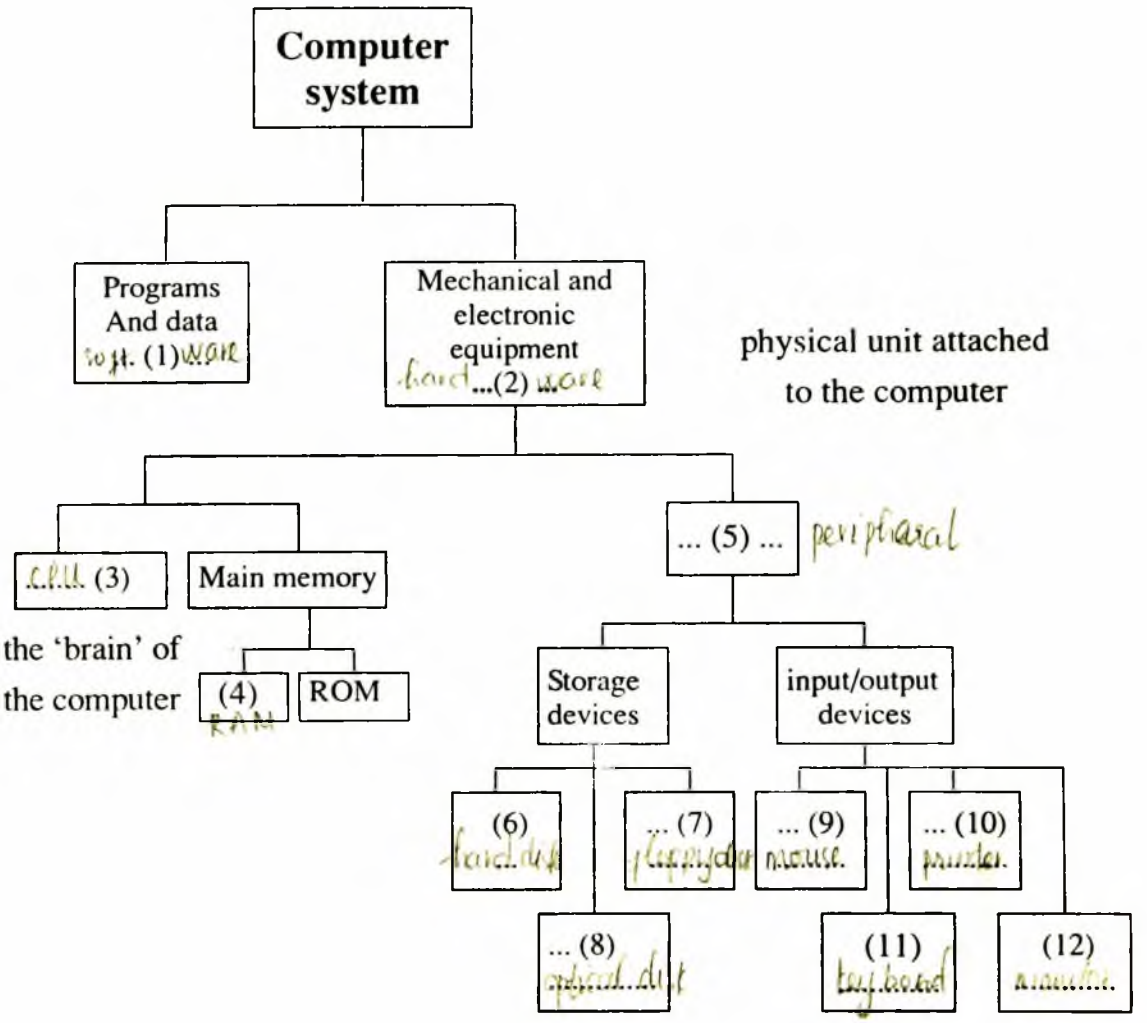
7. "Permanent" storage of information is provided by RAM (random access memory) . ☐

8. The speed of the microprocessor is measured in megahertz. ☐

LISTENING

Task 3

Label this diagram with the correct terms.



Task 4

Compare your answers with a partner.

Task 5

Listen and check your answer

SPEAKING

Task 6

Work in pairs, A and B. find out as much as you can about your partner's computer and complete this table.

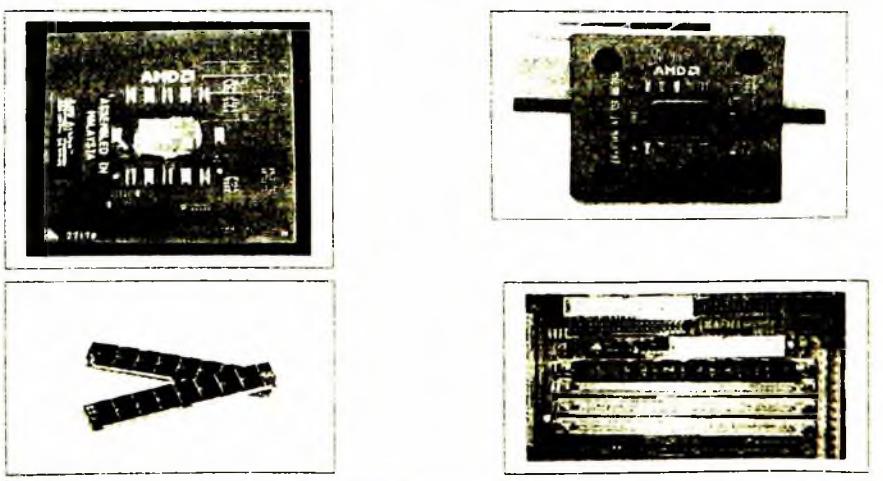
Student A: Your computer details are on page 249

Student B: Your computer details are on page 252

Task 7

In group, write the answers to these questions then read aloud to the class. The winners are the group that answers the most questions correctly in four minutes.

1. What are the main parts of the CPU?
2. What is RAM?
3. What memory section is also known as "firmware" ?
4. What information is lost when the computer is switched off?
5. What is the typical unit used to measure RAM memory and storage memory?
6. What is the meaning of the acronym SIMM?
7. What is a megahertz?
8. What is the ALU? What does it do?
9. What is the abbreviation for "binary digit"?
10. How can we store data and programs permanently?



CPU and RAM

WRITING

Task 8

Study this diagram of a PC motherboard. Match the components to their descriptions

The motherboard

1. These are memory chips. The more you have, the more work you can do at a time. Empty memory slots mean you can add more memory.

2. This is the "brain" of the computer.

3. It's a part of the memory store. It has extremely fast access. It's faster than normal RAM. It can speed up the computer.

4. These let you add features such as sound or a modem to your computer.

5. This kind of memory contains all the instructions your computer needs to activate itself when you switch on. Unlike RAM, its contents are retained when you switch off.

Task 9

Complete this description of the mother board by adding the definitions above in the correct places

The most important electronic part of a computer is the motherboard. The largest chip in the centre is the processor. The board also contains plug in chips. One type contains ROM. A number of chips are mounted on memory boards. A third type of memory is cache memory. The board also has expansion slots.

Task 10

Translate the paragraph into Vietnamese

The main memory of a computer is also called the "immediate access store", as distinct from any storage memory available on disk.

Microcomputers make use of two types of main memory : RAM and ROM, both contained in electronic chips connected to the main board of the computer.

RAM stands for 'random access memory'. All the information stored in the RAM is temporary so it is lost when the computer is turned off.

Therefore, if we want to use this information later on, we have to save it and store it on a disk.

ROM is an acronym for reading only memory which implies that the processor can read and use the information stored in the ROM chip, but cannot put information into it. The ROM section is also referred to as **firmware.**

LANGUAGE STUDY

Relative clauses

We can define people or things with a relative clause.

*The teacher **who** is responsible for the computer centre has just arrived.*

We use the relative pronoun '**who**' because it refers to a person.

*The microprocessor is a chip **which** processes the information provided by the software.*

We use the relative pronoun '**which**' because it refers to a thing, not a person.

Task 11

Complete the sentences with an appropriate relative pronouns

1. That's the CPU.....I'd like to buy.
2. The microprocessor is a chip.....processes data and instructions.
3. The microprocessor coordinates the activities..... take place in the computer system.
4. Last night I met someone.....works for GM as a computer programmer.
5. A co- processor is a silicon chip.....carries out mathematical operations at a very high speed.
6. A megahertz is a unit of frequency.....used to measure processor speed.
7. Here's the floppy disk .....you lent me.

8. Some people..... are frightened by the complexity of the computer don't want to have a computer in their houses
9. Some people .....have seen the film *2001*, may be afraid that the computer will take control of their lives.
10. Whenever I have problems with my computer I usually go to Frank..... is the best at computer in my class

PRACTICE

Task 12

Choose appropriate forms of the words to complete the sentences

1. *repetition, repeat, repetitive, repeatedly, repeating*

a. There are some people who..... arrive late to class whenever they're working on a program because they forget the time.

b. A computer can do ..... operations without getting tired or bored.

c. ....., which can be a boring and unproductive task has been eliminated with the use of computers.

2. *repair, repaired, repairable, repair*

a. When the computer is down it needs to be .....

b. Electronic equipment often takes a long time to.....

c. ..... to a computer system are often done by the same company who manufactured the system.

3. *accuracy, accurate, accurately*

a. A computer is always ..... In its results if well prepared.

b. ..... is one of the advantages of using computers in research or in statistical analysis.

c. Computers can produce results quickly and .....

4. *response respond responded responding*

a. The arithmetic logical unit.....to commands from the control unit.

b. The components of a computer system operate only in.....to commands from the control unit.

5. *advertisement advertise advertised*

a. There are many computer —related jobs ..... in the *New York Times*.

b. Computer Centre will soon .....for more operators and programmers.

c. Career opportunities in computer science and related fields can usually be found in the..... section of newspaper.

Task 13

Fill each gap in the passage with the correct form of a suitable verb from the box

carry	*weld*	*allow*	*perform*	*store*	*draw*
be	*call*	*connect*	*present*		

The physical computer and its components..... known as hardware. Computer hardware includes the memory that ..... data and instructions; the central processing unit (CPU) that..... out instructions; the bus that..... the various computer components; the input device, such as a keyboard or mouse, that.....the user to communicate with the computer; and the output device, such as printers and video display monitors, that enable the computer to..... information to the user. The programs that run the computer are..... software. Software generally is designed to .....a particular type of task- for example, to control the arm of a robot to .....a car's body, ... a graph, or to direct the general operation of the computer.

NEW WORDS

RAM	bộ truy cập ngẫu nhiên
SCSI (*Small Computer System Interface*)	Một giao diện mà trong đó có thể cắm các thiết bị ngoại vi vào
microcomputer (n)	máy vi tính
chip (n)	là một mạch điện tử siêu nhỏ
component (n)	thiết bị
disk drive (n)	ổ cứng
arithmetic logic unit (ALU)	bộ số học- logic học
logical operations (n)	các phép toán logic
main memory (n)	bộ nhớ chính
secondary storage devices (n)	thiết bị lưu trữ thứ cấp
ROM	bộ nhớ chỉ đọc
adapter (n)	bộ tương hợp
microprocessor (n)	bộ vi xử lý
abbreviation (n)	tóm tắt
binary digit (n)	bộ số nhị phân
distinct (n)	riêng biệt
firmware (n)	vi chương trình, chương trình cơ sở
weld (v) (n)	hàn, mối hàn
keyboard (n)	bàn phím
printer (n)	máy in
video display monitor (n)	màn hình video
task (n)	nhiệm vụ

Unit 3

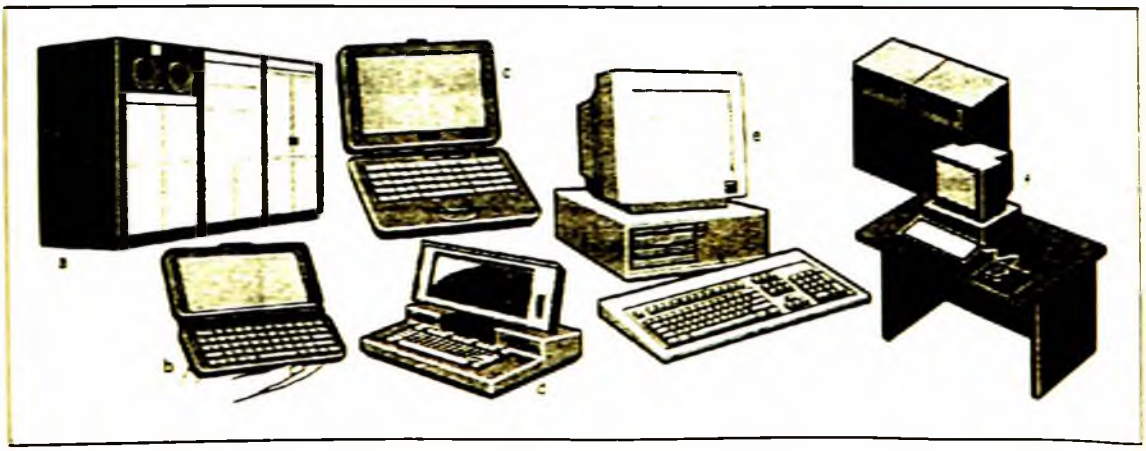
KINDS OF COMPUTER

Objectives

- Understand and know how to use words and expression related to kinds of computer.
- Use the comparison structures fluently to compare all kinds of computer.

Contents

Reading:	Read about some kinds of computer.
Listening :	Listen and identify the kind of computer.
Speaking :	Identify the characteristics of some computers by reading given details
Writing :	Describe the size of computers
Language study:	Comparisons



WARM - UP ACTIVITY

Match these names to the different kinds of computer.

mainframe	*laptop*	*notebook*
handheld	*PC*	*minicomputer*

READING

There are many types of computer but we can divide them into three large categories: mainframe, minicomputer and microcomputer.

Large computer system, or mainframes, as they are referred to in the field of computer science, are those computer systems found in computer installations processing immense amounts of data. These powerful computers make use of very high- speed main memories. These powerful machines have a larger repertoire of more complex instructions which can be executed more quickly. Whereas smaller computers may take several steps to perform a particular operation, a large machine may accomplish the same thing with one instruction.

These computers can be of two types: digital and analog. The digital computer or general- purpose makes up about 90 percent of the large computers now in use today. It can do calculations in steps, one after another at tremendous speed and with great accuracy. Digital computer programming is by far the most commonly used in electronic data processing for business or statistical purposes. The analog computer works something like a car speedometer, in that it continuously works out calculations. It is used essentially for problems involving measurements. It can simulate, or imitate different measurements by electronic means.

Really, powerful computers continue to be bulky and require special provision for their housing, refrigeration systems, air filtration and power supplies. This is because much more space is taken up by the input/output devices- the magnetic tape and disk units and other peripheral equipment- than by the electronic components that do not make up the bulk of the machine in a powerful installation. The power consumption of these machines is also quite high , not to mention the price that runs into hundreds of thousands of dollars.

Minicomputer has smaller size. It has fixed word length between 8 and 32 bits and costs less than a mainframe. The amount of primary memory in minicomputer system ranges from 32-512k bytes. It is used for a fixed application and run only a single program. Many minis are employed in real-time processing so they possess the hardware capability to be connected directly to a large variety of measurement instruments, to analog and digital converters, to microprocessors, and to an even large mainframe in order to analyze the collected data.

Microcomputer was born in the early 1970s. It is becoming more powerful and converging with minicomputer technology. The available range of microcomputer systems is evolving more rapidly than minicomputer because of the low price. Micros have somewhat simpler and less flexible instruction sets than minis and are typically much slower. However the relatively new industries improve the price and performance of its product by using the latest microcomputers.

Task 1

Decide whether the following statements are true (T) or false (F) by referring the information in the text.

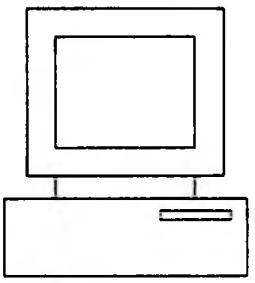
1. Microcomputers were developed after minicomputer
2. Mainframes are very powerful and can execute jobs very rapidly and easily.
3. Mainframe technology has reached the end of the road. No further development is needed.
4. Operating minicomputers costs less than operating mainframes.
5. Minicomputer can be connected directly to various types of devices.
6. A mainframe uses more power than a microcomputer.
7. Microcomputer is cheaper than minicomputer.
8. Microcomputers have the same memory capacity as minicomputer.
9. Many different types of industries are using microcomputer to do their works.
10. By the end of this century microcomputer will have been cheaper, better and probably used in every aspect of life.

LISTENING

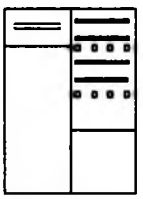
Task 2

Listen to a short lecture given by John Griffiths, an expert on computer systems. As you listen, label the pictures with the words in the box

microcomputer (portable) *microcomputer (desktop PC)*
mainframe *minicomputer*

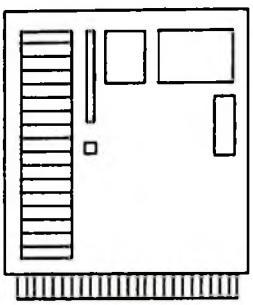


a.....



b.....

c.....



d.....

Task 3

Listen again and choose the correct answer

1. According to the speaker:

a. a mainframe computer is less powerful than a minicomputer.

b. a mainframe is more powerful than a minicomputer.

c. a mainframe is not very powerful but can execute jobs very rapidly.

2. Mainframe computer are used by:

a. students and teachers in school.

b. Executives and businessmen

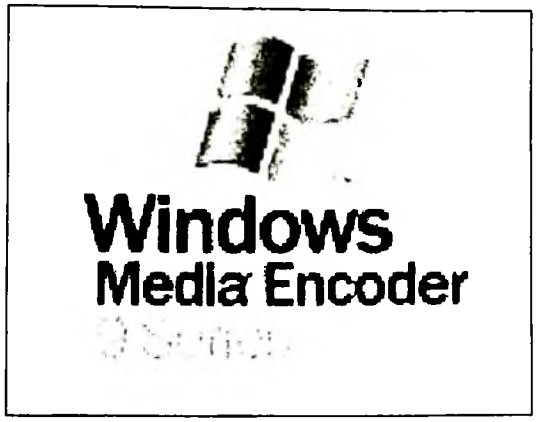
c. Large organizations processing enormous amounts of data.

3. 'Multitasking' means:

a. access to a minicomputer through terminals.

b. Doing a number of tasks at the same time.

c. Connection to a 'host' computer network so that many users have access to data and programs.



4. The most suitable computers for home use are:

a. mainframe

b. minicomputers

c. micro computers (PCs)

5. The smallest computers are known as:

a. minicomputers

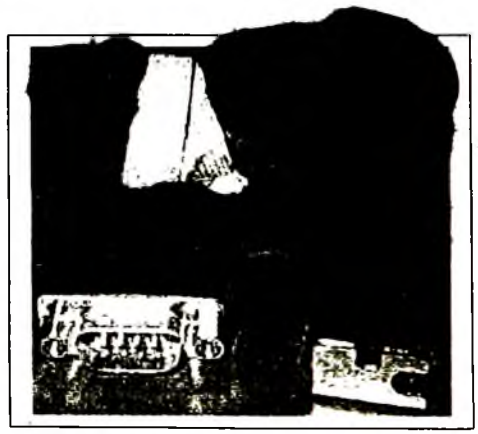
b. desktop PCs

c. laptops and notebook computers.

SPEAKING

Task 4

Study these details of different types of computer. Find the answers to these questions. Which type of computer is:



1. the most common?
2. small enough for a pocket?
3. the most common portable?
4. used by many people at the same time?
5. used like mainframe?
6. also called a handheld computer?
7. the most powerful
8. not suitable for a lot of typing?

Task 5

In pairs, decide what sort of computer is best for each of these users

1. John Wilmott is a salesperson and he spends a lot of time visiting customers. He wants a computer to carry with him so he can access data about his customers and record his sales.

2. Pat Nye is a personnel officer. She needs a computer to keep staff records and to keep a diary of appointments. She also needs a computer for writing letters.

3. The University of the North needs a computer to look after its accounts, its network, the record of all students and staff, and to help with scientific research.

4. The James family want a computer for entertainments, writing letters, the Internet, and for calculating tax.

WRITING

Task 6

Put the words in brackets into the correct forms to make an accurate description of sizes of computers

There are different types of computer. The (large) larger and (powerful) .....2....are mainframe computers. Minicomputers are (small) .....3....than mainframes but are still very powerful.

Microcomputers are small enough to sit on a desk. They are the (common) .....4.....type of computer. They are usually (powerful) .....5.....than minicomputers.

Portable computers are (small) .....6..... than desktops. The (large) .....7..... portable is a laptop. (small) .....8..... portables, about the size of a piece of writing paper, are called notebook computers. Sub-notebooks are (small) .....9..... than notebooks. You can hold the (small) .....10..... computers in one hand. They are called handheld computers or palmtop computers.

LANGUAGE STUDY

Comparisons

Study this comparison of the three types of computer.

	Mainframes	Minicomputers	Microcomputers
Size	+++	++	+
Power	+++	++	+
Cost	+++	++	+

We compare things using adjectives in two ways.

1. We can compare one type of computer with another.

Minicomputers are ***bigger than*** *microcomputers.*

Mainframes are ***more expensive than*** *microcomputers*

For negative comparisons we can say:

Microcomputers ***are not as big as*** *minicomputers*

Microcomputers ***are not as powerful as*** *mainframes.*

2. We can compare mainframes to all other types of computer.

Mainframes are ***the biggest*** *computers.*

Mainframes are ***the most powerful*** *computers.*

Mainframes are ***the most expensive*** *computers.*

With short adjectives (*big, small, fast*) , we add -er and -est (*faster, fastest*) .

With long adjectives (*powerful, expensive*) , we use more/less and the most/ the least before the adjective (*more powerful, the most powerful*)

Remember these exceptions:

Good- better- the best

bad — worse — the worst *far — further — furthest.*

Task 7

Choose the correct adjective then fill in the gaps with the correct form of the adjective

1. ***light/ heavy*** Laptops are lighter than desktop computers, but..... than notebooks

2. ***large/ small*** The mainframe is the.....type of computers. A minicomputer is.....than a microcomputer.

3. ***common/good*** Personal computers are.....than mainframes but mainframes are .....than personal computers at processing very large amount of data.

4. ***powerful/ expensive*** Minicomputers are.....than mainframes but they are also.....

5. ***fast/ cheap*** New computers are.....and sometimes..... than older machines.

6. ***powerful / expensive*** Laptops are often.....than PCs but they as not as.....

PRACTICE

Task 7

Complete the following statements with the appropriate words. (Some can be used more than once) . Make sure you use the correct form. i.e. singular or plural.

mainframe	*computer installation*	*digits*
hybrid computer	*code*	*programming*
digital	*analog*	

1. The ..... system is a computer which has combined the features of both the ..... and ..... computer. It is used mainly in scientific research.

2. ..... Computers get their name from the word ..... These are single character numbers that make up the ..... In which the data are presented to the computer for processing.

3. ..... Are usually found in large .....

4. The most commonly used language of ..... In the business community is .....

Task 8

Match the words in column A with the words or statements in column B

	A	B
☐	1. minicomputer	a. processing unit of microcomputer
☐	2. primary memory	b. specialized secondary memory devices
☐	3. mini peripherals	c. where operator can manually operate the computer
☐	4. cartridges	d. internal storage
☐	5. console	e. fixed word length of 8- 32 bits
☐	6. microprocessors	f. attached to minicomputer.

Task 9

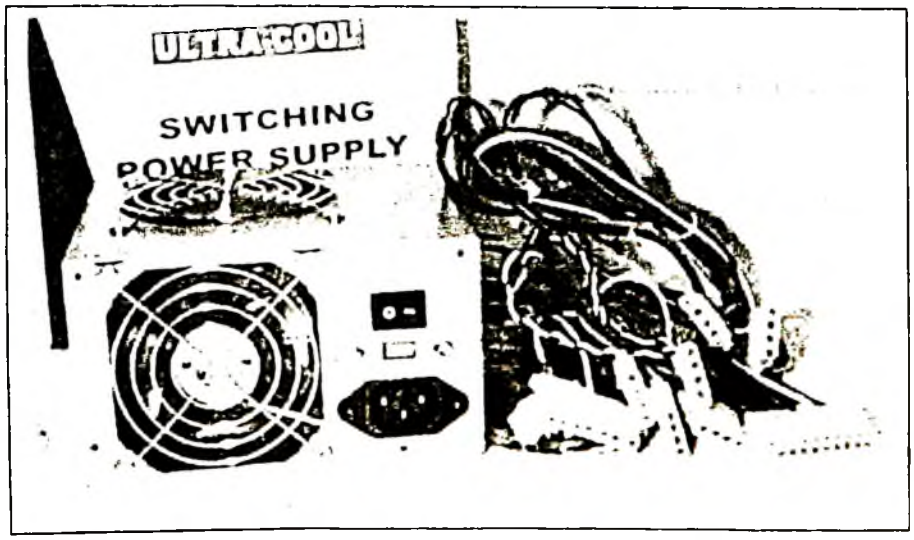
Complete the text below with the words in the box

systems	*memory*	*task*	*terminals*
desktop	*CAD*	*applications*	

The first microcomputers, also known as .....(1)..... PCs, were for single users only, and this clearly distinguished them from minicomputers. Another important difference was that 'minis' were much more powerful than 'micros' they could execute more than one (2) ..... simultaneously and were used as file severs for (3) .....and workstations. However, modern microcomputers have operating (4).....and network facilities that can support many simultaneous users. Today, most personal computers have enough (5).....to be used for word processing and business (6)..... Some PCs can even handle multitasking and (7).....applications. As a result, the division between 'minis' and 'micros' is now disappearing.

Task 10

Use the information in the text, compare three kinds of computers: mainframe, minicomputer, microcomputer



Task 11

Choose the correct words to complete each sentence. You may have to change some words if necessary

1. electron electronic electronics electronically

a. An .....pen is one example of an input device.

b. A computer solves problems ..... Many- ..... students go on to work as engineers.

2. *technology technological technologically technologist*

a. The computer is the greatest .....invention of the twentieth century.

b. There are two.....involved in a clipboard PC.

c. Today's computers are.....far superior to those used a few years ago

3. *identify identifying identifiable identity*

a. The clipboard's pattern recognition software immediately the letters and numbers written by the stylus.

b. Most computer companies will not allow people without an ..... card to enter their premises.

c. A password is a mechanism for..... the computer- user and allowing access.

4. *compute computing computation computerize computerization*

a. The ..... of the manufacturing division will be expensive in the short term, but cost- effective in the long term.

b. We should be able to.....our profit for next year fairly accurately with the new program.

c. I could tell from all the .....on the board that a maths lesson was in progress.

5. *continuation continue continuing continuously*

a. If microcomputer sales.....to increase, it won't be long before every household has one

b. Computers can do repetitive operation..... without getting bored.

c. There is a.....interest in discovering new areas where computers can be used.

6. *Measurement measure measured measurable*

a. The analog computer is essentially used for problems involving .....

b. Because computer equipment is often bulky, the area used for a computer installation must be.....out carefully.

c. The number of employees a computer company can be seen as ..... of its success in the business world

7. *general generally generality generalize*

a. .....purpose computers are large than minicomputer.

b. It is the.....consensus of opinion that computers have improved the quality of life.

c. Minicomputers are.....cheaper than mainframes.

d. It is often easier to.....than to talk about specifics.

8. *flex flexible flexibility flexibly*

a. Because of their.....microcomputers are becoming more popular than minicomputers.

b. Microcomputers have a more.....set of instructions than microcomputers.

9. *finance financial financially*

a. The.....implications of leasing a computer may be less than owning one

b. Companies often borrow huge sums of money to..... large- scale projects to computerize their business.

c. ..... speaking, a microcomputer is more affordable than a minicomputer.

10. *education educational educationally educated*

a. There are many .....institutes that teach computer programming

b. It is possible that by the year 2000, a well..... person will have to have a good knowledge of computer science

c. There are many fields of..... today that use computers as teaching tools.

Task 12

Complete the sentences below with appropriate words from the box

mainframe	*computer*	*installation*	*digits*
hybrid computer	*code*	*digital*	*analog*
programming			

1. The.....system is a computer which has combined the features of both the .....and ..... computer. It is used mainly in scientific research.

2. ..... computers get their name from the word ..... . These are single character numbers that make up the.....in which the data are presented to the computer for processing.

3. .....are usually found in large .....

4. The most commonly used language of.....in the business community is.....

Task 13

Translate into Vietnamese

It would seem that the limits for microcomputer applications have by no means been reached. There are those who predict that the home and hoppy computer markets will grow into a multi- billion dollar enterprise within a decade or so. It would also appear that performance of microprocessors could well un-crease ten- fold before 1990 while prices for micros could decrease by as much.

NEW WORDS

divide into (v)	chia thành
minicomputer (n)	máy tính mini
immense (Adj)	rộng lớn
execute (v)	thực hiện
accomplish (v)	hoàn thành
analog computer (n)	máy tính tương tự
speedometer (n)	đồng hồ đo tốc độ
simulate (v)	mô phỏng, mô tả
imitate (v)	bắt chước, làm theo
bulky (Adj)	cồng kềnh
filtration (n)	lọc
range (n)	phạm vi, lĩnh vực
application (n)	ứng dụng
real- time processing (n)	xử lý thời gian thực
converter (n)	máy đổi dòng điện
analyze (v)	giải thích
flexible (Adj)	phức tạp
aspect (n)	bề ngoài, diện mạo
host (n)	máy chủ
laptop (n)	máy tính xách tay
portable (Adj)	di động
access (v)	truy cập
network (n)	mạng máy tính
entertainment (n)	giải trí
tax (n)	thuế
CAD (v)	thiết kế bằng máy tính
Distinguish	phân biệt
Simultaneously (Adv)	đồng thời, cùng một lúc

Unit 4

HARDWARE AND SOFTWARE

Objectives

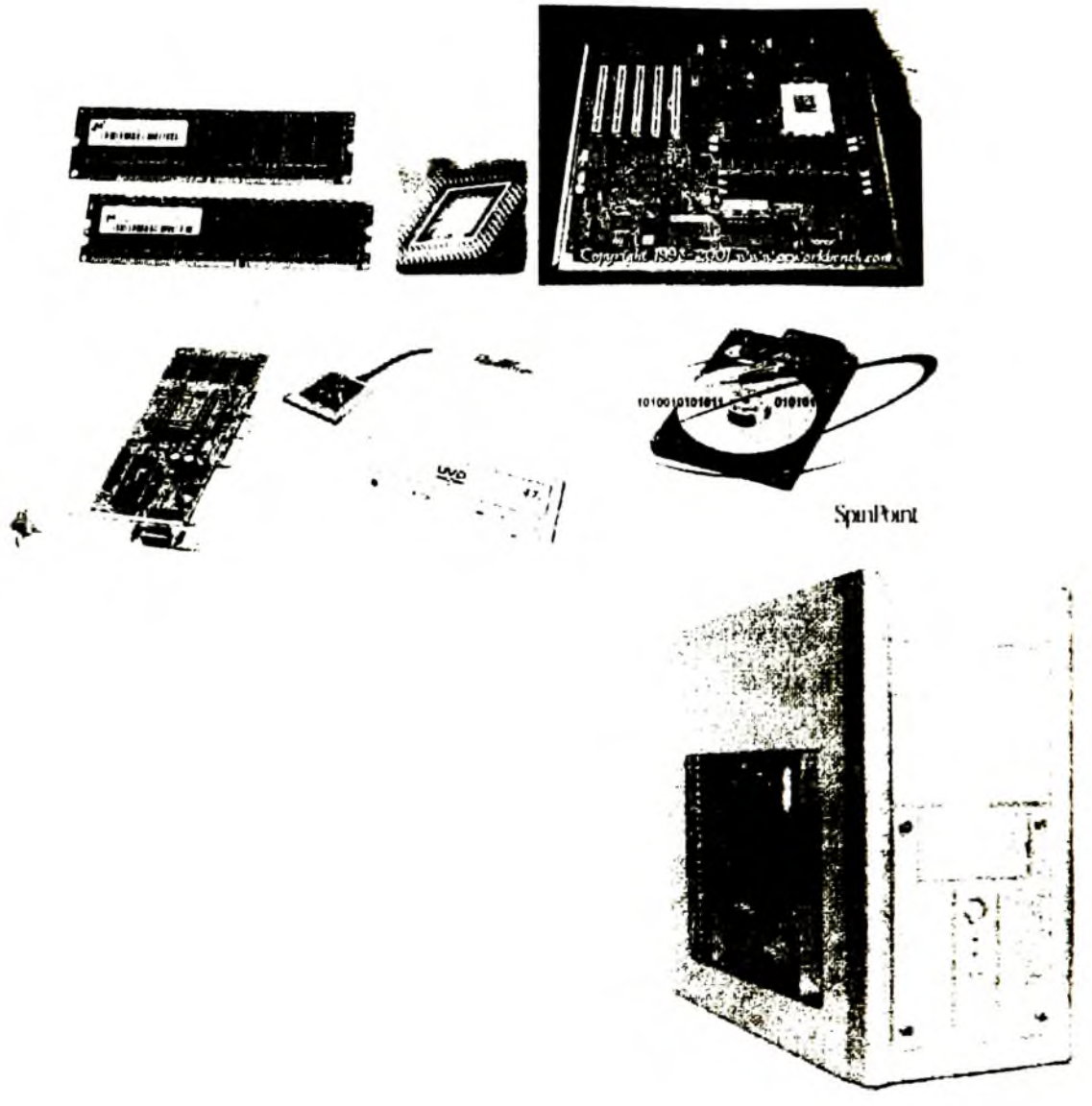
- Acquire specific vocabulary related to hardware and software.
- Identify hardware and software's characteristics and function
- Know how to use relative pronoun 'that'

Contents

***Reading*:**	Read about hardware and software
***Listening* :**	Listen to people talking about the two models and fill in the gaps
***Speaking* :**	play role ask and answer questions about some new models
***Writing* :**	look at the diagram a of computer and complete a paragraph introducing two main components in a computer system.
***Language study*:**	Relative clause with '*that*'

TRANS

1. What do you know about hard ware?
2. What are they?



READING

In order to use computers effectively to solve problems in our environment, computer systems are devised. A "system" implies a good mixture of integrated parts working together to form a useful whole. Computers system may be discussed in two parts.

The first part is hardware- the physical, electronic, and electromechanical devices that are thought of and recognized as "computer". The second part is

software- the programs that control and coordinate the activities of the computer hardware and that direct the processing of data.

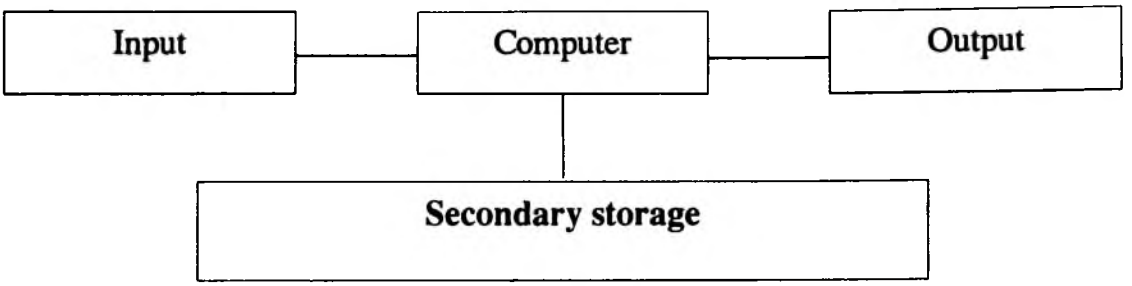


Figure 5.1

Figure 5.1 shows diagrammatically the basic components of computer hardware joined together in a computer system. The centerpiece is called either the computer, the processor, or usually the central processing unit (CPU) . The term "computer" usually refers to those parts of the hardware in which calculations and other data manipulations are performed, and to the internal memory in execution of programs. The various peripherals, which include input and/or output devices, various secondary memory devices, and do so on, are attached to the CPU.

Computer software can be divided into two very broad categories systems software and applications software. The former is often simply referred to as "system". These, when brought into internal memory, direct the computer to perform tasks. The later may be provided along with the hardware by a systems supplier as part of a computer product designed to answer a specific need in certain areas. These complete hardware/ software products are called turnkey system.

The success or failure of any computer system depends on the skill with which the hardware / software computer components are selected and blended. A poorly chosen system can be a monstrosity incapable of performing the tasks for which it was originally acquired.

Task 1:

Read the text and indicate whether the following idea are stated or not stated (S/NS)

1. A system implies a good mixture of parts working together.
2. Input and output device operate more slowly the decision- making devices.
3. The control unit and the arithmetic- logical unit are part of the processor.
4. The 'computer' is the hardware.
5. Software is the programs on cards, tapes and disks.
6. The processor is usually reffered to as the CPU.
7. The word'computer' means the processor and the internal memory.
8. Systems software is usually reffered to as programs.
9. Complete hardware/ software products are called turnkey systems.
10. Computers process specially prepared items of information.

LISTENING

Task 2

You are going to hear two people making enquiries in a Macintosh computer shop. The shop assistant is telling them about the two models below. Listen and fill in the missing information.

Imac

Processor speed	*266MHZ*
RAM standard	.....
Hard disk capacity	.....
Price	.....

Power Macintosh G3

Processor speed	.....
RAM standard	.....
Hard disk capacity	.....
Price	*£1, 720*

Task 3

Now listen again and fill in the gaps below.

Assistant: ***Do you need any help?***

Paul: Um yes, we' re looking for a personal computer. Have you got any fairly basic ones.

Assistant: Yes, sure. If you'd like to come over here....

Paul: What different (1) .....are there?

Assistant: At the moment we've got these two models: the IMac, which has a (2) ..... operating at 266 megahertz, and the Power Macintosh G3 which has a processor (3) ..... at 400 megahertz.

Sue: So the Power Macintosh G3 is the (4) .....one. And which one has the most memory? I mean- which has the most RAM?

Assistant: Well, the IMAC has 64 megabytes of (5) ....., which can be (6) ..... up to 256, and the Power Macintosh G3 has 128 megabytes which can be expanded up to (7) ..... It all depends on how much memory you think you're going to need.

SPEAKING

Task 4

Work with a partner. One of you wants to buy a computer, the other is the sales assistant. Ask and answer questions, using the information and instructions below to help you.

Products available	*Processor/ speed*	*Minimum/ Maximum RAM*	*Hard disk*	*Disk drives*	*Monitor*	Price
Explora 700 Net PC	Mips R4700 300 MHz	32 MB expandable to 256	4 GB	Optional 3,5" drive	Super VGA compatible	£799

Toshiba portable	Pentium III 500 MHz	64 MB expandable to 256	10 GB	3,5" drive 32 x CD	Colour LCD	£2,450
IBM Aptiva	AMD Athlon 700 MHz	128 MB expandable to 384	20 GB	3,5" drive DVD	XGA	£2,640
Polywell	AMD Athlon 700 MHz	128MB expandable to 768	20 GB	3,5" drive CD/ Zip	Super VGA	£2,330
Compaq	Pentium III 650 MHz	64 MB expandable to 768 MB	16 GB	Zip drive DVD	XGA	£2,580

Shop assistant ***Customer***

Greets the customer and offer help.

Asks to see some computers.

Shows the customer some models.

Asks for details: processor, RAM, etc.

Describes the speed in megahertz and the main memory.

Asks about the hard disk.

Gives explanations (MB storage capacity, etc) .

Asks about the monitor and other features.

Gives the required information.

Asks the price.

Gives the price and explain different ways of paying.

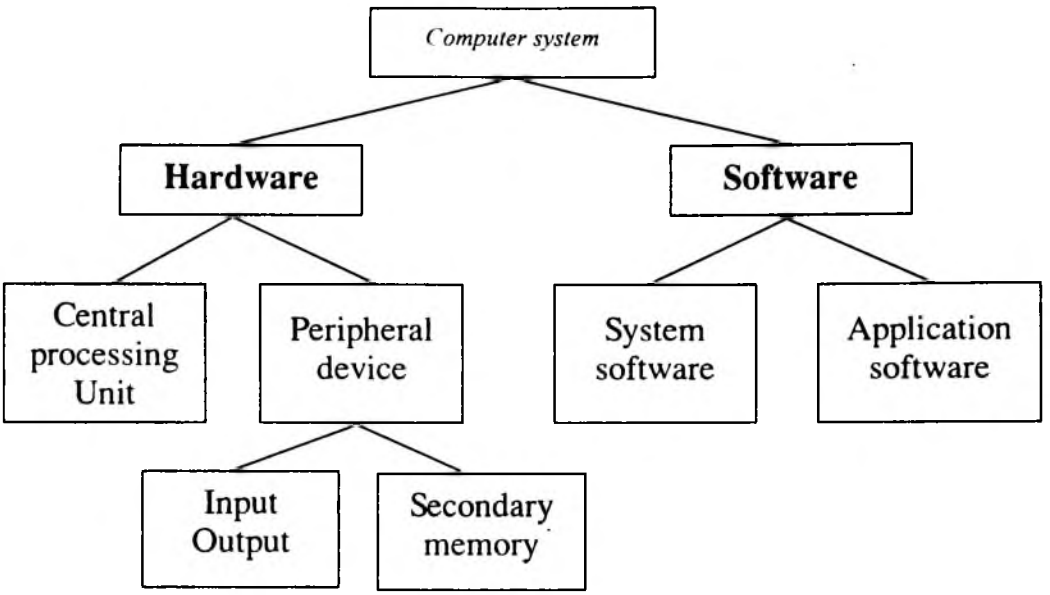
Decides to buy one/ to think about it.

Thanks the shop assistant and leave the shop.

WRITING

Task 5

Use the following diagram which shows the relationship between the system and its parts to complete the paragraph.



A computer system consists of two components:..... (1) and..... (2) . Each component is subdivided into different parts. The Central Processing Unit and the..... (3) constitute the ..... (4) component. Systems software and..... (5) comprise the..... (6) component. Devices that are used for secondary storage are considered part of the ..... (7) component. These devices along with Input and Output devices are referred to as..... (8) devices.

LANGUAGE STUDY

Relative clause with ' *That*

Study these example:

- *Computers are electronic machines that process information. (which machines)*

- *Software is the program that control and coordinate the activities of the computer hardware. (which program) .*

We can use that in the same way as which but we can only use it in definite relative clause.

We use "That" to refer to both a thing and a person.

Those are the students that have computer certificates.

When *that* is the object of the clause we can leave it out.

The computer that you ordered last week has arrived.

Or *The computers you ordered last week have arrived.*

Between main clause and relative clause there is no comma.

Task 6

Combine the sentences below with "that" or which", leave the relative pronoun if it is possible.

1. Abacus is one of the first calculating devices. It is now being used in many parts of the world.

2. Floppy disks conform to a standard. You can use them to carry data from one place to another.

3. CD-Rom disks are very common and conform to a standard. They are removable and can hold large amount of data.

4. A company should be willing to provide a number of services. That company provides, distributes, or sells computers or computer materials.

5. There are a few fundamental principles. They are the basic of all the electrical means of communication.

6. Where are the computers?. They have just delivered.

7. Those are the letters. They came from IBM company.

8. He refused the related- computer job. That job was advertised in the paper.

9. A computer contains thousands of electronic circuits connected by switches. Those switches can be in one of two possible states: ON or OFF.

10. The total number of colour is called the colour palette. It can be shown on the screen.

PRACTICE

Task 7

First choose the appropriate forms of the words to complete the sentences. Then check the differences of meaning in your dictionary

1. integration, integrated, integrating

a. Some computer manufacturers have integrated.....both input and output devices into one terminal.

b. The success of any computer system depends on the integration..... of all its parts to form a useful whole.

c. integrating..input and output devices into one peripheral has reduced the area needed for a computer installation.

2. coordination, coordinate, coordinated, coordinating, coordination

a. The control unit of processor.coordinate. The flow of information between the arithmetic unit and the memory.

b. Coordinating..... the many activities in a computer department is the job of the department head

c. The.....coordination.....of a language institute has assistant to help him and many have access to a computer to help him with the..... of the many programs, timetables, space and student results.

3. *diagram diagrammatic diagrammatically diagrammed*

a. Very often manufacturers provide.diagrammatic.....representations of the internal workings of a computer.

b. A..... is a drawing that show how something is arranged rather than what it actually looks like.

c. A few ideas have been..diagrammed. for you in this book.

4. *interchange interchangeable interchangeably interchanged*

a. The word 'arithmetic logic' and 'arithmetic logical' can be used .....interchangeably.....

b. There is often an..interchange.....of ideas among computer scientists.

c. There is a big difference between an input and an output. These can not be..interchanged.....

5. *division divide divisible*

a.It is often difficult for computer science students to..divide..... heir time up proportionally between studying and programming.

b. Are all numbers.....by three?

c. There is always a.....of labour within a computer company.

Task 8

Fill each gap in the sentences with a suitable word or phrases from the box

disk	*disk drive*	*display*	*hard disk*
keyboard	*menu*	*software*	*microprocessor*
modem	*monitor*	*mouse*	*operating system*
printer	*RAM*	*ROM*	

1. A.....is what you use to input information into the computer. It works like a normal typewriter

2. The.....is where you place the disks to start the program

3. The.....show 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 memory 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 use on a computer.

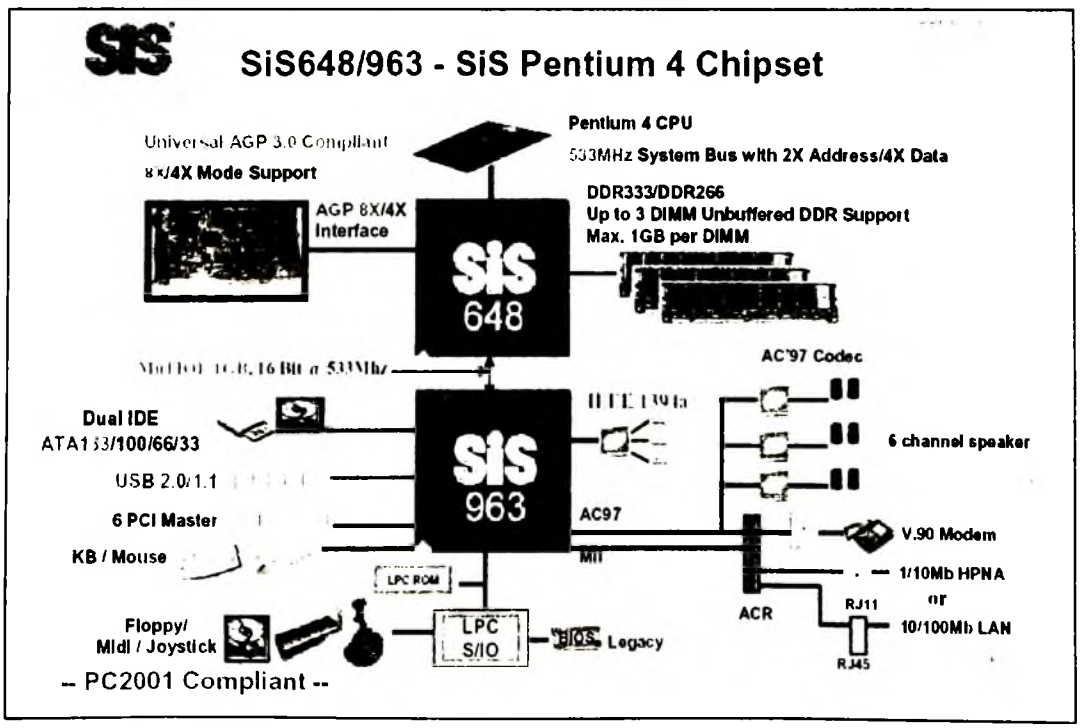
11. A.....is a device which connects a computer to a telephone line.

Task 9

Read the passage and fill in each gap with one suitable word

A computer program is a set of instructions..... directs a computer to perform some processing function or combination of functions. For the instructions to.....carried out, a computer must *execute* a program, that is, the computer read the program, and.....follows the steps encoded in the program in the precise order..... completion. A program can be executed many different times, with each execution yielding a potentially different result depending..... the options and data that the user gives the computer.

Programs fall into two major classes: application programs..... operating systems. An application program is one that ..... out some function directly for a user, ...as word processing or game- playing. An operating system is a program that manages the computer and the various resources and devices connected..... it, such as RAM (random access memory) , hard drives, monitors, keyboard, printers, and modems, ...that they may be used by other programs. Examples of operating systems are DOS, Windows 98, OS/2. and UNIX.



NEW WORDS

effectively (Adv)	hiệu quả
imply (v)	ngụ ý
coordinate (v)	kết hợp
secondary storage (n)	bộ nhớ thứ cấp
diagrammatically (Adv)	theo biểu đồ, sơ lược
refer to (v)	dựa vào, đề cập đến
manipulation (n)	thao tác
category (n)	hạng, loại
former (Adj)	xưa, cũ
internal memory (n)	bộ nhớ trong
turnkey system (n)	hệ thống chìa khoá trao tay
monstrosity (n)	kỳ quái, quái dị
acquire (v)	dạt được, thu được
expand up (v)	mở rộng
consist of (v)	bao gồm
conform (+ *to*) (v)	làm thích hợp với
removable (Ađj)	có thể mở được
willing (Adj)	bằng lòng
distribute (v)	phân phối
fundamental (Adj)	cơ bản, cơ sở, chủ yếu
principle (n)	cơ bản, nguồn gốc
communication (n)	thông tin
delivery (n)	chuyển hàng, giao hàng
palette (n)	bảng màu
installation (n)	cài đặt
proportionally (Adv)	tương ứng, cân xứng
operating system (n)	hệ điều hành
mouse (n)	chuột
combination (n)	phối hợp
encode (v)	mã hoá
precise (Adj)	rõ ràng, chính xác
yielding (Ađj)	dễ uốn, mềm, dẻo
modem (n)	bộ điều giải

Unit 5

PERIPHERAL DEVICES

Objectives

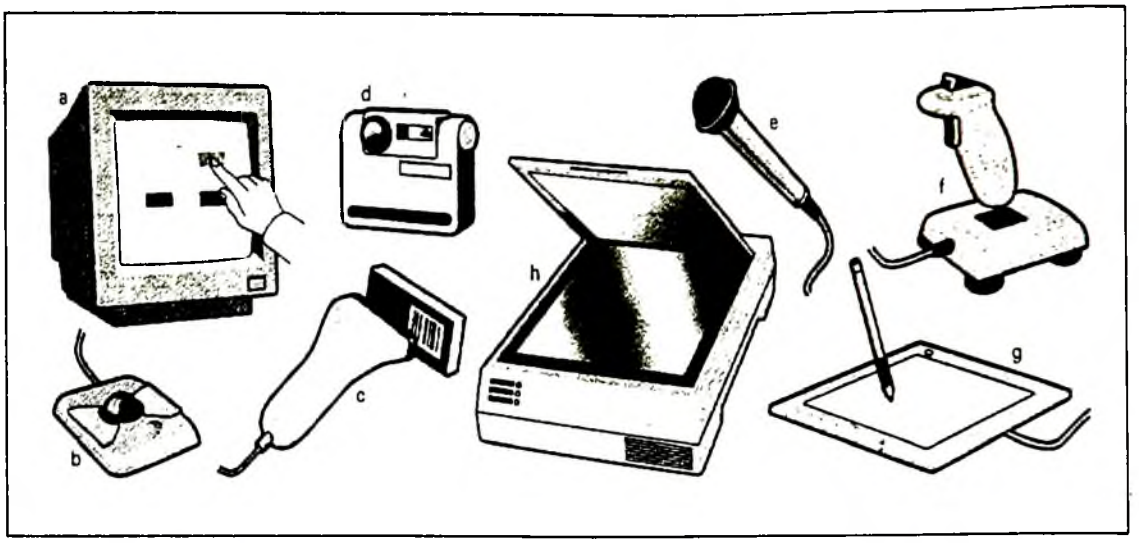
- Understand technical vocabulary connected to input, out put devices
- Identify important keys on a keyboard and explain their function.
- Use grammartical structures to describe input and output devices

Contents

***Reading*:**	Read about 'mouse', one of the input devices
***Listening* :**	Listen to descriptions of three input devices and identify them
***Speaking* :**	Talk about the usage of each input and output device
***Writing* :**	Look at the diagram and complete a paragraph comparing digital cameras with film cameras.
***Language study*:**	Describing function

WARM UP ACTIVITY

Look at the pictures and name as many peripherals as you can



Peripheral devices are attached to the CPU. Two kinds of peripheral devices are: *input and output devices.*

Input devices are the pieces of hardware which allow us to enter information into the computer. The most common are the keyboard and the mouse. We can also interact with a computer by using one of these: a light pen, a scanner, a trackball, a graphics table, a joystick or a voice recognition device.

After entering instructions and data into computer, information has been processed internally, we can see the results on the **visual display unit** or VDU. To obtain a permanent copy of these results, we can use plotter, printers or video recorders. In this interactive process with computer, the screen plays an important part.

READING

Read the text to check your answers or find the right answers

Point and click!

Typically a mouse is a palm- sized device, slightly smaller than a pack of cards. On top of the mouse there are more buttons for communicating with the computer. A 'tail' or wire extends from a mouse to a connection on the back of the computer.

The mouse is designed to slide around on your desktop. As it moves, it moves an image on the screen called a **pointer** or **mouse cursor.** The pointer

usually looks like an arrow or I- bar, and it minis the movements of the mouse on your desktop.

What makes the mouse especially useful is that it is a very quick way to move around on a screen. Move the desktop mouse half an inch and the screen cursor will leap four inches. Making the same movements with the arrow key takes much longer. The also issues instructions to the computer very quickly. Point to an available option with the cursor, **click** on the mouse, and the option has been chosen.

Mice are so widely used in graphics applications because they can do things that are difficult, if not impossible, to do with keyboard keys. For example, the way you move an image with a mouse is to put the pointer on the object you want to move, press the mouse buttons and **drag** the image The buttons on the mouse are used to select items at which the mouse points. You position the pointer on an object on the screen, for example, on a menu or a tool in a paint program, and then you press the mouse button to "select" it. Mice are also used to load documents into a program: you put the pointer on the file name and **double- click** on the name- that is, you press a mouse button twice in rapid succession.

Task 1

Here are some basic mouse actions. Match the terms in the box with the explanations below

a- click	**b- double click**	**c- drag**

1. Position the pointer on something, then rapidly press and release the mouse button twice. (you do this to load a program, open a document or select text or graphics.) b

2. Position the pointer on something, hold down the mouse button and move the mouse to the desired position, then release the button. (you do this to mean image to a new location on the screen) drag

3. Position the pointer on something, then press and release the mouse button. (you do this to place the insertion point, to choose an option, or to close a window.)

LISTENING

Task 2

Listen to these descriptions of three input devices. What are they?

1..... 2..... 3.....

Task 3

Check your answer with your partner.

SPEAKING

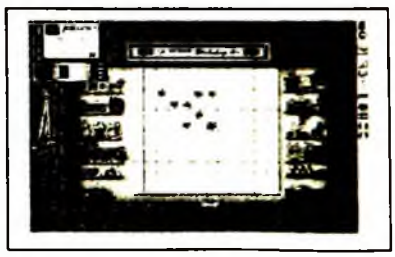
Task 4

Try to answer these questions

1. How is the mouse connected to the computer?
2. What does the mouse pointer look like on the screen?
3. What are the functions of the mouse buttons?
4. What are the advantages of a computer mouse over the keyboard?

Task 5

In groups, decide which input device is best for:



1. controlling fast- moving objects in a game
2. reading the price of things in a shop
3. making copies of a page of text and graphics
4. storing sounds on a computer
5. producing pictures of people and places for storing in a computer
6. controlling a computer using speech
7. typing text into a computer

WRITING

Task 6

Write your own comparison of printer types

Type	Speed	Text quality	Grapgics capability	Colour quality	Cost
Dot-matrix	Slow to medium	Fair to good	Limited	Fair if you add a colour option	Low
Ink-jet	Medium to fast	Good to Excellent	Good to Excellent	good to very good	Low to high
Lazer	Medium to very fast	Excellent	Good to Excellent	Good in colour laser printers	Medium to high
Thermal Transfer	Medium to fast	Excellent	Good to Excellent	Good to superior	Medium to high
Solid Ink	Medium to fast	Excellent	Good to Excellent	Good	Medium to high
Electro-static	Slow to fast	Fair to Good	Fair to Good	Fair to good	low to high

LANGUAGE STUDY

Describing function

We can describe the function or use of a device in different ways.
Study these examples.
Joysticks are used in computer games.
Using a scanner, you can input printed drawings directly into a computer.
You can used a scanner to input text.
A microphone is used for inputting sound.
There are different ways of describing function:
*** Are / is used for + V. ing (for controlling)**
*** Are / is used in.....**
*** Using...you can...**
*** You can use...to...**
Example You use mouse to select from a menu.

Task 7

Match each device (1-7) with its use (a-g) .

Device	Use
1. joystick	a. draw a pictures on to a computer screen
2. lightpen	b. copy documents
3. scanner	c. input sound
4. digital camera	d. input text
5. mouse	e. select from a menu
6. keyboard	f. move the cursor rapidly
7. microphone	g. produce photos without film

Task 8

Describe the use of each device in a sentence

Task 9

Use the structures from the language study section to make up new sentences

Example *You use a mouse to select from a menu.*

PRACTICE

Task 10

Fill in the gaps with appropriate words

There are different types of printer: dot- matrix, inkjet, and laser.

Dot- matrix printer are the.....1.....kind of printer, ... 2.....their print quality is low and they are slow and.....3..... They are.....4.....to run. Inkjets are.....5.....expensive, but you get..... 6 .....quality and quieter operation. However, they are relatively .....7..... and also.....8.....to run. They are a good choice for colour.

Laser printers give the.....9..... quality of output. They print .....10..... than either of the other two

.....11.....of printer and they cost.....12..... to run than an inkjet. Unfortunately, they.....13.....almost twice as.....14.....as an inkjet.

Task 11

Tables often include abbreviations and technical words that are not easy to understand. Look at this table and explanation of Monitor A's specifications

	CRT size	CRT face	Pixel res.	Visual display	Refresh rate	Tilt-and-swivel	Other features
MonitorA Superview	16''	flat	870 x 640	256 shades of grey	60 Hz	v	Anti-glare filter
Monitor B Paintview	19"	flat	1,024 x 768	32000 colours	75 Hz	v	Video card

Task 12

The specifications of Superview (monitor A) may be explained like this:

1. This monochrome monitor has a 16-inch screen.

2. This display system has a resolution of 870 x 640 pixels that gives you enough quality for graphics.

3. It offers 256 shade of grey.

4. It has a 60 hertz refresh rate. (This is quite low, so it will probably produce a flickering, unsteady imagine) .

5. A stilt-and- swivel stand is used to move the monitor up, down, and around so that the angle can be adjusted for each user.

6. The anti- glare filter helps eliminate eye fatigue and electromagnetic radiation.

Task 13

Use this example to help you describe Monitor B

Task 14

Translate into English

1. Máy tính được sử dụng để điều khiển các hoạt động kỹ thuật trong công nghiệp sản xuất ô tô để làm tăng năng xuất lao động.

2. Ngoài màn hình ra, nhiều loại thiết bị khác gọi là máy vẽ được sử dụng để cho ra những kết quả đồ hoạ vĩnh cửu.

Task 15

Fill each gap in the passage with a suitable word from the box

Socket	*joystick*	*monitor*	*printer*	*function*
program	*mouse*	*keyboard*	*screen*	*disk*

A computer has a .....similar to that of typewriter. It is possible to give the computer commands by means of the.....keys above the letter keys. The machine has a ..... at the back so that you can connect it to a....., which has a .....like a television. We often use a.....which someone has written. All the information is stored on.....and at the side of the computer there is a..... . A.....is used to copy the information on to paper. The object like a car gear is useful for playing games on a computer and is called a ..... .

NEW WORDS

interact (V)	tác động lẫn nhau
scanner (N)	máy quét
trackball (N)	quả cầu đánh dấu, bóng xoay
joystick (N)	cần điều khiển
VDU (video display unit)	màn hình
permanent copy (N)	copy thường xuyên

interactive (Adj)	tương tác
advantage (N)	ưu điểm
wire (N)	dây
slide (N)	tờ chiếu
pointer (N)	con trỏ
mouse cursor (N)	con trỏ
leap (V)	nhảy, lao vào
drag (V)	kéo
release (V)	thoát khỏi
similarly (N)	tương tự, giống nhau
grab (v)	nắm
stretch (V)	căng ra
tool (N)	công cụ
matrix (N)	ma trận
inkjet (N)	lọ mực
pixels (N)	ảnh điểm
flickering (Adj)	lập loè, bập bùng
stilt-and- swivel (N)	trụ xoay
adjust (V)	điều chỉnh
anti- glare filter (n)	máy lọc ánh sáng
electromagnetic (N)	điện từ
radiation (N)	phát xạ nhiệt

Unit 6

ISSUES IN COMPUTING

Objectives

- Remember the words and expression involving in computer problems
- Identify the ethical issues involving in computing and know the ways to deal with these problems.
- Use grammartical structures well

Contents

Reading: Computer viruses

Listening : Health and safety in a computer

Speaking : Talk about computer problem

Writing : Design and advertisement for a PC protection package

Language study: Making guideline and rules

WARM UP ACTIVITY

Work in group. Discuss how you can prevent these events

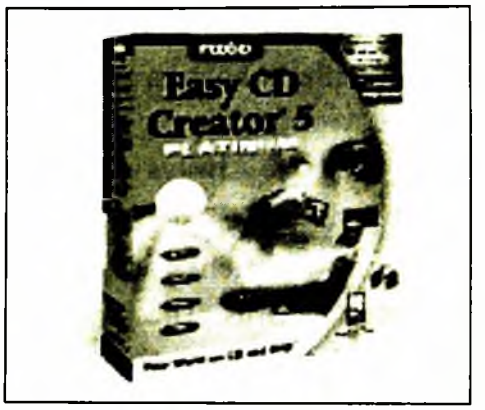
1. Your files are accidentally destroyed.
2. Someone reads your private emails.
3. Someone copies software only you are authorized to use.

READING

Task 1

Try to answer the following questions in groups.

1. What is a computer virus?
2. How are viruses spread?
3. How can you deal with viruses?
4. Name any viruses you know.



Task 2

Read the Text to check your answer.

COMPUTER VIRUSES

The Maltese Amoeba may sound like a cartoon character, but if it attacked your computer, you wouldn't be laughing. The Maltese Amoeba is a computer virus. It is a form of software which can "infect" your system and destroy your data. Making computer viruses is only one type of computer crime. Others include hacking (changing data in a computer without permission) and pirating (illegally copying software programs) .

Viruses are programs which are written deliberately to damage data. Viruses can hide themselves in a computer system. Some viruses are fairly harmless. They may flash a message on screen, such as 'Gotcha! bet you don't know I crept in'. The Yankee Doodle virus plays this American tune on the computer's small internal speaker every eight days at 5 p.m. Others have serious effects. They attach themselves to the operating system and can wipe out all your data or turn it into gobbledegook. When the Cascade virus attach, all the letters in a file fall into a heap at the bottom of the screen. This looks spectacular but it's hard to see the funny side when it's your document.

Most viruses remain dormant until activated by something. For example, the Jerusalem B virus is activated every Friday the 13th and erases any file you

try to load from your disk. The Michelangelo virus was programmed to become active on march 6th 1992, the 517th birthday of Michelangelo. It attacked computer systems throughout the world, turning data on hard disks into nonsense.

Viruses are most commonly passed via disks but they can also spread through bulletin boards, local area networks, and email attachments. The best form of treatment is prevention. Use an antivirus program to check a floppy before using it. Always download email attachment onto a floppy and check for viruses.

If you do catch a virus, there are antivirus programs to hunt down and eradicate the virus. The problem is that around 150 new viruses appear every month and you must constantly update your antivirus package to deal with these new forms.

Task 3

1. List three computer crimes!
2. What do you think these words in the passage mean?

Flash (line 10)
Gobbledegook (15)
Dormant (line 19)
Eradicate (line 31)

3. Why is this difficult to remove all viruses?
4. Complete this table.

Virus	Effect
Yankee Doodle	
Cascade	
Michelangelo	
Jerusalem B	

LISTENING

Task 4

Tony Clark, a lecturer in computer ergonomics, is talking to some students about health and safety in a computer classroom. Listen and complete the sentences below.

1 You should get a good chair, one that----------

2 Position the keyboard----------

3 Position the monitor----------eye level, or just---------

4 A titl-and- swivel display let you----------

5 You should stay an arm's length away from----------

6 If you work in a room with a lot of computers, sit----------

SPEAKING

Task 5

As a class, find out how many had problems with any of these items of hardware in the last twelve months. Calculate the percentages and compare results with these findings from a national survey.

% of users reporting problems in the last 12 months		
	Your class	**Other users**
Hard disk		17
CD-ROM drive		15
Modem		15
Mouse		13
Monitor		12
Motherboard		11
Sound card		7
Cooling fan		7
Floppy disk drive		7
Battery		7
Keyboard		6

Power supply		6
Memory		5
Graphics/ video		5
CPU		3

Task 6

Work in pairs, A and B. Advise your partner on his her computing problem. Ask for advice on your computing problem. Complete this form for your partner's problem.

Student A Your problems and advice are on page 249

Student B Your problems and advice are on page 252

Help Desk Technician's Name	Data of Call	Time Commenced

Reported by	address

Under Warranty	Service Tag No.	make	Model

Processor	RAM Size	Operating System	Network Type

Problem Description	Diagnosis

Cleared by phone	Job number

Passed to Supplier	Time	Ref.No.

Passed to Thirty Party	Time	Ref.No.

Require Visit	Time	Visiting Technician

Equipment Required	Commends (e.g. case history)

WRITING

Task 7

Design an advertisment for a PC protection package. Your advertisment should mention all the features listed below, but you may add others. Choose a name, and decide on the best way to present your product.

Features

Password protection- system manager controls what each user is permitted to do.

File encryption- plain text messages are converted into cipher (code) so that only authorized recipients can read them.

Keyboard lock- screen is cleared and keyboard is locked after pre- set period of inactivity.

Task 8

How many ways can you think of to protect a computer from unauthorized use? Note down your ideals and compare your list with another student.

LANGUAGE STUDY

To make guidelines we can use one of these ways

Using an imperative:

1. Try to reinstall the sound drivers.

Using the modal verb should:

2. you should reinstall the sound drivers.

Using recommend + Ving

3. I recommend reinstalling the sound driver.

You can also use:

4. I recommend that you reinstall the sound drivers.

5. I advise you to reinstall the sound drivers.

Or phrases such as:

6. The best thing to do is to reinstall the sound drivers.

We can make them stronger by adding always and never.

Always download email attachments onto a floppy.

Never use a floppy without checking it.

Task 8

Study these steps to take before you phone for technical support. Rewrite each one using the clue given

1. Reboot your PC to see if the problem recurs. (should)
2. Use your PC's on board diagnostic and repair tools. (recommend)
3. Record the details of the problem so you can describe it accurately. (good idea)
4. Note your system's model name and serial number. (advise)
5. Keep the record of hardware and software you've installed along with any changes you've made to settings. (strongly recommend)
6. If you think hardware may be at fault, figure out how to open the case. (should)
7. Visit the vendor's website and check the FAQs. (best thing)

8. Avoid phoning in peak times. (never)

9. Have your system up and running and be near it when you call. (good idea)

10. When you reach a technician, tell him or her if you may have caused the problem. (advise)

Task 9

Diagnose these faults and provide advice on each problem

1. My laser printer produces very faint copies.
2. When I print three or four sheet come through the printer at the same time.
3. My spreadsheet does not seem to add up correctly.
4. Everything I type appears in capitals.
5. My PC is switched on but the monitor screen is blank.
6. I tried to print a document but nothing came out of the printer.
7. My monitor picture is too narrow.
8. My monitor screen flickers.
9. My mouse responds erratically.
10. the time display on my computer is one hour slow.
11. When i print out a page, the first two lines are missing.
12. My computer sometimes stops and reboots itself. The lights dim at the same time.

Task 10

Making guidelines and rules

Study these guidelines for preventing and treating viruses.

Download email attachments onto a floppy.

Don't use a floppy without checking it.

We can make them into rules by using must and mustn't.

You **must** download attachments onto a floppy.

You **mustn't** use a floppy without checking it.

Task 11

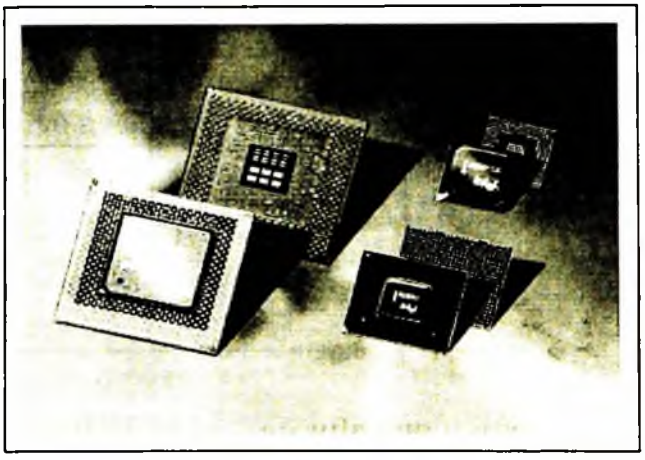
Rewrite this advice using must or mustn't

1. Keep your network password secret.
2. Don't try to access other people's data.
3. Always make a backup copy of all your important files.
4. Never use commercial software without a license.
5. Check your email regularly.
6. Never install software before it is virus- checked.
7. Don't reuse web images from pages which have a copyright symbol.
8. Never change other people's data without permission.
9. Don't believe every email message that warns you about viruses.
10. Always virus- check an email attachment before opening it.

Task 12

Write two rules about each of these topics

1. Password
2. Floppy disk care
3. Backups
4. Working condition
5. Viruses
6. CD- ROM care



Task 13

Fill in the gaps with the correct form of an appropriate verb from this list

may	*might*	*must*
should	*will*	

1. Technicians----------have normal colour vision to follow colour-coding of wires.
2. You----------try to remove a floppy disk when the drive is running.

3. Biological computers ----------replace electronic computers in the future.

4. You----------update your Web page regularly

5. You----------have pages with dead- ends on your website.

6. You----------know your password to gain access to the network.

7. Computers ----------get cheaper and more powerful.

8. You----------back up your files regularly.

Task 14

WORD STUDY Semantic groups Group these terms into the five headings, A to E, below.

A	B	C	D	E
Viruses and other destructive programs	Data protection	Communication systems	Internet	World Wide Web

anti- virus software
backups
bandwidth
browser
domain name
encryption
firewalls
FTP
GPS
IRC
ISP
hyperlink
logic bomb
pagers
passwords
router
trigger routine
Trojan
URL
Usenet
XML

NEW WORDS

Spread (v)	tuyên truyền
deal with (v)	giải quyết
attack (v)	bắt đầu, bắt tay vào
infect (v)	đầu độc
pirating (n)	sao chép, mô phỏng
đamage (v)	hỏng
hide (v)	giữ kín
harmless (Adj)	vô hại , vô tội
flash (v)	chiếu sáng
heap (n)	là vùng lưu trữ đặc biệt trong bộ nhớ, dùng để lưu trữ những tài liệu quan trọng
spectacular (adj)	kỳ lạ, ngoạn mục
dormant (adj)	không hoạt động, im lìm
erase (v)	xoá bỏ
nonsense (n)	vô lý, vô nghĩa
treatment (n)	sự giải quyết
download (v)	tải xuống
hunt down (v)	lùng sục, dồn vào thế cùng
eradicate (v)	bài trừ
appear (v)	xuất hiện, hiện ra
authorize (v)	uỷ quyền, cho phép
net (v)	tịnh, thực (trọng lượng)
blast (v)	phá hoại
injure (v)	làm hại
crucial (adj)	cốt yếu, chủ yếu
fear (v) (n)	sợ hãi
chaos (n)	lộn xộn, hỗn loạn
punishment (n)	trừng phạt, trừng trị
ethical (adj)	đúng qui cách

online (n)	trực tuyến
accuse (v)	buộc tội, kết tội
pornography (n)	sự khiêu dâm
propaganda (n)	sự tuyên truyền
forensic (adj)	pháp lý
tempt (v)	cám dỗ, lôi cuốn
unauthorizebis (n)	trái phép
have a secret (v)	bí mật
backup (n)	bản sao dự trữ
password (n)	mật khẩu
symbol (n)	biểu tượng
update (n)	cập nhật

REVIEW OF UNITS 1-6

Objectives

Understand the usage of grammartical structures to do exercises:

+ Relative clause
+ The passive
+ Comparisons

Contents

Grammartical exercises

Vocabulary exercises

Translation

THE PASSIVE

Exercise 1

Read the text below, which describes the insurance company's procedure for dealing with PC- users` problem. Fill in the gaps using the correct forms of the verbs in brackets.

All calls ..... (register) by the Help Desk staff. Each call ..... (evaluate) and then..... (allocate) to the relevant support group. If a visit..... (require) , the user ..... (contact) by telephone, and an appointment ..... (arrange). Most calls ..... (deal with) within one working day. In the event of a major problem requiring the removal of a user's PC, a replacement can usually..... (supply) .

Exercise 2

Fill in the gaps in the following sentences using the appropriate form of the verbs in brackets.

1 The part of the processor which controls data transfers between the various input and output device..... (call) the control unit.

2. The address bus..... (use) to send address details between the memory and the address register.

3. The pixel positions..... (pass on) to the computer's pattern recognition software.

4. An operating system ..... (store) on disk.

5. Instructions written in a high level language..... (transform) into machine code.

6. In the star configuration, all processing and control functions (perform) by the central computer.

7. When a document arrives in the mail room, the envelope (open) by a machine.

8. Once the index..is stored..... (store) , a temporary key number ..is generated..... (generate) and..written..... (write) on the document.

9. Microsoft ..was found..... (found) by Bill Gates.

10. During that period, enormous advances ..were made..... (make) in computer technology.

RELATIVE CLAUSE

Exercise 3

Combine the sentences below with "which" or "that"

1. Computers are electronic machines. They can process information and communicate with the user.

2. I've just bought a computer. It was made in Japan.

3. A new computer for household use. It is being advertised in our local newspaper.

4. In addition, many aspects of business can be computerized. They include accounting systems, inventory control and statistics.

5. Information can now be put into a piece of silicon no larger than the head of a nail. It formally required miles of computer tape.

6. A big breakthrough in computer technology was the microprocessor, or computer chip. It was developed in the 1970s.

7. Furthermore, the price of computers will be even less in the future. It has fallen for a number of years.

8. A home computer can perform many time- consuming tasks. It will free individuals to do other things.

9. In the school, computers can keep students learn many subjects. They will replace the need for personal contact with a tutor

10. They may be right , for computerized robots are already being used in many factories. They are programmed to perform complex functions.

COMPARISONS

Exercise 4

Rewrite the sentences with provided words

1 I've never seen such a wonderful computer before.

It's .....

2. Tom is the best programmer in his company.

No one .....

3. Ten years ago, there were fewer computers in use than today.

Today .....

4. A mainframe is bigger and more expensive than a microcomputer.

A microcomputer .....

5. Learning a computer language is not as difficult as a foreign language.

Learning a foreign language .....

6. Neither minicomputers nor microcomputers could be as complex as large mainframes.

Large mainframe.....

7. An analog computer is not the same as a digital computer.

A digital computer.....

8. Unlike minicomputers, microcomputers are not very flexible.

Microcomputers.....

9. No technology in the world today is growing as fast as computer technology.

Computer technology is.....

10. When computer gets bigger it can do more complex operations.

The bigger.....

11. That's the most expensive computer he has ever had.

He has.....

WRITING

Exercise 5

Choose the best answer

1. My TV,....., has broken down twice already.

A. which I bought only last year

B. that I bought only last year

C. which I bought it only last year

D. I bought only last year

2. Because of TV, people are better.....about what is going on in the world than they used to be.

A. instructed B. educated

C. informed D. prepared

3. .....receipt of your instructions, I immediately sent a telex message to Algeria.

A. In B. On

C. With D. By

4. I had a headache after the film because I was sitting too close to the television.....

A. view B. glass

C. window D. screen

5. Computers have had an enormous effect .....our daily life.

A. on B. in

C. for D. of

6. I couldn't afford a new computer so I bought a (n) ...one

A. old- fashioned B. second hand

C. outdated D. antiquated

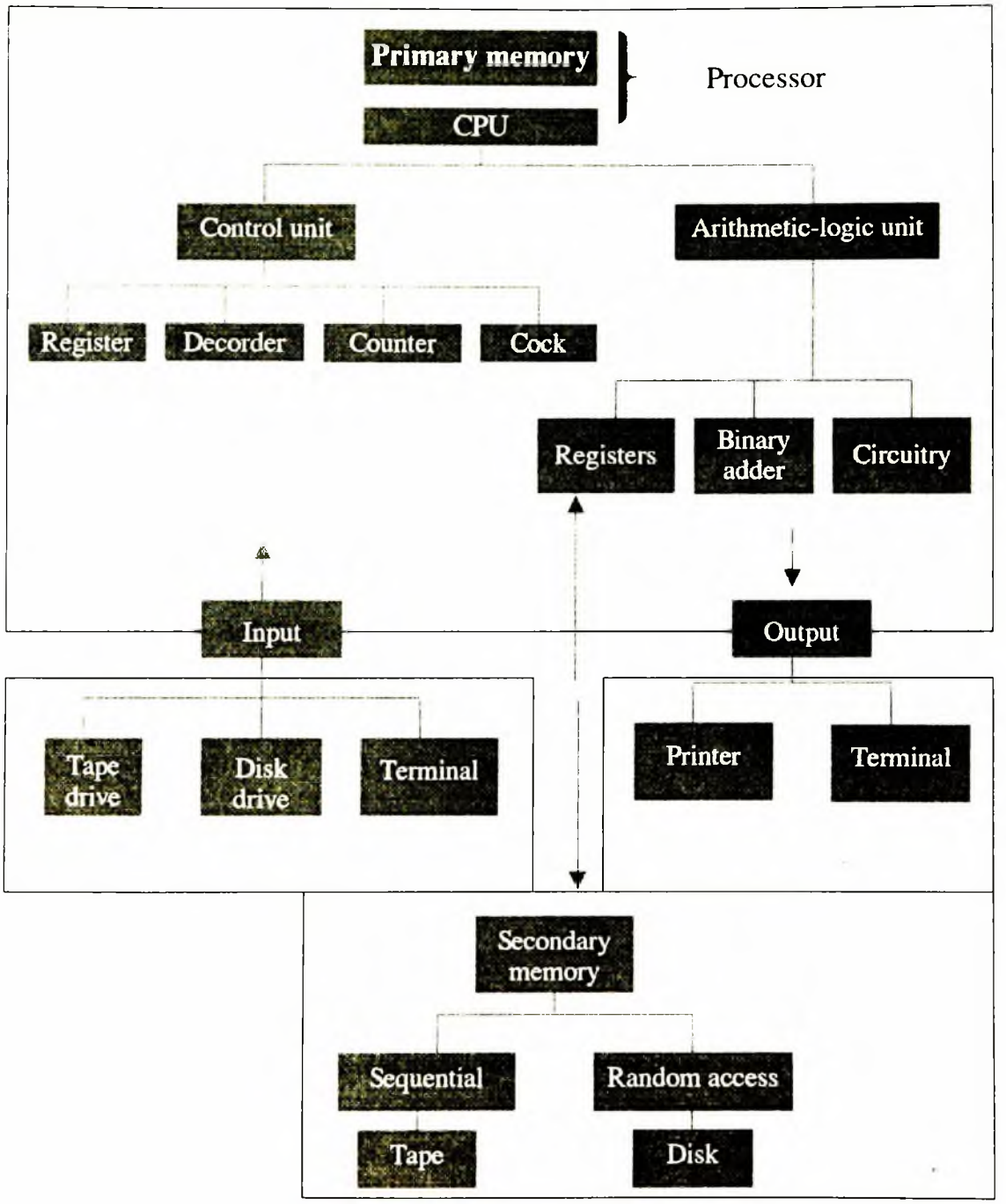
7. He gave me some very.....advice on buying a computer.

A. precious B. wealthy

C. dear D. valuable

Exercise 6

Using the diagram below, complete the paragraph on the following page.



A computer system

A computer , has four basis components: input, processor, memory, and output. The CPU consists of two parts; the control unit....., which directs and controls the signals and commands inside the processor, and the .....unit, which does the arithmetic operation and the decision-making operations. While the ..... is made up of a ....., a ....., a ....., and a ....., the .....is composed of....., a ....., and .....

In a computer, internal memory or .....refers to the storage locations inside the computer, whereas .....refers to the storage embodied in the peripherals. .....may be divided into ..... "..... " and ..... ".....".

The .....devices can be either a ....., a ....., or ..... .

These devices enter information into the computer. After the processor has operated on it, the .....devices display the results of the computations on either a .....or a ..... , or store them on tape or disk for future use.

Exercise 7

Fill in the gap in the sentences with suitable words or phrases from the box

memory	*software*	*hard copy*	*program*
hardware	*bytes*	*keyboard*	*silicon*
visual	*display unit*	*data*	

1. Another word for information in number is .....
2. The part of a computer which remembers data is the .....
3. The screen like a television screen which fits a computer is called a .....
4. Computers and the machines which go with them are called .....

5. Programs on cassette or floppy disc are calls .....

6. A list of instructions and information which goes into a computer is called a .. , ...

7. A printer gives the computer user.....

8. A kilobyte is the same as 1024 . .....

9. The brain of a computer is a ... . chip.

10. Most computers have a , . like a typewriter.

Exercise 8

Translate into English

Máy tính điện tử đóng vai trò quan trọng trong đời sống hàng ngày của chúng ta. Các nhà khoa học đang nghiên cứu một thế hệ máy tính mới có thể trả lời điện thoại, nhưng chưa thể hiểu được tiếng người. Một số công ty máy tính nổi tiếng thế giới hy vọng rằng họ sẽ đưa ra một loại máy tính mới vào năm tới có thể thực hiện được điều này.

Exercise 9

Fill in the gap in the sentences with the correct form of the word in brackets

1. A computer can perform mathematical operations very quickly. (operate)

2. The students are still waiting for their .accept... ... into the Computer Science program. (accept)

3. It may take a lot of time to find a ..... to a complex problem in programming. (solve)

4. Today's computers are remarked ..... faster than their predecessor. (remark)

5. Some people working in computer installation aren't very ..... because they are shy. (communicate)

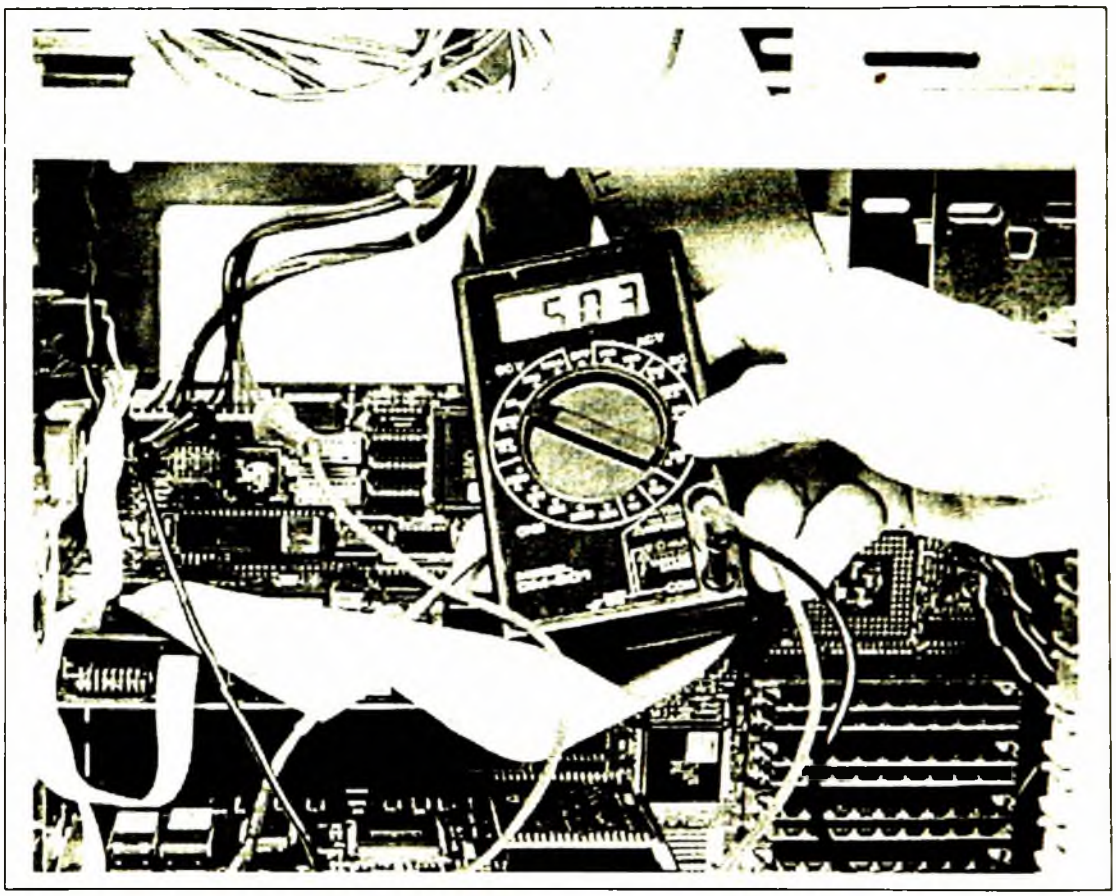
6. A good programmer isn't ..... going to be a good system analyst. (necessity)

7. The ..... improvements of computers are reducing man's workload. (technology)

8. Computers are ..... machines. (rely)

9. A computer is limited in its ability by the ..... of man. (imagine)

10. It is usually not ..... to smoke in a computer installation. (permit) .



READING

Exercise 10

Fill in the gaps in the passage with suitable prepositions. You can use two of them more than once.

The crime of the future

The increased use of computers ..... business has been accompanied .....a corresponding increase in computer crime. computers are used in business in ever- increasing number to store, process and

distribute information. At the same time, thefts by computer are ..... the rise.

The costs .....the victims of computer crime are very high. .....his book, *Crime by computer*, computer expert Donn B. Parker estimated that financial losses to business ..... computer thefts would exceed 410 billion in 1978. Although Parkers' estimate base ..... documented cases, no one really knows the extent ..... computer crime because thefts by computer are almost impossible to discover. "There is just no reliable way to detect computer thefts," Parker said: "It is not just the money they control; they control data, and data is power."

Exercise 11

Work in group of three. Read two texts each and complete your sections of the table.

Medium	**advantages**	**disadvantages**
Floppy disk		
Fixed hard disk		
Re-moveable hard disk		
CD - ROOM disk		
Magneto- optical disk		
Magnetic tape		

A. Most computers use floppy disks. Floppies conform to a standard and you can use them to carry data from on place to another. They are also very cheap, but they are slow and have a limited capacity.

B. Almost all desktop computers have hard disks. They are fast and can store much greater amounts of data than floppies, but they are fixed inside the computer and you cannot use them to transfer data.

C. You can move data from place to place using removable hard disks. They are almost as fast as fixed hard disks and also have high capacities, but they are relatively expensive. They do not all conform to one standard and they are not very common.

D. CD- ROM disks are very common and conform to a standard. They are removable and can hold large amounts of data. They are also cheap to make. However, they are usually read- only. You cannot change the information on them. They are also slow compared to hard disks.

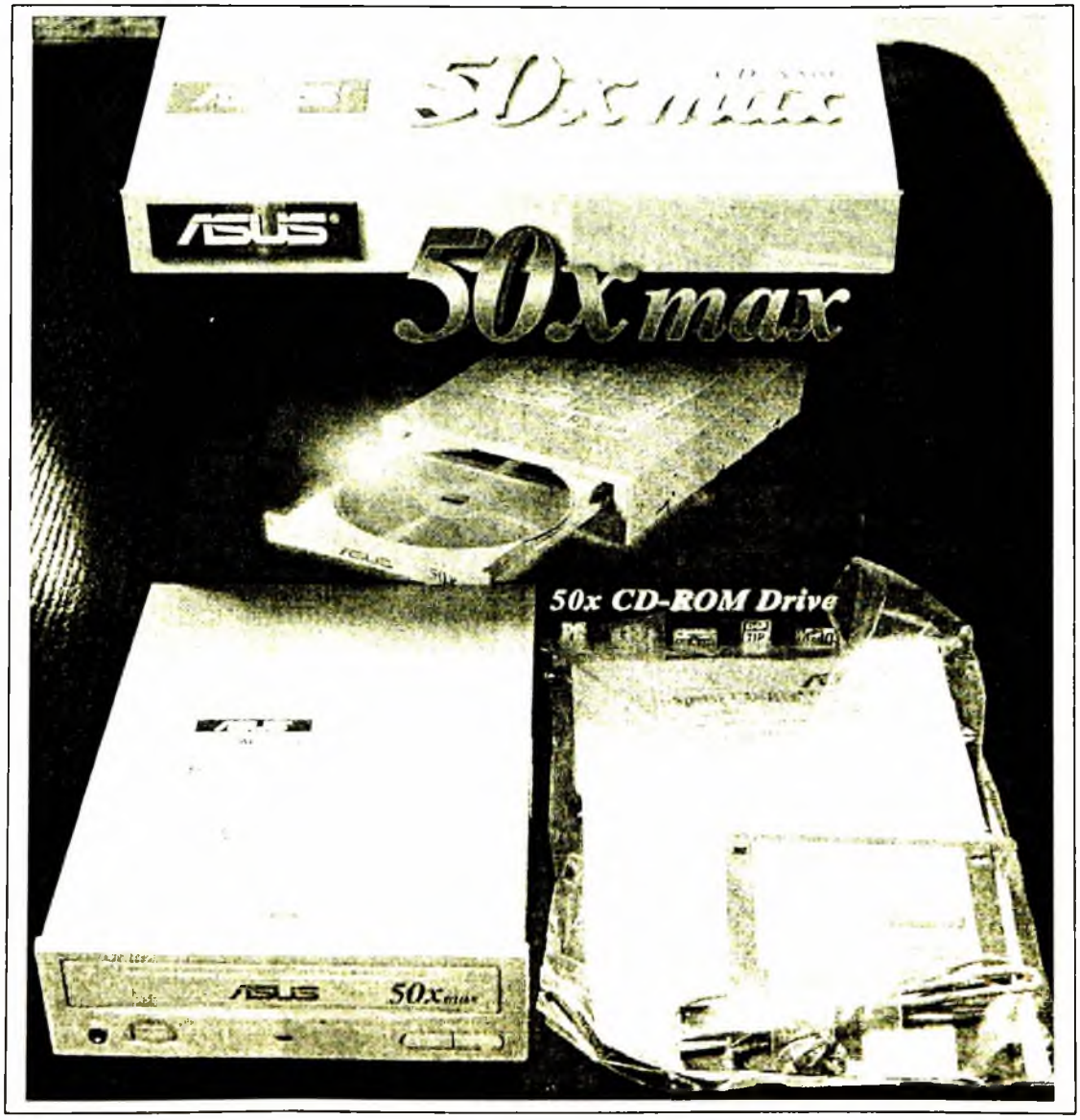
E. Magneto- optical disks are like CD- ROMs, but you can write data on to them. They are removable, have large capacities, and last for a long time, out they are expensive and do not all conform to on standard. For this reason they are not very common.

F. Magnetic tape is a cheap medium. You can use it to store very large amounts of data, but it does not allow random access. Every time you read or write a piece of data, you start at the beginning of the tape. Tape drives are slow. Therefore, it is only suitable for doing backups.

NEW WORDS

evaluate (v)	định giá, đánh giá
allocate (v)	phân phối
removal (n)	di chuyển
transform (v)	biến đổi
code (n)	mã
configuration (n)	cấu hình
index (n)	bảng chú dẫn
temporary (adj)	tạm thời, nhất thời
household (n)	trong gia đình
inventory (n)	kiểm kê, hàng tồn kho
statistics (n)	tập hợp, số liệu thống kê
breakthrough (v)	chọc thủng phòng tuyến
primary memory (n)	bộ nhớ chính
binary adder (n)	bộ cộng nhị phân
sequential (adj)	tuần tự
random access (n)	truy cập ngẫu nhiên
embodied (adj)	hiện thân, tiêu biểu

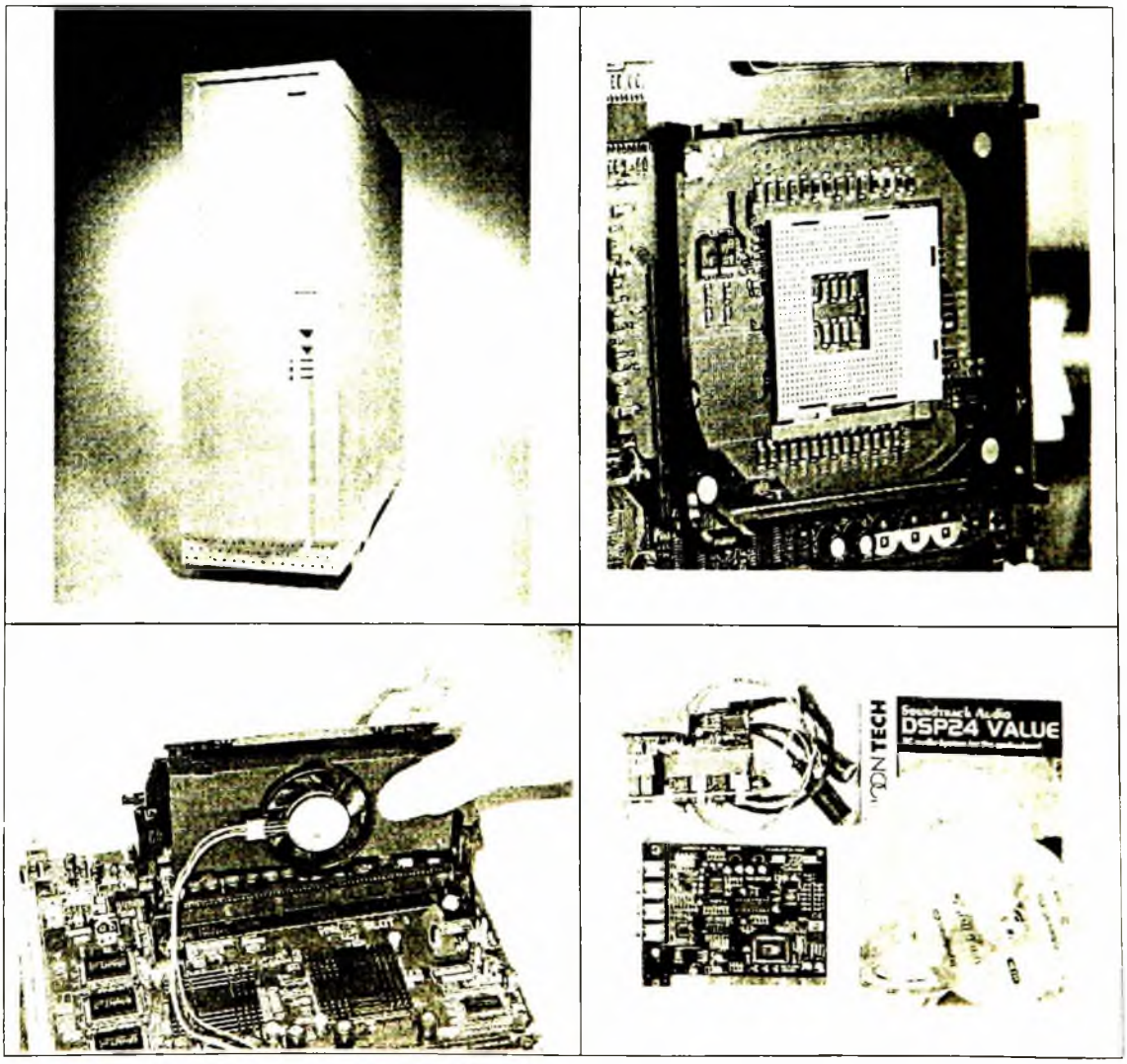
fit (v)	điều chỉnh cho vừa
predecessor (n)	cha ông, tổ tiên
theft (n)	ăn trộm, ăn cắp
estimate (v)	đánh giá, ước lượng
reliable (adj)	tin cậy



CD- ROM

Section 2

BASIC SOFTWARE



Unit 7

OPERATING SYSTEMS

Objectives

- Understand the words and expressions related to system software and utilities
- Can use utilities well
- Use grammartical structures to describe the usage of utilities

Contents

Reading:	some kinds of operating system
Listening :	Listen and identify the system utilities appropriate requirements
Speaking :	Find out from the information of operating systems
Writing :	Write and describe of a operating system
Language study:	-ing form as a noun after prepositions

WARM UP ACTIVITY

Make a list of software products that you use (e.g. word processing, spreadsheets, etc.) . Are there some features of the products you never use? Are there any features missing?

READING

Task 1

Read the text and find:

1. The text- based operating system delivered with most PCs.
2. The mail package included with Windows '98
3. The function of the Finder in Macintosh computers
4. The meaning of 'multitasking'
5. The operating system which is written in C language and has been adopted by many corporate installations as standard
6. The OS that is freely redistributable under the GNU general public license
7. The OS used by Digital computers
8. The OS creates to run Java applications.

MS- DOS

This is the disk operating system developed in 1981 by Microsoft Corp. It is the standard OS for all IBM PC compatibles or clones. In this text- based operating system, you communicate with the computer by typing commands

that exist within list library. For example, some basic DOS commands include DIR (shows a list of all the files in a directory) , COPY (makes a duplicate of a file) , DEL (deletes files) .

Window '95/ 98

Windows ' 95 is a bootable operating system in its own right. It has a graphical interface with many Macintosh- like features. It supports multimedia applications and comes with Internet software. The program manager is called Windows Explorer. Buttons and scroll- bars have an attractive, three-dimensional look.

Windows ' 98, Internet access becomes part of the user interface. Its active desktop lets you find information easily with the same view of content on your PC, network for the Web. The system includes Outlook Express for e- mail, NetMeeting conferencing software, a chart program and a Web- page editor. It offers support for new technologies like DVD and it also enables you to watch TV on your PC.

Windows 2000

This OS is an update to all Windows versions, including Windows NTs

Macintosh
(Apple) - Mac OS

Most of the Mac OS code is in the ROM chips. These contain hundred of routines (sequences of instructions) which perform such tasks as starting up the computer, transferring data from disks to peripherals and controlling the RAM space.

Large parts of the Mac OS are also inside the system file and the Finder, kept in the System folder. The content of the System file loaded automatically at start-up, and contains information which modifies the routines of the OC in the ROM chips. The Finder display the Macintosh's desktop and enables the users to work with disks, programs and files. It allows multitasking. It has an Internet set-up assistant, an e- mail program and a Web browser.

OS/2 Warp
(IBM)

This is the PC's world most technically sophisticated operating system. It provides true multitasking, allowing a program to be divided into 'threads',

many of which can be run at the same time. Thus, not only can numerous programs run simultaneously, but one program can perform numerous at the same time.

The IBM OS/2 Warp includes easy access to networks via modem, support for Java applications and voice recognition technology.

UNIX

This operating system, designed by Bell Laboratories in the USA for microcomputers, has been widely adopted by many corporate installations. From the very first, it was designed to be a multitasking system. It is written in C language.

It has become an operating environment for software development, available for any type of machine, from IBM PS/2 to Macs to Cray supercomputers. UNIX is the most commonly used system for advanced CAD programs.

Linux
(Linus Torvalds)

Protected under the GNU general public license, Linux is the open source, cooperatively-developed POSIX- based, multitasking operating system. Linux is used as a high value, fully- functional UNIX® workstation for applications ranging from Internet Servers to reliable work group computing. Linux is available for Intel®. Alpha TM and Sun SPARC® platforms.

Open VMS
(Digital)

The open VMS operating system is Digital's popular general purpose OS for all VAX computers. It provides data and access security. Open VMS supports all types of Digital and multivendor networks.

JavaOS
(Javasoft)

This is designed to execute Java programs on Web- Based PCs. It's written in Java, a programming language that allows Web pages to display animation, play music, etc. The central component of JavaOS is known as the Java Virtual Machine.

Task 2

Match the DOS commands on the left with the explanation on the right. Some commands are abbreviations of English words

1. FORMAT	a. erases files and programs from your disk
2. CD (or CHDIR)	b. copies all files from one floppy disk to another
3. DIR	c. changes your current directory
4. MD (or MKDIR)	d. initialized a floppy disk and prepares it for use
5. DISKCOPY	e. displays at list of the files of a disk or directory
6. BACKUP	f. changes names of your files
7. REN (or RENAME)	g. creates a subdirectory
8. DEL	h. saves the contents of the hard disk on floppy disks for security purposes

LISTENING

Task 3

Read the information in the box and then listen to four advertisements from a radio programme about computers

System utilities are small programs which improve a system's performance and help users take advantage of the computer's capabilities. They are often desk accessories that can be called up while you're working in another application. They can also be INITs, i.e. system extensions which are activated when you turn on the computer, control devices which you adjust in the control panel, or even stand-alone programs that run when you need them. Utilities are available for back- up, file search, virus protection, disaster recovery, and so on.

TASK 4

Number these system utilities in the order in which you hear them.

- ☐ screen saver
- ☐ virus detector
- ☐ crashed disk rescuer and data recovery
- ☐ printing aid

Task 5

Listen again . Which utilities would you see for each of these requirements?

1. To work on one document while another is printing.....
2. To diagnose and repair damaged disks .....
3. To automatically blank out the screen after a specific interval of inactive time (so that the image does not burn into the screen) .....
4. To protect your system against computer viruses. .....

SPEAKING

Task 6

Work in pairs, A and B. Each of you has information about some popular operating systems. Find out from the information you have and by asking each other, the answers to these question:

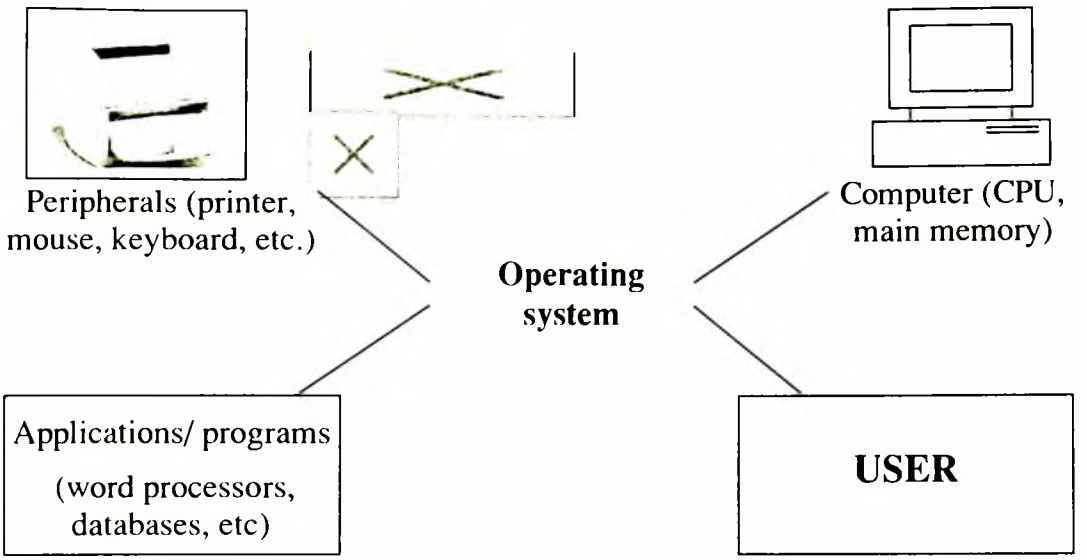
Student A Your information is on page 250

Student B Your information is on page 252

1. Which operating system is used on Apple Macintosh microcomputers?
2. What is Penpoint designed for?
3. Name one system used on IBM mainframes.
4. Which operating system is Linux related to?
5. Name an IBM operating system similar to MS-DOS.
6. Which operating system replaced MS-DOS?
7. Which systems are in fact graphically orientated shells for MS-DOS?
8. How many versions of windows 9X were developed?
9. Which operating systems are designed for networks?
10. Which operating system is used by DEC VAX minicomputers?

Task 7

Look at the diagram and talk about the function of operating system



Task 8

Discuss the following questions

1. If you were a developer of software, what kind of software package would you develop? Why?

2. Do you think software developers should develop educational software more like the software developed for games? Why?

WRITING

Task 9

This description of the Mac OS X is drawn from the table below. Write a similar description of Linux

Mac OS X is a Unix- based operating system desinged for use on Apple Mac computers. It includes memory- protection, pre- emptive multitasking and symetric multiprocessing support. Graphics are provided by a graphics engine known as Quartz. It has advanced- PDF standard support, OpenGL and QuickTime integrated into the OS. The operating system features are accessed through a graphical user interface called Aqua.

	Mac OS X	Linux
Type	Unix- based	Unix- based
Computer	Apple Mac	Wide variety
Features	Memory- protection, pre-emptive multi- tasking, symmetric multiprocessing support	Variety of distribution kits available
Graphics engine	Quartz	XFree 86
Standard support	Advanced- PDF, OpenGL, QuickTime	
User interface type	GUI	Command line, GUI
User interface	Aqua	KDE, Gnome
Source code availability	Not available	Freely available

LANGUAGE STUDY

- ING FORM: AS A NOUN AND AFTER PREPOSITIONS	
We can use the *-ing* form of the verb as a noun. It can be the subject, object, or complement of a sentence. **For example:**	The *—ing* form is also used after prepositions. This includes to when it is a preposition and not part of the infinitive. **For example.**
1. *Managing* the computer's resources is an important function of the operating system.	4. *without* the user *being* aware of the details, the operating system manages the computer's resources.
2. The operating system starts *running* the user interface as soon as the PC is switched on.	5. We begin by *focusing* on the interaction between a user and a PC operating system.
3. Another function of other operating system is *executing* and *providing* services for applications software.	6. We look forward to *having* cheaper and faster computers.

Task 10

Rewrite each of these sentences like this:

Eg: *An important function of the operating system is to manage the computer's resources.*

Managing the computer's resources is an important function of the operating system.

1. One task of the supervisor program is to load into memory non- resident program as required.

2. The role of the operating system is to communicate directly with the hard ware.

3. One of the key functions of the operating system is to establish a user interface.

4. An additional role is to provide services for applications software.

5. Part of the work of mainframe operating system is to support multiple programs and users.

6. The task in most cases is to facilitate interaction between a single user and a PC.

7. One of the most important functions of a computer is to process large amounts of data quickly.

8. The main reason for installing more memory is to allow the computer to process data faster.

Task 11

Complete the gaps in this summary of the text on operating systems using these linking words and phrases:

although	*in addition*
because	*such as*
but	*therefore*

The user is aware of the effects of different applications programs ..... operating systems are invisible to most users. They lie between application programs, ...word processing, and the

hardware. The supervisor program is the most important. It remains in memory, ...it is referred to as resident. Others are called non-resident .....they are loaded into memory only when needed. Operating systems manage the computer's resources, ...the centre processing unit. ....., they establish a user interface, and execute and provide services for applications software. .....input and output operations are invoked by applications programs, they are carried out by the operating system.

PRACTICE

Task 12

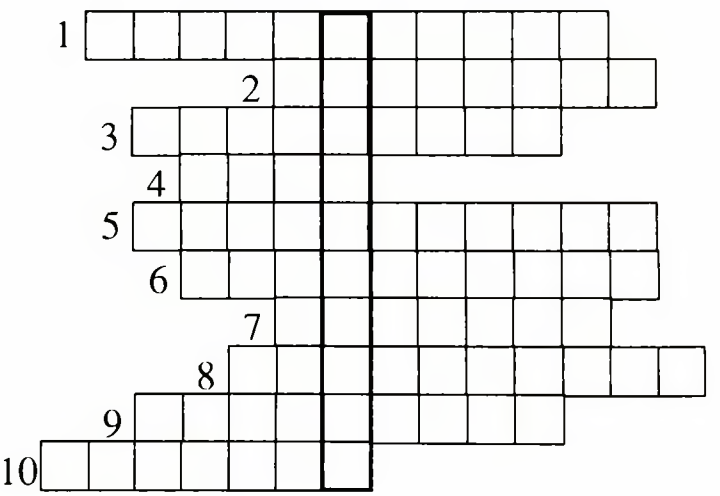
Complete these sentences by using a term from the text. Then write the words in the puzzle

Across

1. A program designed to perform a specific function. (11)

2. A general term for programs but are used when which do not form part of a computer operating it. (8)

3. A facility which allows the user to read in a file of names and create 'personalized' letters. (4,5)



4. A sequence of instructions that is repeated until a desired condition is reached. (4)

5. A program that manipulates rows and columns of figures, used especially for accounting. (11)

6. The combined used on computer of text, graphic, video, animation, and sound. (10)

7. The.....editor is a system program that fetches required

systems routines and links them to the object module. (7)

8. The business of preparing, printing, distributing books or magazines, ect. To the public. (10)

9. Someone who creates new software products. (9)

10. A program or series of programs directed at some generic application (e.g. word processing) that can be tailored by the user to match his individual needs. (7)

Down

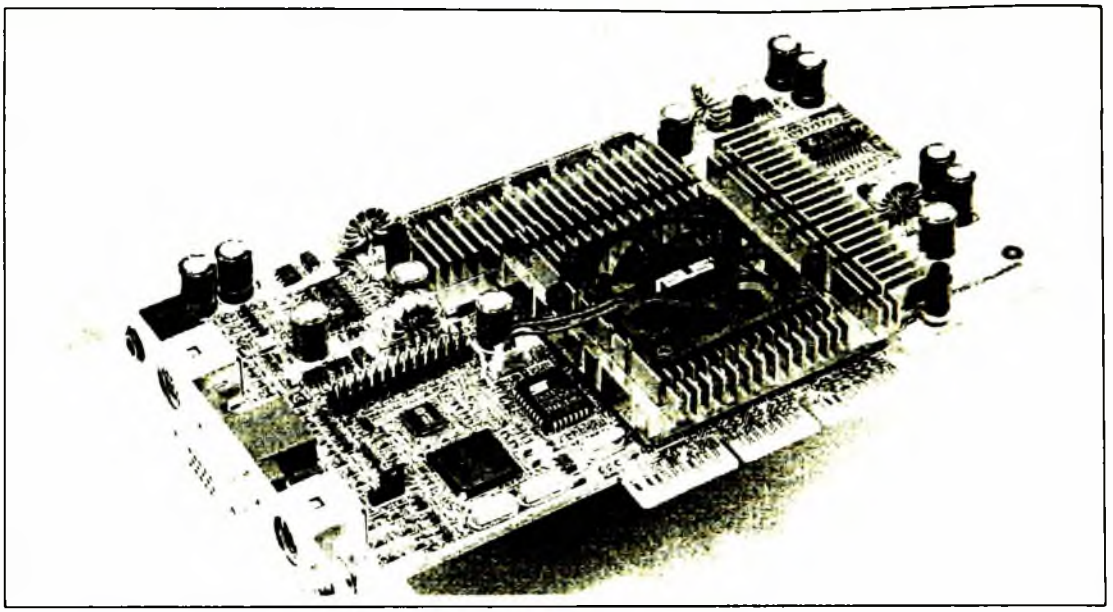
11. An IBM.....computer is one which can be used with other IBM hardware. (10)

Task 13

Fill in each gap in the passage with the correct form of the word in bracket.

The operating system

When a computer is turned on it searches for ..... (instruct) in its memory. Usually, the first set of ..... (this) instructions is a special program ..... (call) the operating system, which is the software that makes the computer work. It prompts the user (or other machines) for input and commands, reports the results of these commands and other ..... (operate) , stores and manages data, and controls the sequence of the software and hardware actions. When the ..... (use) request that a program run, the operating system loads the program in the computer's ..... (memorize) and runs the program. Popular operating systems, such as Window 95 and the Macintosh operating system, have a graphic user interface (GUI) - that is , a display that uses tiny pictures, or icons, to represent ..... (vary) commands. To execute these commands, the user clicks the mouse on the icon or presses a ..... (combine) of keys on the keyboard.



Task 14

Read the passage and fill in each gap with one suitable word from the box

computer	*games*	*machine*	*problems*
kind	*programs*	*language*	*courses*

Today computer companies sell many different .....for computers. First, there are programs for doing maths ..... . Second, there are programs for scientific studies. Third, some programs are like fancy typewriters. They are often used by writers and business people. Other programs are made for .....in school and universities. And finally, there are programs for fun. These include word ..... and puzzles for children and adults.

Computer ..... can be funny at times. For example, we say computers have a memory. We know they do not really remember or think. But we still say memory. Also, on many ..... programs there is a menu. Of course, we are not talking about restaurants or food. This is a different ..... of menu. Another funny, example is the mouse in some computers. It is hard not to think about a real mouse when you hear the word. But do not worry: there are no little gray animals in the .....

NEW WORDS

compatible (adj)	hợp nhau, tương hợp
clone (n)	vô tính
duplicate (n)	bản sao
editor (n)	người biên tập
sophisticates operating system (n)	hệ thống hoạt động phức tạp
numerous (adj)	đông đảo, nhiều
multivendor	
protocol	
academic	
generic	

Unit 8

WORD- PROCESSING

Objectives

- Understand the words and expressions related to word- processing facilities
- Identify the function of word- processing facilities
- Use grammartical structures to talk about word- processing facilities

Contents

Reading:	word - processing
Listening :	Listen and complete a conversation about how to move text by using 'Cut and Paste' technique.
Speaking :	work in pair, explain why is this program is better than the other
Writing :	Write a short description of the process of cutting and pasting
Language study:	Expression of purposes *to V* or *so that*

WARM UP ACTIVITY

General purpose packages such as word processor and spreadsheets have a number of features in common. Match these commands (1-7) to their meaning (a-g) .

1. Open	a. alter data in the document
2. New	b. begin a new file containing no data
3. Save	c. after the appearance of the text (e.g. change the font)
4. Print	d. start the application ready for use

5. Insert e. enter information into the file
6. Edit f. save the document to disk
7. Format g. Send the data to the printer to be printed out

Before you read try to answer these questions

1. What is a word processor?
2. What makes word processors superior to traditional typewriter?
3. Make a list of the most important features offered by word processors.

READING

Writing letter, memos or reports are the ways most people use computers. They manipulate words and text on a screen- primarily to print at some later time and store for safe keeping. Computers alleviate much of the tedium associated with typing, proofing and manipulating words. Because computers can store and recall information so readily, documents need not be retyped from scratch just to make corrections or changes. The real strength of word processing lies in this ability to store, retrieve and change information. Typing is still necessary (at least, for now) to put the information into the computer initially, but once in, they need to retype only applies to new information.

Word processing is more than just typing, however. Features such as Search and Replace allow users to find a particular phrase or word no matter where it is in a body of text. This becomes more useful as the amount of text grows.

Word processor usually include different ways to view the text. Some include a view that displays the text with editor's marks that show hidden characters or commands (spaces, returns, paragraph ending, applied styles, etc.) . Many word processors include the ability to show exactly how the text will appear on paper when printed. This is called WYSIWYG (What You See Is What You Get, pronounced 'wizzy-wig') . WYSIWYG shows bold, italic, underline and other type style characteristics on the screen so that the user can clearly see what he or she is typing. Another feature is the correct display of different typefaces and format characteristics (margins, indents, supper- and sub- scripted characters, etc.) . This allows the users to plan the document more accurately and reduces the frustration of printing something that doesn't look right.

Many word processors now have so many features that they approach the capabilities of layout applications for desktop publishing. They can import graphics, format multiple columns of text, run text around graphics, etc.

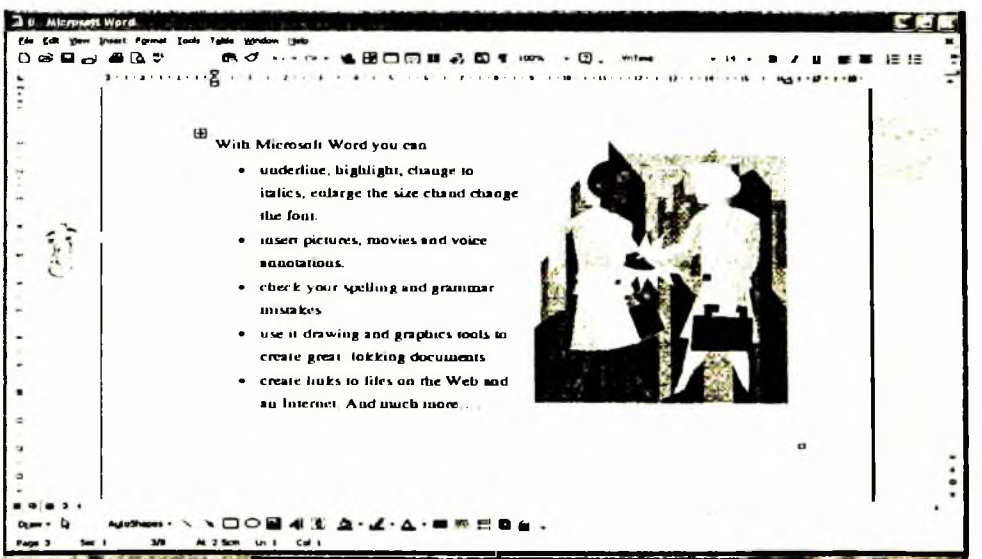
Two important features offered by word processors are automatic hyphenation and mail merging. Automatic hyphenation is the splitting of a word between two lines so that the text will fit better on the page. The word processor constantly monitors words typed and when it reaches the end of a line, if a word is too long for fit, it checks that word in a hyphenation dictionary. This dictionary contains a list of words with the preferred places to split it. If one of this cases fits part of the word at the end of the line, the word processor splits the word, adds a hyphen at the end and places the rest on the next line. This happens extremely fast and gives text a more polished and professional look.

Mail merge applications are largely responsible for the explosion of 'personalized' mail. From letters with designated spaces for names and addresses are stored as documents with links to lists of names and addresses of potential buyers or clients. By designating what information goes into which blank space, a computer can process a huge amount of correspondence substituting the 'personal' information into a from letter. The final document appears to be typed specifically to the person addressed.

Many word processors can also generate tables of numbers or figures, sophisticated indexes and comprehensive tables of contents.

Task 1

Read the text and underline any word- processing capabilities that you did not list in warm up activity



Task 2

Look at the words in the box and complete the following sentences with them. Use the information in the text or Glossary if necessary

type style	*WYSIWYG*	*format*	*indent*
font menu	*justification*	*mail merging*	

1. ..... stands for " What You See Is What You Get". It means that your printout will precisely match what you see on the screen.

2. ..... refers to the process by which the space between the words in a line is divided evenly to make the text flush with both left and right margins.

3. You can change font by selecting the font name and point size from the ..... .

4. ..... refers to a distinguishing visual characteristic of a typeface; 'italic', for example is a ..... that may be used with a number of typefaces.

5. The ..... menu of a word processor allows you to set margins, page numbers, spaces between columns and paragraph justifications.

6. ..... enables you to combine two files, one containing names and addresses and the other containing a standard letter.

7. An ..... is the distance between the beginning of a line and the left margin, or the end of a line and the right margin. Indented text is usually narrower than text without ..... .

Task 3

Match the words and expressions on the left with their explanation on the right

1. retrieve	a. text printed in the top margin
2. typefaces	b. recover information from a computer system
3. header	c. letter, number or symbol that appears below
4. footer	the baseline of the row of type; commonly used in math formulas

5. subscripted character	d. text printed in the bottom margin
6. hyphenation	e. division of words into syllables by a short dash or hyphen
	f. styles for a set of characters; sometimes called 'fonts'

LISTENING

Task 4

Two friends are talking about how to move text by using 'Cut and Paste' technique. Read the conversation and complete it with words from the box

finally	*command*	*first*	*edit*
now	*mistake*	*next*	*insertion*

A: Do you know how I can move this paragraph? I want to put it at the end of this page.

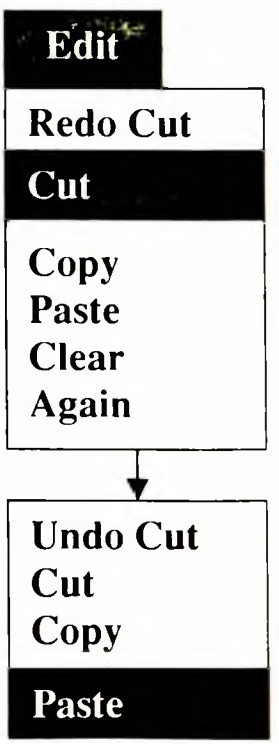
B: Er..... I think so. (1) ..... you use the mouse to select the text that you want to move .... and then you choose the Cut (2) ..... from the Edit menu....

A: Like this?

B: B: Yes. The selected text disappears and goes onto the Clipboard. And (3) ..... you find where you want to text to appear and you click to position the (4) ..... point in this place.

A: Mm.... is that OK?

B: Yes, if that's where you want it. (5) ..... Choose Paste from the (6) ..... menu, or hold down Command and press V. (7) ..... check that the text has appeared in the right place.
What do I do if I make a (8) .....?



A: You can choose Undo from the Edit menu which
B: will reverse your last editing command.
Brilliant! Thanks a lot.
That's OK.

Task 5

Now listen to check your answers.

SPEAKING

Task 6

Study these instructions for moving a file from one folder to another using Windows Explorer. Then write your own instructions for one of the actions below

1. Create a folder
2. Start a program
3. Shut down the system
4. Adjust the speaker volume
5. Arrange the icons
6. Display the date
7. In Windows, show tooltips

To move a file

1. If you want to move a file that was saved in a different folder, locate and open the folder.
2. Right- click the file you want to move; then click Cut on the shortcut menu
3. Locate and open the folder where you want to put the file.
4. Right- click the folder; then click Paste on the shortcut menu.

Task 7

Work in pairs. Read the table below which summarizes the most relevant features of two word- processing programs. The characteristics of each program are marked with a stick (✓) . Student A has Printext and Student B has Publisher . Explain to your partner why your program is better

Example:

A: With Printext I can....

B: Yes, but you can't...

A: However, it is possible to.... whereas with Publisher you can't...

B: Yes, but don't forget that with Publisher you can... Moreover,...

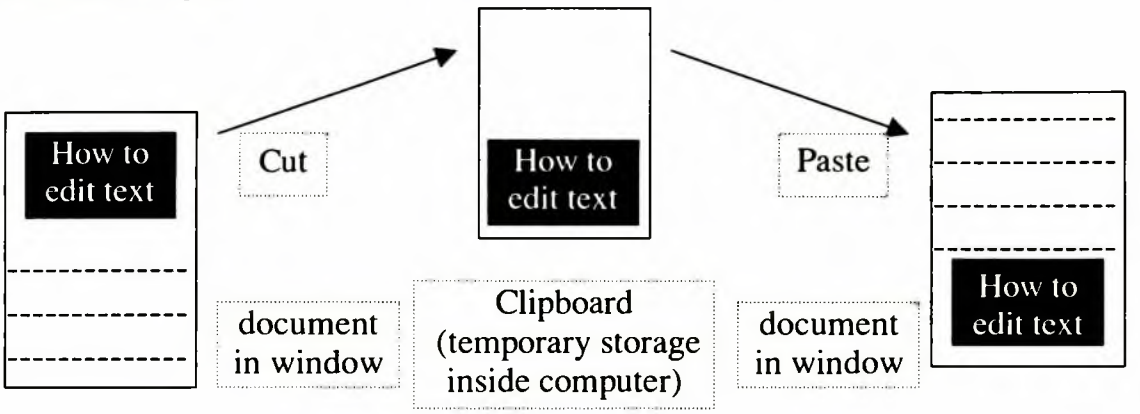
A: OK. I understand what you mean, but what about....?

Characteristics	Student A Printext	Student B Publisher
1. Instantaneous WYSIWYG and editing	✓	✓
2. Variety of font types, styles and size	✓	✓
3. Editing facilities: Copy, Cut, Paste, Undo, Select All	✓	✓
4. Centring and indenting paragraphs. Special column formats. Hyphenation and justification of text with optimum line- breaking	✓	✓
5. Spell checker, grammar checker and thesaurus	✓	✓
6. Can find and replace words even in unopened files	✓	
7. Automatic numbering of chapters and sections. Automatic generation of indexes and tables of contents. Cross- reference facilities.		✓
8. Allows you to generate math formulas, and diagrams		✓
9. Graphics tools: You can have the text wrap around the graphic or flow through it. You can scale and rotate graphics	✓	
10. Import and export facilities. You can transfer files to other IBM PCs and Macintosh applications	✓	
11. You can record voice annotations to insert comments into a document		✓
12. Includes Internet connection tools and allows you to create HTML pages for the Web		✓

WRITING

Task 8

Moving text is a process of cutting and pasting, as if it were using scissors and glue. The picture below represents this process. Write a short description of it.



LANGUAGE STUDY

We can use ***the passive + to Verb*** to talk about purpose

Eg. Computer is designed to process information and data

To emphasize the purpose we also use ***to Verb*** or '***so that***'

Eg : People manipulate words and text on a screen- primarily *to print* at some later time and store for safe keeping.

WYSIWYG shows bold, *italic*, underline and other type characteristics on the screen *so that* the user can clearly see what he or she is typing.

To verb can come at the beginning of the sentence.

To avoid losing your data you have to safe it before turning off the computers.

We can also use *so as to / so as not to* + verb instead of *to verb*

So as not to make mistakes in your writing you can use Spell checker

'*so that*' is followed by a clause.

SUBJECT +VERB + OBJECT + SO THAT + SUBJECT + VERB

Task 9

Study this word processing screen. Can you identify these components? What are they used to do? Write sentenses using expression of purpose

1. Menu toolbar
2. Insertion point
3. Status bar
4. Title bar
5. Format toolbar
6. Standard toolbar
7. Ruler

PRACTICE

Task 10

Study these two drafts of a letter. Underline the changes made on draft two

14 Glancey Street
Broadtown
EL12 4PQ
5th Jan 2003
Ms J Huckerby
Customer Services
Wanda LTd.
Somerton
SP1 3QR

Dear Ms Huckerby
Re: Printer 6WL, Serial No 1563526
I purchased this printer from you in September, but it soon developed a fault. I sent it for repair under the guarantee on 19th November last year. It was returned on December 6th but it is still falty. I am returning it for further attention.

Yours sincerely

Paul Brandt

14 Glancey Street
Broadtown
EL12 4PQ
5th Jan 2003
Ms J Huckerby
Customer Services
Wanda LTd.
Somerton
SP1 3QR

Dear Ms Huckerby
Re: Printer 6WL, Serial No 1563526
I purchased this printer in Setember but it soon developed a fault. I sent it for repair under the guarantee on 19th November last year. It was returned on December 6th but it is still falty. The paper jams every time it prints. I am returning it for further attention.

Yours sincerely

Paul Brandt

Task 11

Which of these words processing features has writer used to make changes in draft two.

NEW WORDS

manipulate (V)	thao tác
alleviate (V)	làm nhẹ bớt
tedium (Adj)	chán ngắt, buồn tẻ
scratch (Adj)	tạp nham, hỗn tạp
initially (Adv)	ban đầu
hide (V)	giữ kín
margin (N)	rìa, lề
dash (N)	nét viết, gạch ngang, gạch đầu dòng
hyphen (N)	dấu nối, quãng ngắt
insertion (N)	gài vào, lồng vào
optimum (Adj)	điều kiện tốt nhất
annotation (N)	chú giải, chú thích

Unit 9

DATABASES AND SPREADSHEETS

Objectives

- Understand the words and expressions related to databases and spreadsheets
- Understand the basic features of databases and spreadsheets
- Use grammartical structures to talk about database management

Contents

Reading:	Basic features of database programs
Listening :	Listen and number the steps of using mail merging to some employees
Speaking :	Talk about database
Writing :	Make an invoice
Language study:	Plurals

WARM UP ACTIVITY

Study this example of a record from a database of company employees. What fields do you think it contains? What other fields might be useful?

Boot, Ronald	*MarketingSalesperson30/5/68*	*£28,000*

Work in pair. What fields would you include in a database for:

1. a national police computer?
2. a national driver and vehicle licensing center?

READING

Task 1

Here is part of an article about databases. First, read all the way though and underline the basic features of a database

BASIC FEATURES OF DATABASE PROGRAMS

With a database you can store, organize and retrieve a large collection of relative information on computer. If you like, it is the electronic equivalent of an indexed filing cabinet. Let us look at some features and applications.

- Another feature of a database via fields. Each field hold a separate piece of information, and the fields are collected together into records. For example, a record about an employee might consist of several fields which give their name, address, telephone number, age, salary and length of employment with the company. Records are grouped together into fields which hold large amounts of information. Files can easily be updated: you can always change fields, add new records or delete old ones. With the right database software, you are able to keep track of stock, sales, market trends, orders, invoices and many more details that can make your company successful.

- Another feature of database programs is that you can automatically look up and find records containing particular information. You can also search on more than one field at a time. For example, if a managing director wanted to know all the customers that spend more than $7,000 per month, the program would search on the name field and the money field simultaneously.

A computer database is much faster to consult and update than a card index system. It occupies a lot less space, and records can be automatically sorted into numerical or alphabetical order using any field.

The best packages also include networking facilities, which add a new dimension of productivity to businesses. For example, managers of different departments can have direct access to a common database, which represents enormous advantage. Thanks to security devices, you can share part of your files on a network and control who sees the information. Most aspects of the program can be protected by user- defined passwords. For example, if you wanted to share an employee's personal details, but not their commission, you could protect the commission field.

In short, a database manager helps you control the data you have at home, in the library or in your business.

Task 2

Now make a list of the words you don't understand. Can you guess their meaning? Compare your idea with other students

Task 3

Using the information in the text, complete these statement

1. A database is used to .....
2. Information is entered on a database via.....
3. Each field holds.....
4. 'Updating' a file means.....
5. The advantages of a database program over a manual filing system are .....
6. Access to a common database can be protected by using..... .....

LISTENING

Task 4

Listen to Helena Davies, an IT trainer, explaining how to use mail merging to some employees. Number these steps in the order that you hear them

- ☐ Activate the Mail Merge command (Print Merge in some programs) . This combines the main document and the data document.
- ☐ Click 'Print' and the program generates a single letter for each record in the data document.
- ☐ Create the data document with a database program or with the right spreadsheet software. This document contains rows with names, addresses and other information that will be merged with the standard letter.
- ☐ Create the main document with a word processor. Type the standard letter and insert the appropriate field names into it.

Task 5

Look at the illustration of mail merging and identify the three types of documents involved in this example of mail merging

	A	B	C	D	E	F
1	**Title**	**First name**	**Last name**	**Street**	**City**	**Postcode**
2	Mr	Fred	Jones	15 The Calls	Leeds	LS2 6JU
3	Mrs	Diana	Read	18 Union Street	Glasgow	G1 3TA
4	Ms	Carol	Taylor	75 Windmill Street	London	WIP 1HH
5	Mr	Jack	Gordon	7 Piccadilly Street	York	YO1 1PN

«DATA Mailing»

«Title»«First name»«Last name»

«Street»

«City»«Postcode»

Dear «Title»«Last name»,

We are pleased to inform you that an updated version of Top Project is now available. To obtain your copy, simply call us and we'll send you, absolutely free, the new version of the program.

We also enclose a catalogue with the new range of SunRise machines and the latest software products. There are special offers for all our clients, including a book about budgeting and balancing . To order by phone, call 01332 8430477.

Your sincerely,

Barry Stephens

Sales Manager

SunRise Computers

19 Part Avenue

Derby

SPEAKING

Task 6

Study this example of a record from a database of company employees. What fields do you think it contains? What other fields might be useful?

Boots, Ronald	Marketing	Salesperson	30/5/68	$28,000

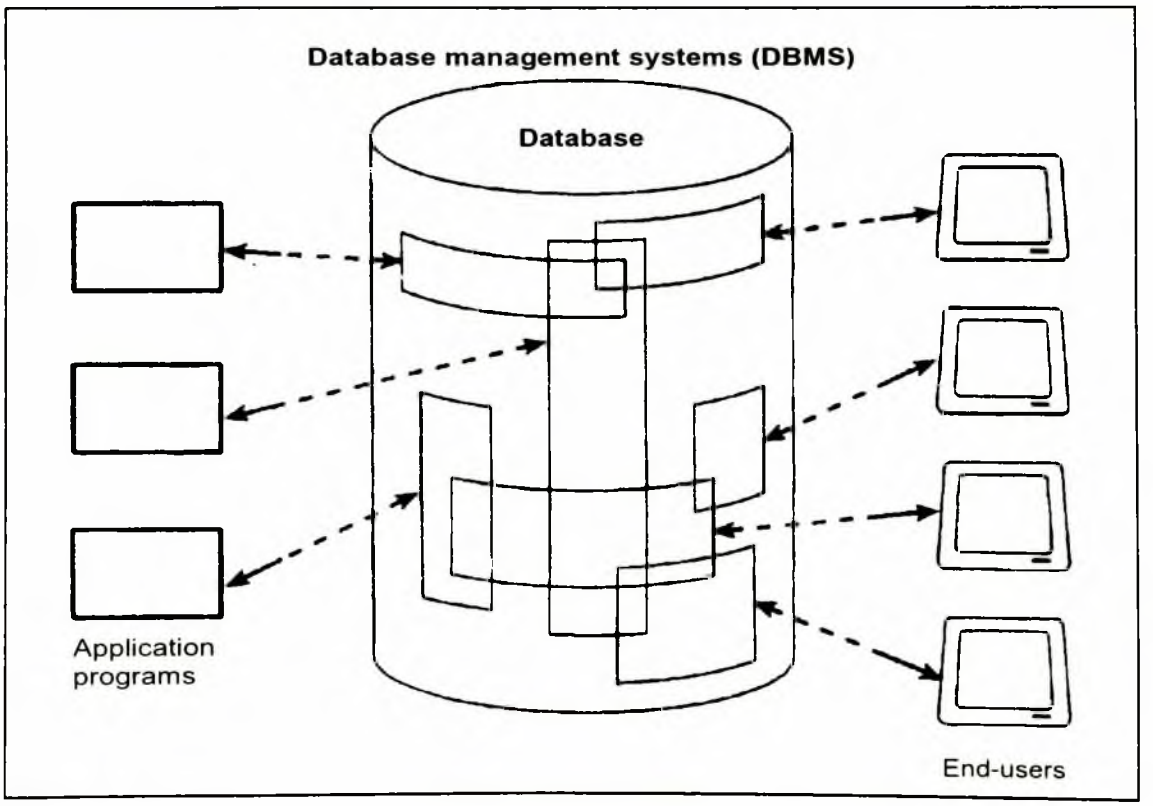
Task 7

The diagram below represents a simplified database. In pair, use the diagram to explain to your partner the following:

Student A: what a DBMS is and how at works

Student B: how an access request is processed

Try not to refer to the text. Use your own words.



WRITING

Task 8

A Spreadsheet programs are also used to make out invoices. Look at the invoice below and fill in the blanks with the right words from the box.

Quantity	Description	Price	VAT (Value Add Tax)
Reference	Total	Address	Company

Name: Redwood Comprehensive School invoice

Springbank Road, Easthill date : 12 May 1999

Telephone: 436171

				Total
Ulussess Classic	**64MB ofRAM, 9GB HD**	**12**	**$ 1,050**	**$ 12,600**
XGA Monitor	**Colour 16□□**	**9**	**225**	**2,025**
Video Card	**Millions of colours**	**5**	**316**	**1,580**
Portable Ulussess	**32 MB RAM, 2GB HD**	**3**	**1,190**	**3,570**
Lazer SAT	**Postscript**	**1**	**825**	**825**
Scanner JUP	**Flatbed. Includes OCR**	**2**	**675**	**1,350**
			Subtotal	**$ 21,950**
			□17,5%	**3,841**
Ulusses computers, Inc.				**$ 25, 791**

Task 9

Have you got a spreadsheet program at work or school? If so, try to produce a similar invoice.

Task 10

Imagine that you are Barry Stephens, the sales manager of SunRise Computers. Write a standard letter to your clients about 'New software products on the market' and offer them a free demonstration disk.

LANGUAGE STUDY

Plurals

A. Look at the HELP box and then write the plural of these words:

1. slot5 fax
2. key6 mouse
3. directory7 floppy
4. businessman8 virus

B. Look at the text again and find five plurals pronounced /iz/

HELP box

Plurals

* *In most cases, the plural in English is written with an □s□*

Record - records

The plural is written with □es□ after □s□, □sh□, □x□ or □ch□.

Address - addresses, box - boxes

- With nouns which end in a consonant □y□, the □y□ becomes □i□ and □es□ is aded.

Technology - technologies

- But if the □y□ follows a vowel, only □s□ is added.

Day — days

* *Special plural forms*

Man → men

Child → children

Analysis → analyses

Formula → formulas/ formulae

Pronunciation of the □s□

- /s/ after one of the sounds /t/, /p/, /k/, /f/ or / /

chips, amounts

- /iz/ after one of the sounds /s/, /z/, /dz/, /t /, / /

processes, cartidges

- /z/ in most other cases

drives, customers, files

Task 11

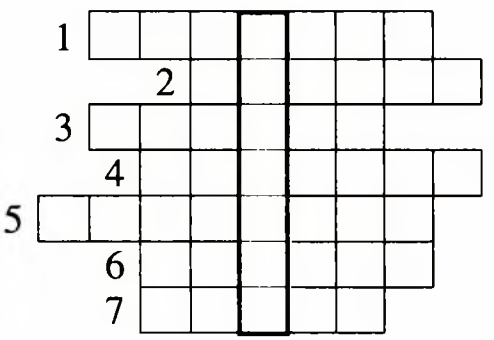
Put these plurals in the correct pronunciation column. Then listen and check your answer.

PRACTICE

Task 12

Complete the sentences by using a term from the list. Then write the words in the crossword to find the hidden message.

database	*field*	*layout*	*merging*
record	*stored*	*updated*	



1. In order to personalized a standard letter you can use ' mail .....' (a technique which consists of combining a database with a document made with a word processor) .

2. Record can be automatically ..... into any order.

3. You can decide how many fields you want to have on a .....

4. Files can easily be..... by adding new information or deleting the old one.

5. A ..... program can be used to store, organize and retrieve information of any kind.

6. The ....of the records can be designed by the user.

7. Each piece of information is given in a separate.....

Task 13

Study this simple database of volcanoes and answer the questions.

Name	Country	Continent	Height (m)	Status
Cotopaxi	Ecuado	South America	5978	active
Popocatapetl	Mexico	North America	5452	active
Sangay	Ecuado	South America	5410	active
Tungurahua	Ecuado	South America	5033	active
Kilimanjaro	Tanzania	Africa	5889	dormant
Misti	Peru	South America	5801	dormant
Aconcagua	Argentina/ Chile	South America	6960	believes extinct
Chimborazo	Ecuado	South America	6282	believes extinct
Orizaba	Mexico	North America	5700	believes extinct
Elbrus	Russian Federation	Asia	5647	believes extinct
Demavend	Iran	Middle East	5366	believes extinct

1. How many fields are there?
2. How many records are there?
3. List the volcanoes in North America?
4. List the volcanoes over 6,000 metres?

Task 14

Match the terms in the box with the explanations below.

a. formula b. cell c. sales d. payroll
e. share (s) f. revenue g. interest h. expenses

1. A sum of money that is charged or paid as a percentage of a larger. Sum of money which has been borrow or invested, e.g. *High ~ rate./7 per cent ~on a loan.*
2. The intersection of a column and a row in a spreadsheet, e.g. *the ~ B2.*
3. The quantity sold, e.g. *The ~ of PCs rose by 10 per cent last year.*
4. The income - or money — received by a company or organization, e.g. *The annual ~ of this multinational company is...*

5. A ~ in a company is one of the equal parts into which the capital of the company is divided, entitling the holder or the ~ to a proportion of the benefits,

e.g. *$10 ~ s are now worth $11.*

6. Financial costs; amounts of money spent, e.g. *Travelling ~*

7. A function or operation that produces a new value as the result of adding, subtracting, multiplying or dividing existing values, e.g. *if we enter the ~ B5- B10, the program calculates...*

8. 1. A list of people to be paid and the amount due to each. 2 wages or salaries paid to employees, e.g. *He was on the company's*

NEW WORDS

database (n)	cơ sở dữ liệu
collection (n)	tập hợp
separate (v)	riêng rẽ, riêng biệt
alphabetical (adj)	bảng chữ cái
enormous (adj)	to lớn, khổng lồ
commission (n)	phận sự, nhiệm vụ
manual (n)	sách giáo khoa
spreadsheet (n)	bảng tính
absolutely (avd)	hoàn toàn

Unit 10

FACES OF THE INTERNET

Objectives

- Understand the words and expressions related to Internet utilities
- Understand the usage of Internet utilities
- Use grammartical structures to write an email and message, design a Web.

Contents

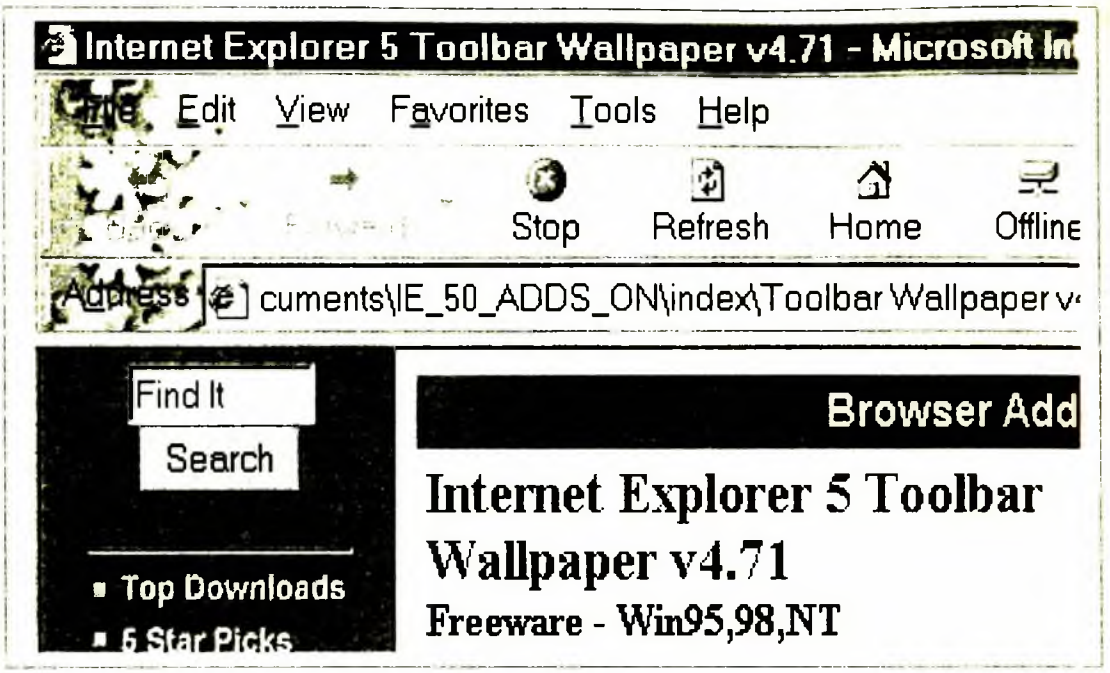
Reading:	Internet facilities **'Getting connected'**
Listening :	Listen to a person talking about the Internet and complete the notes.
Speaking :	Work in pairs choose the sites to visit in order to find information on some topics and complete the website flowchart with help of the partner.
Writing :	Design a Web home page. Write a headline with an explanatory paragraph about college or company. Write a brief e-mail describing your course.
Language study:	Expression of permission. **'Can' 'allow'**

WARM UP ACTIVITY

Try to answer these questions

1. What is the Internet?
2. What can you do on the Internet?

Make a list of possible applications.



TASK 1

Which Internet utility (1 to 7) would you use to do each of these tasks (a to g) ? Read the text to check your answers

1.E- mail
2. Web browser
3. Newsreader
4. IRC/ chat program
5. FPT software
6. Videoconferencing
7. Telnet

a. send a message to another person via the Internet

b. transfer files from the Internet to your hard disk

c. have live conversation (usually typed) on the Internet

d. connect to a remote computer by entering certain instructions and run programs on it.

e. take part in public discussion areas, called newsgroups

f. fetch and view Web on the Internet

g. participate in live conversations, using text, audio and video

Getting connected

The language used for data transfer on the Internet is known as TCP/IP (transmission control protocol/ Internet protocol) . This is like the Internet operating system.

The first program you need is a PPP (point to point protocol) driver. This piece of software allows the TCP/IP system to work with your modem; it dials up your Internet service provider (ISP) , transmits your password and log- in name and allows Internet program to operate.

E-mail

E- mail is your personal connection to the Internet. It allows you to exchange messages with people all over the world. It can include text, pictures and even audio and animation.

When you set up an account with an ISP, you are given a unique address and anyone can send you e- mail. The mail you receive is stored on the server of your ISP until your nest connect and download it to your hard disk.

Web browsers

The Web is hypertext- based system where you can find news, pictures, games, online shopping, virtual museums, electronic magazines- any topic you can imagine.

You navigate through the Web using a program called a 'browser', which allows you to search and print Web pages. You can also click on keywords or buttons that take you to other destinations on the net. This is possible because browsers understand **hypertext markup language** (HTML) , a set of commands that indicate how a Web page is formatted and displayed.

IRC, audio and video chatting

IRC - **Internet relay chat**- is a system for real- time (usually typed) conversation. It's easy to use. To start a chat session you run an IRC program, which connects you to an IRC server- a computer dedicated to IRC. Then you join a channel, which connects you to a single chat. Next you type a message and the other participants can see it.

Internet telephone and video chatting are based on IRC protocols. Video conferencing programs enable users to talk to and see each other, are collaborate. They are used in intranets- company networks that use Internet software but make their Wed site accessible only to employees and authorized users.

FPT and Telnet

With FPT software you can copy programs, games, images and sounds from the hard disk of a remote computer to your hard disk. Today this utility is built into Web browsers.

A Telnet program is used to log directly into remote computer systems. This enables you to run programs kept on them and edit files directly.

Newsgroups

Newsgroups are the public discussion areas which make up a system called 'Usenet'. The contents of the newsgroups are contributed by people who send articles (message) or respond to articles. They are classified into categories: comp (computers) , misc (miscellaneous) , news (news) , rec (recreation) , soc (society) , sci (science) , talk and alt (alternative.)

Task 2

Read the text again and choose the right answer

1. An Internet service provider (ISP) is

a. a program that connects you to the Internet.

b. a company that gives you access to the Internet.

2. HTML is

a. the software which allows you to fetch and see Web pages.

b. the codes used to create hypertext document for the Web.

3. An IRC channel is

a. an IRC discussion area.

b. a computer system dedicated to IRC.

4. Usenet is

a. a big system of public discussion groups

b. a newsgroups

5. An Intranet is

a. like a small version of the Internet inside a company.

b. a commercial online service.

LISTENING

Task 3

Before listening try to answer these question

1. What is the Internet
2. What can you do on the Internet?

Task 4

Make a list of possible applications

Task 5

Now listen to Peter Morgan, the director of Text Link talking to a journalist about the Internet and complete the Journalist's notes

- To connect to the Internet you need:

(1) ..... (2) .....

(3) ....

- One code of the modem is connected to the (4) ..... of your computer to the other to the

(5) .....

- To get your internet identity you need to have an account with a (6) ..... a company that offers connection for an annual fee.
- Services offer by the Internet

(7) ..... (10) .....

(8) ..... (11) .....

(9) .....

- The Web is a huge collection of (12) ..... stored on computers all over the world.

SPEAKING

Task 6

Work in pairs, A and B. Complete your website flowchart with the help of your partner. Do not show your section of the

flowchart to your partner but do answer any questions your partner asks. Make sure all links are included in your completed chart.

Student A: Your section of the flowchart is on page 251

Studen B: Your section of the flowchart is on page 253

Task 7

Work in pairs. Decide which of the sites (a-j) to visit in order to find information on the following topic (1-10) .

1. the latest scientific developments	a www.admarket.com
2. caring for your cat	b www.bubble.com/webstars/
3. calculating your tax	c www.buidacard.com
4. new cars	d www.carlounge.com
5. advertising on the Web	e www.petcat.co.uk
6. books on sport	f www.encenter.com/ski/
7. sending a virtual greetings card	g www.moneyworld.co.uk
8. economic data on Bulgaria	h www.newscientist.com/
9. your horoscope	i www.thebookplace.com
10. ski conditions in Europe	j www.worldbank.org

WRITING

Task 8

Work in groups. Design a Web home page for your college or company. Write a headline with an explanatory paragraph.

about your college or company, and a menu which readers can choose from to find out more about different aspects of it.

Each member of your group should write a brief paragraph which reader can access when they click on one of the menu links.

Task 9

Write a brief e-mail to a friend describing your course. Your message should answer these questions.

1. What is your course called?
2. When do you have classes?
3. Which subjects do you study?
4. Which subjects do you enjoy most? Why?
5. Which subjects do you like least? Why?
6. What do you do in your free time?

LANGUAGE STUDY

Permission

Study these examples

1. With **Window 98,** Internet access becomes part of the user interface.

Its active desktop ***lets you find*** information easily.

2. The system ***offers support for*** new technologies like DVD and it also ***enables you to watch*** on your

3. The Finder ***allows multitasking***.

4. JavaOS is written Java, a programming language that ***allows Web pages to display*** animation.

We can make the permission by using verb **"let", "allow", "enable", "offer"**

Let + object + V

Allow / enable + object + To V

Allow + Ving

Offer support for.....

Task 10

Complete each of the sentences below with one appropriate verb in the right form.

1. Computer networks link computers by communication lines and software protocols, ...data to be exchanged rapidly and reliably.

2. In the very near future, CRT and a system of network..... you to define their problems.

3. My mother doesn't..... me sit in front of the computer in the evening.

4. Main memory .....storing data inside the computer.

5. Three- dimensional graphics, along with color and animation ..... for such applications as fine art, graphic design, Web page design, computer- aided engineering and academic research.

PRACTICE

Task 11

Complete each gap in these sentences with the -ing form of an appropriate verb from this list.

back up	*become*	*receive*	*find*	*keep up*	*learn*
Link	*enter*	*select*	*send*	*use*	

1. ..... with the latest news on your favorite team is easy on the Web.

2. One of the most useful features of the Internet is ..... and ..... email

3. The grandfather, father, son method is one way of ..... your documents.

4. Fiber- optic cable can be used foe ..... computers in a network.

5. Search engines are ways of ..... information on the Web.

6. ..... a keyboard is the commonest way of ..... data into a computer.

7. ..... audio and video attachments is possible with email.

8. ..... a programmer means ..... a number of programming languages.

9. The White Pages are for ..... email addresses.
10. ..... an option in a menu is easy with a mouse.

Task 12

Try to answer these questions using an -ing form

Example

How do you draw pictures on a computer?

By using a graphics package.

How do you:

1. find a website?
2. select an option on a menu?
3. move rapidly through a document?
4. return to your starting page on the Web?
5. store favorite sites?
6. Share ideas with other Internet users on a subject you're interested in?
7. Increase the speed of your computer?
8. Send voice and text messages to other Internet users?
9. end a search on the Web?
10. move the cursor round the screen?

NEW WORDS

via (prep)	theo đường
remote (adj)	xa xôi, hẻo lánh
IRC (Internet Relay Chat)	cho phép những người ở xa đối thoại thời
real time (n)	gian thực
miscellaneous (adj)	hỗn hợp
ISP (Internet Service Device)	nhà cung cấp dịch vụ Internet
Intranet (n)	mạng nội bộ
horoscope (n)	sự dự đoán
cursor (n)	con trỏ

Unit 11

INTERNET ISSUES

Objectives

- Understand the words and expressions related to security and privacy
- Understand and discuss basic ideas about security and privacy on the Internet
- Use grammartical structures to write your own idea on security and privacy

Contents

Reading:	Security and privacy on the Internet, : Security on the Web; E-mail privacy ; Network security; virus protection.
Listening :	Listen to a person talking about cyberspace's danger and benefits for children and complete the notes in the table.
Speaking :	Read about '**Hackers**' then play in role make up your own questions on the prompts on the **hackers** and **hacking.**
Writing:	Write a new item like the short newspaper about Ralph or about any other hacking case known to you. Make a flowchart to show each step in the method of infection for a virus information database.
Language study:	Revision of the passive

WARM UP ACTIVITY

Try to answer these questions

1. Is it technically possible for computer criminals to infiltrate into the Internet and steal sensitive information?

2. What is a hacker?

3. Can viruses enter your PC from the Internet?

READING

SECURITY AND PRIVACY ON THE INTERNET

There are a lot of benefits from an open system like the Internet, but we are also exposed to hackers who break into computer systems just for fun, as well as to steal information or propagate viruses. So how do you go about making online transactions secure?

SECURITY ON THE WEB

The question of security is crucial when sending confidential information such as credit card number. For example, consider the process of buying a book on the Web. You have to type your credit card number into an order form which passes from computer to computer on its way to the online bookstore. If one of the intermediary computers is infiltrated by hackers, your data can be copied. It is difficult to say how often this happens, but it's technically possible.

To avoid risks, you should set all security alerts to high on your Web browser. Netscape Communicator and Internet Explorer display a lock when the Web page is secure and allow you to disable or delete 'cookies'.

If you use online bank services, make sure your bank uses digital certificates. A popular security standard is SET (secure electronic transactions)

E- MAIL PRIVACY

Similarly, as your e- mail message travels across the net, it is copied temporarily on many computers in between. This means it can be read by unscrupulous people who illegally enter computer systems.

The only way to protect a message is to put it in a sort of 'envelope', that is, to encode it with some form of encryption. A system designed to send e- mail privately is pretty Good Privacy, a freeware program written by Phil Zimmerman.

NETWORK SECURITY

Private networks connected to the Internet can be attacked by intruders who attempt to take valuable information such as Social Security numbers, bank accounts or research and business reports.

To protect crucial data, companies hire security consultants who analyze the risks and provide security solutions. The most common methods of protection are pass words for access control, encryption and decryption systems and firewalls.

VIRUS PROTECTION

Viruses can enter a PC through files from disks, the Internet or bulletin board systems. If you want to protect your system, don't open e- mail attachments from strangers and take care when downloading files from the Web. (Plain text e-mail alone can't pass a virus) .

Remember also to update your anti- virus software as often as possible, since new viruses are being created all the time.

Task 1

Read the text and find answers to these questions.

1. Why is security so important on the Internet?
2. What security features are offered by Netscape Communicator and Internet Explorer?
3. What security standard is used by most banks to make online transactions secure?
4. How can we protect and keep your e- mail private?
5. What methods are used by companies to make internal networks secure?
6. Which ways can a virus enter a computer system?

Task 2

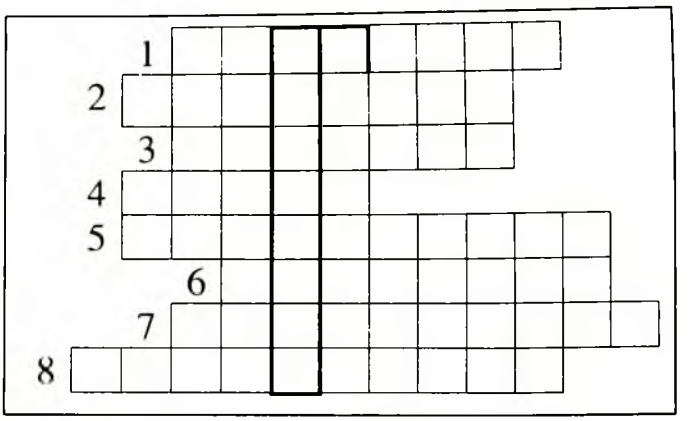
Complete these sentences by using the terms from the text. Then write the words in the puzzle.

1. Users have to enter a p..... to gain access to a network.
2. You can download a lot of f..... or public domain programs from the net.

3. Hundreds of h..... break into computer systems every year.

4. A computer v..... can infect your files and corrupt your hard disk.

5. The process of encoding data so that unauthorized users can't read the data is known as e.....



6. A f.....is a device which allows limited access to an internal network from the Internet.

7. You can include an a.....as part of your e- mail message.

8. This company uses d..... techniques to decode (or decipher) secret data.

LISTENING

Task 3

Listen to Diana Wilson, a member of the Internet Safety Foundation. She is talking about cyberspace's dangers and benefits for children. Complete the notes in this table.

Benefits:

* The Internet brings benefits for (1) ..... and entertainment.

Risks

* manipulation of children

invasions of (2) .....

*child (3) .....

* violence and neo- Nazi (4) .....

* There are Web sites (5) ..... for children.

* Internet (6) ..... programs let parents block objectionable Web sites.

* Web sites should (7) .....their content with a label, from child-friendly to over 18- only.

But this may limit free expression.

SPEAKING

Task 4

Work in groups. Discuss how you can prevent these events

1. Your files are accidentally destroyed
2. Someone reads your private e-mails.
3. Someone copies software only you are authorized to use your list with another student.

Task 5

These headlines cover some of the ethical issues involved in computing.

Task 6

Work in pairs. Try to match the headlines to the first sentence of each story.

1. net bomb blast injures boys
2. Cyberspace faces crucial court test
3. police turning cybercrop to net villains
4. Fears that new virus causes internet chaos
5. crime and punishment

The Internet may prove to be a superhighway to crime for technologically-minded villains, the head of the national Criminal Intelligece Service has warned.

Scotsman 29/5/97

An historic test case in a German court is to weigh the ethical and commercial question of who control information on the Internet with the American online service company CompuServe being accused of trafficking in pornography and neo- Nazi propaganda.

Guardian 18/4/97

The federation Against Software Theft (FAST) and the mid- Glamorgan Trading Standards office have employed forensic technology to nab a software pirate.

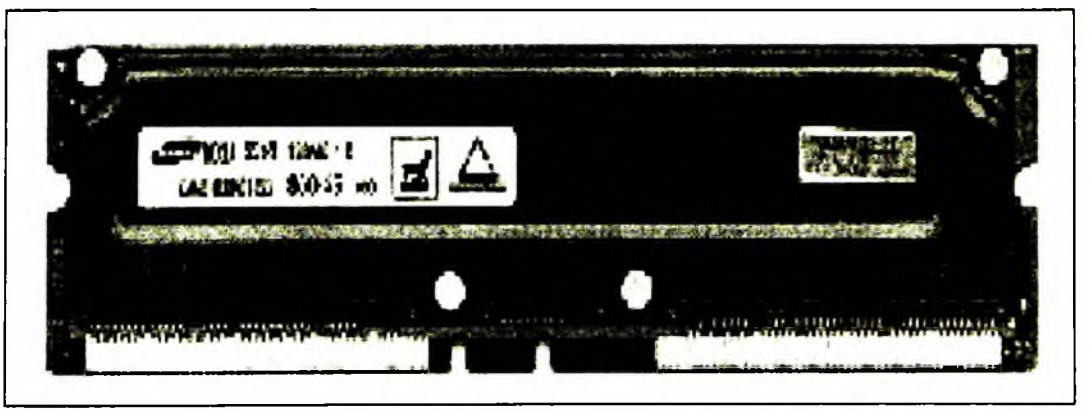
PC Pro, July 1997

Two 16- year-old Finnish schoolboys could face serious charges after a bomb they were making from instructions found on the Internet blew up.

Guardian 27/5/97

If you switch on your computer today and a sign appears saying 'You have got to read this'- do not be tempted, because hidden in this email is a sinsister new virus.

Scotsman 24/4/97



Task 7

Role play

Work in pairs. Together make up your own questions on these prompts. Then play the parts of the interview an Ralph.

1. first interested in hacking
2. reason for being interested
3. present job
4. ways to avoid hackers
5. views on Hollywood hackers
6. safe ways of paying for Internet shopping

COMPUTER SECURITY
SECURITY BREACH BLAMED ON 'HACKER'

12 YEAR-OLD HACKS INTO BANK'S DATABASE	HACKER CAUSES CHAOS IN CITY HOSPITAL

Task 8

Computer fraud on the increase. In pairs, answer these questions

1. Who or what is a 'hacker'?
2. How many ways can you think of to make the data in a computer secure?

Hackers!

Task 9

Read the text in order to answer these questions.

1. Which hacking case inspired the film ***war games?***
2. Why was Nicholas Whitely arrested in 1998?
3. How old was the hacker that cracked the US defence computer in October 1989?
4. Who was known as "Dark Dante" on the networks? What was he accused of?
5 .Which computer club showed on TV a way to attack bank account?

Sep '70John Draper, also known as Captain Crunch, discover that the penny whistle offered in boxes of Cap'n Crunch breakfast cereal perfectly generates the 2,600 cycles per second (Hz) signal that AT&T used to control its phone network at the time. He starts to make free calls.

Aug '74Kevin Mitnick, a legend among hackers, begin his career, hacking into banking networks and destroying data, altering credit report of his enemies, and disconnecting the phone lines of celebrities. His most famous exploit- hacking into the North American Defense Command in Colorado springs- inspired ***War Game,*** the 1983 movie

Jul '81Ian Murphy, a 23-year-old known as Captain Zap on the network, gains instant notoriety when he hacks into the *White House* and the Pentagon.

Dec '87IBM international network is paralysed by hacker's Christmas message.

Jul '88Union Bank of Switzerland 'almost' loses $32 million to hacker's — criminals. Nicholas Whitely is arrested in connection with virus propagation.

Oct '89 Fifteen year-old hacker cracks US defence computer

Nov '90 Hong Kong introduces anti- hacking legislation.

Aug '91Isaraelis arrest 18-year-old for hacking foreign banking and credit card national.

Jul '92 In New York, five teenagers are charged with breaking into computer systems at several regional phone companies, large firms and universities.

Dec '92Kevin Poulsen, known as 'Dark Dante' on the networks, is charged with stealing tasking orders relating to an air force military exercise. He is accused of theft of US national secrets and faces up to 10 years in jail.

Feb '97German Chaos Computer Club shows on TV the way to electronically obtain money from bank accounts using a special program on the Web.

May '98Computer criminal propagate a lot of viruses through the Internet.

WRITING

Task 10

Write a new item like the short newspaper texts about Ralph or about any other hacking case known to you.

Task 11

Translate into English:

Ý thức sâu sắc về những tác hại nguy hiểm do sự cố máy tính năm 2000 gây ra, chính phủ các nước cùng với các công ty trên thế giới đã soạn ra các chương trình hành động chi tiết đồng thời đầu tư một khoản kinh phí to lớn nhằm ngăn ngừa và khắc phục sự cố này. Cả thế giới cho đến nay đã chi một số tiền ước tính 600 tỉ đô la Mỹ. Thí dụ như chính phủ Anh quốc, ngoài việc đầu tư kinh phí trong nước, đã quyết định cấp cho các nước đang phát triển 10 triệu bảng Anh để hỗ trợ cho việc khắc phục vấn đề này qua các đại diện của mình tại Ngân hàng thế giới.

LANGUAGE STUDY

Revision of the passive

Task 12

Complete the sentences below with correct tense of the verb in bracket in the passive form.

1. The first computer ..... (build) in 1930
2. Computers can ..... (define) as devices which can access and store data.
3. Illegal software ..... (find) on sale in many parts of the world.
4. It is also true that employees who ..... (give) the option of telecommuting are often reluctant to accept the opportunity.
5. Nowadays more and more software products..... (design) to meet people's need.
6. In future housework..... (do) by the robots.
7. They just (deliver) the computers we ordered last week.
8. The accounts department already ..... (equip) with new computer system.
9. When we got there the computers ..... (assemble) .
10. In order to obtain still higher speeds, magnetic tape or disk frequently..... (use) as an intermediate input medium.

PRACTICE

Task 13

Fill in each gap in the passage with a suitable preposition from the box

up	*with*	*like*	*into*	*by*
as	*from*	*to*		

Computer viruses are self-replicating computer program that interferes (1) ----------a computer's hardware or operating system (the basic software that runs the computer) . Viruses are designed to replicate and to elude

detection. (2) ----------any other computer program, a virus must be executed to function- that is, it must be loaded (3) ----------the computer's memory, and the virus's instructions must then be followed (4) ----------the computer. These instructions are called the payload of the virus. The payload may disrupt or change data files, display a message, or cause the operating system to malfunction.

There are other harmful computer programs that are similar (5) ---------- viruses but do not both replicate and elude detection. These programs fall (6) ----------three categories: Trojan horses, logic bombs, and worm. A Trojan horse appears to be something interesting and harmless, such (7) ----------a game, but when it runs it may have harmful effects. A logic bomb delivers it's payload when it is triggered by a specific condition, such as when a particular date or time is reached or when a combination of letter is typed. A worm only makes copies of itself, but it can take (8) ----------computer memory and slow the computer's processes.

Task 14

Read the passage and choose the best answer

Hooked on the net

The (1) -------addiction to trap thousands of people is the Internet, which has been (2) ----------for broken relationship, job loses, financial ruin and even one suicide. Psychologists now recognize Internet Addiction Syndrome (IAS) as a new illness that could (3) ----------serious problems and ruin many lives. Special help groups have been set up to (4) ----------sufferers help and support.

Psychologists have describe many (5) ----------examples, including one man who took his own life after (6) ----------more than 14,000

pound to feed his addiction, and a teenager who had to receive psychiatric treatment 12- hour-a-day (7) ----------. "This illness is not (8) ----------, and it must be taken seriously", said an expert in behavioral addiction at Nottingham Trent University. "These are not sad people with serious personality (9) ----------: they are people who was fine before they found the Internet." IAS is similar to other problems like gambling, smoking and drinking; addicts have dreams about the Internet; they need to use it first thing in the morning; they (10) ----------to their partners how much time they spend online; they (11) ----------they could cut down, but are unable to do so. A recent study found that many users spend up to 40 hours a week on the Internet; (12) ----------they felt guilty, they became depressed if they were (13) ----------to stop using it.

Almost anyone can be at risk. Some of the addicts are teenagers who are already (14) ----------on computer games and who (15) ----------it very difficult to resist the games on the Internet. Surprisingly, however, psychologists (16) --------that most victims are middle- aged housewives who have never used a computer before.

1.	A. closest	B latest
	C nearest	D soonest
2.	A. blamed	B faulted
	C mistaken	D accused
3.	A. lead	B affect
	C take	D cause
4.	A. offer	B suggest
	C recommend	D advise
5.	A. worrying	B worried
	C disappointing	D disappointed
6.	A. gaining	B. lending
	C. winning	D. borrowing
7.	A. habit	B. custom
	C. manner	D. routine
8.	A. false	B. imitation
	C fake	D. artifical

9. A. mistakes B. errors
C. faults D. defects
10. A. betray B. deceive
C. cheat D. lie
11. A. want B. wish
C. rather D. prefer
12. A. although B. despite
C. unless D. without
13. A. let B. allowed
C. had D. made
14. A. taken B. addicted
C. tied D. hooked
15. A. say B. feel
C. find D. have
16. A. promise B. tell
C. say D. Object

NEW WORDS

confidential (adj)	bí mật
transaction (n)	giải quyết, giao dịch
unscrupulous (adj)	không nguyên tắc, không cẩn thận
encryption (n)	giải mã
intruder (n)	người xâm nhập
attempt (v)	cố gắng
firewall (n)	bức tường lửa
bulletin (n)	bản tin
domain (n)	vùng
infect (v)	làm cho, gây cho
decipher (v)	giải mã
invasion (n)	xâm lược, xâm chiếm

defence (V)	phòng thủ
whistle (N)	tiếng còi hiệu
legend (N)	lời chú giải
enemy (N)	kẻ thù
propagate (V)	truyền bá
payload (N)	trọng tải
disrupt (V)	phá vỡ
elude (V)	tránh, né
worm (N)	một loại vi rut máy tính
trigger (V)	gây ra
psychologist (N)	nhà tâm lý học
addition (N)	phép cộng
psychiatric (N)	bệnh tâm thần
gambling (N)	trò cờ bạc ăn tiền
depressed (Adj)	chán nản, thất vọng
resist (V)	chống lại
victim (N)	nạn nhân

Unit 12

PROGRAMMING

Objectives

- Understand the words and expressions related to programming and programming languages
- Understand basic concept in programming and the usage of programming languages
- Use grammartical structures to write the steps of programming.

Contents

Reading: Programming languages

Listening: Listen to a person explaining how a program is produced and number the steps

Speaking : Give your own idea on the statements about learning a programming language.

Writing : Write a description of the flowchart. Solve the anagrams

Language study: Infinitive construction

WARM UP ACTIVITY

Work in pair. The states in programming (1-7) are listed below. Fill in the gaps with the missing states (a- d) .

1. Analyzing and defining the problem to be solved
2. .....
3. Coding
4. .....

a. Training the users

b. Testing

c. Designing the problem

5. ..... d. Documenting

6. .....

7. Obtaining feedback from users

READING

Programming languages

Unfortunately, computers cannot understand ordinary spoken English any other natural language they can understand directly is called machine code. This consists of the 1s and 0s (binary codes 0 that are processed by the CPU.

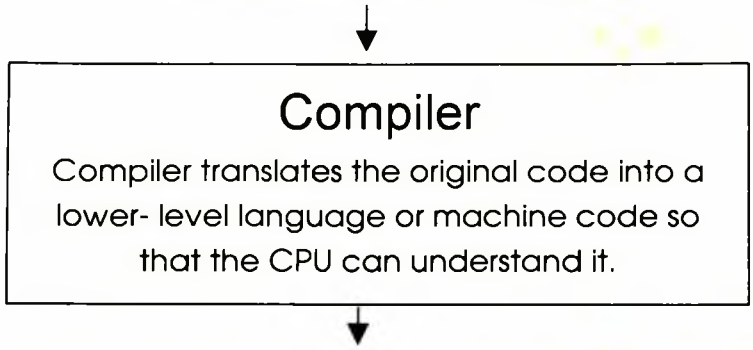
However, machine code as a means of communication is very difficult to write. For this reason, we use symbolic languages that are easier to understand. Then, by using a special program, these languages can be translated into machine code. For example, the so- called assembly languages use abbreviations such as ADD, SUB, MPY to represent instructions. These mnemonic codes are like labels easily associated with the items to which they refer.

Basic languages, where the program is similar to the machine code version, are low- level languages. In these languages, each instruction is equivalent to a single machine code instruction, and the program is converted into machine code by a special program called an assembler. These languages are still quite complex and restricted to particular machines.

To make the programs easier to write and to overcome the problem of intercommunication between different types of machines, higher- level languages were designed such as BASIC, COBOL, FORTRAN or Pascal. These are all problem- oriented rather than machine- oriented. Programs written in one of these languages (known as source programs) are converted into a lower- level language by means of a compiler (generating the object program) . On compilation, each statement in a high- level language is generally translated into many machine code instructions.

People communicate instructions to the computer in symbolic languages and the easier this communication can be made the wider the application of computers will be. Scientists are already working on Artificial Intelligence and the next generation of computers may be able to understand human languages.

Instruction are written in a high- level language
(e.g. BASIC, COBOL, Ada, C, Lisp Pascal) .
This is known as the source program



Instruction are complied and packaged into a program.
The software is ready to run on the computer

Task 1

Read the text and find answers to these questions.

1. Do computers understand human languages?
2. What are the differences between low- level and high- level language?
3. What is an assembler?
4. What is the function of complier?
5. What do you understand by the terms source program and object program?
6. In the future, could computers be programmed in Spanish, French, or Japanese?

LISTENING

Task 2

Listen to Lucy Boyd, a software developer, explaining how a program is produced. Number these steps in the order you hear them.

- ☐ Provide documentation of the program
- ☐ Understand the problem and plan the solution
- ☐ Test and correct the program
- ☐ Make the flowchart of the program
- ☐ Write the instructions in codes form and complile the program

Task 3

Listen again and take notes. Use your notes to explain what each step means.

SPEAKING

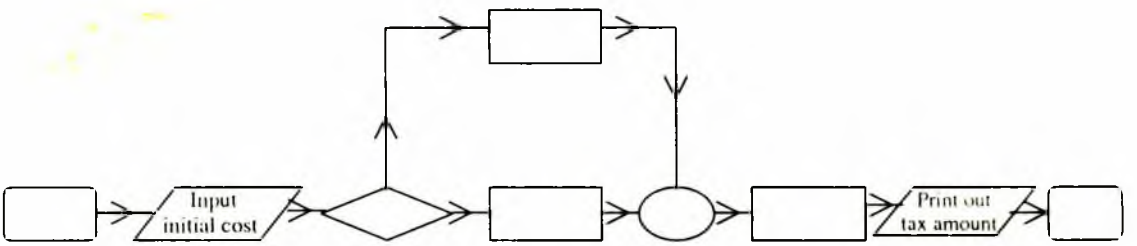
Task 4

Read the statements below. Which do you agree with more? Why?

'Learning a programming language is like learning any natural language. The only difference is that you are communicating with a machine instead of another person.'

'I get annoyed when I hear people comparing programming languages with natural languages. They have almost nothing in common.'

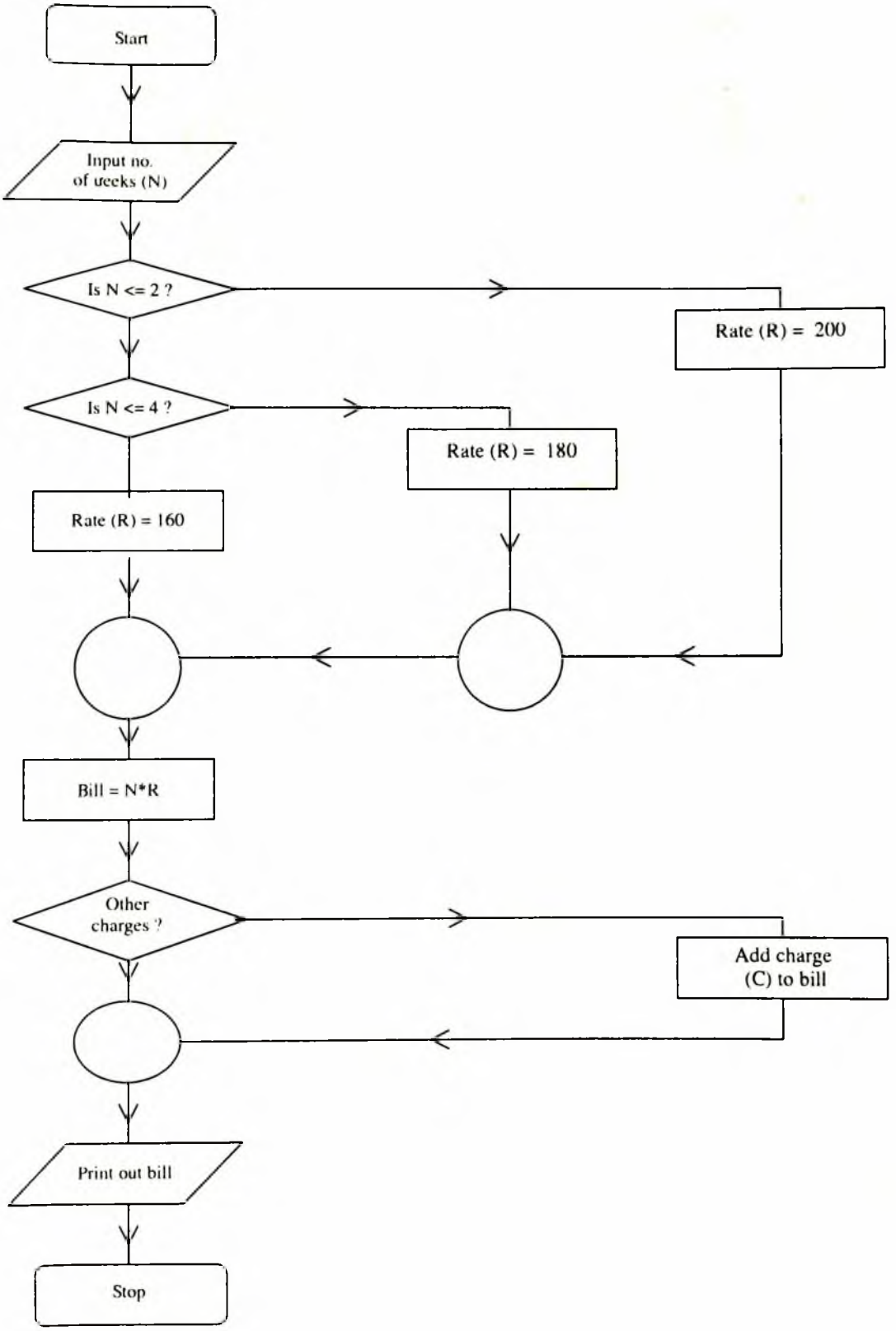
WRITING



A 'Start' symbol indicates where the program begins. When the program has started, the initial cost of the item is input. A decision is then taken on which rate of tax to use. This depends on the initial cost. If the cost is greater than 100, the program follows the 'Yes' route and sets the tax rate at 15%. Otherwise the program follows the 'No' route and sets the tax rate at 10%> The two different paths then come back together at the 'connector' symbol and follow the same route. The actual sales tax is now calculated by multiplying the cost by the tax rate. Finally the amount of tax is printed out and the program stops.

Task 5

Read this description of the flowchart above. Then write your own description of the flowchart below


Start
Input no. of weeks (N)
Is N <= 2 ?
Rate (R) = 200
Is N <= 4 ?
Rate (R) = 180
Rate (R) = 160
Bill = N*R
Other charges ?
Add charge (C) to bill
Print out bill
Stop

INFINITIVE CONSTRUCTIONS

Make sentences as in the example.

Example

not easy/ write instructions in Pascal

It is not easy to write instructions in Pascal.

1. advisable/ test the program under different conditions

2. expensive/ set up a data-processing area

3. unusual for a program/ work correctly the first time it is tested

4. difficult for student/ learn FORTRAN

5. important/ consider the capabilities of the programming language

6. quite easy/ write instructions in BASIC

HELP box

Infinitive instructions

The infinitive is used:

- After adjectives

- It is **difficult to use** machine code.

- after modal verbs with to: *ought to, used to*

- I **ought to make** *a back- up copy.*

- *Using a computer is much easier* than it **used to be**.

- after modal and auxilliary verbs without to: *can, could, may, might shall, should, will, would rather, would sooner*

- *Unfortunately, computers* **can't understand** *English.*

- I' **d rather buy** *a game than a spreadsheet.*

Task 6

Read the information in the HELP box and then look again at the reading passage in Task 3. Underline the infinitive constructions after modal verbs

Example

Unfortunately, computers *can not understand* ordinary spoken English.....

Task 7

Look at these pairs of examples and decide where there is an 'important' change in meaning

1. a. I remember shutting down the computer before I left the room
   b. Please remember to buy the new program
2. a. They stopped to look at the flowchart
   b. They stopped looking at the flowchart
3. a. I like studying C language.
   b. I like to study C language in the evening.
4. a. It has started to rain.
   b. It has started raining.
5. a. He needs to work harder.
   b. This hard disk needs repairing.

PRACTICE

Task 8

Look at the group of words and decide what part of speech each word is. Then complete the sentences with the correct word

compile *compiler* *compilation*

1. Programs written in a high- level language require....., or translation into machine code.

2. A..... generates several low- level instructions for each source language statement.

3. Programmers usually..... their program to create an object program and diagnose possible errors.

program *programmers* *programming* *programmable*

4. Most computer..... make a plan of the program before they write it. This plan is called a flowchart.

5. A computer..... is a set of instructions that tells the computer what to do.

6. Converting an algorithm into a sequence of instructions in a programming language is called.....

bug *debug* *debugger* *debugging*

7. New programs need..... to make them work property.

8. Any error or malfunction of a computer program is known as a..... ..... .

9. The best compilers usually include an intergrated..... which detects syntax errors.

Task 9

In the word debug the prefix de- is used. This prefix means 'to reserse an action'. Here are a few more example:

defrost	*debrief*	*declassfy*
decode	*decompose*	*decentralize*

Task 10

Write down the base form of each verb. What do the verbs mean in your language? And what do the verbs with de- mean?

Task 11

Can you think of any more verbs with de- as a prefix in English words?

NEW WORDS

abbreviation (N)	viết tắt
mnemonic (Adj)	trí nhớ
algorithm (N)	thuật toán
syntax (N)	cú pháp
diagnose (V)	chuẩn đoán
compiler (N)	người biên soạn

REVIEW OF UNITS 7-12

Objectives

- Consolidate the contents of units 7, 8, 9,10,11,12.
- Understand the usage of grammartical structures to do exercises:
+ ing- form
+ Expression of purpose
+ Plural nouns
+ Infinitive construction

Contents

Grammartical exercises

Vocabulary exercises

Translation

GRAMMAR

Exercise 1

Match each clause and effect. Then link them with an _ing clause.

Example:

A WAV file may sample a song 44,000 times a second, creating a huge mass of information.

Cause	Effect
1. Computers with MIDI interface board can be connected to MIDI instruments	a. This permits extra information to be stored on the performer and other tract details.
2. Each side of a DVD can have two layers	b. You can create your own compilation

3. MP3 removes sounds we can't hear. 4. You can download single tracks. 5. Each MP3 file has a tag. 6. MP3 players contain several devices. 7. You can download a skin program. 8. You can legally down load some music.	c. This allows you to sample a new group before buying their CD. d. This give an enourmous storage capacity. e. This allows the music being played to be stored by the computer and displayed on the monitor. f. This enables you to change the appearance of your player. g. These allow you to control the way the music sounds. h. This produces much small files.

ING- FORM AND INFINITIVE

Exercise 2

Complete these sentences with the correct form of the verb: infinitive or ing form

1. Don't switch off without (close down) your PC.
2. I want to (upgrade) my computer.
3. He can't get used to (log on) with a password.
4. You can find information on the Internet by (use) a search engine.
5. He objected to (pay) expensive telephone calls for Internet access.
6. He tried to (hack into) the system without (know) the password.
7. You needn't learn how to (program) in HTML before (design) webpages.
1. I look forward to (input) data by voice instead of (use) a keyboard.

INFINITIVE CONSTRUCTIONS

Exercise 3

Make right sentences using suggested words

1. Marconi / one of/ first to experiment/ radio waves.
2. I can afford / buy/ new radio

3. I / just write / IBM / get their latest price list.
4. Radio / unlikely / be replaced entirely / television.
5. Most companies / likely / connect / network.
6. They / should / build / computer centre.
7. You / rather / save your data / memory stick.
8. When / telephones / first / begin / use / dial system?
a. Computers / need / be directed / in order / perform tasks successfully
9. It / interesting / chat / on line.

Exercise 4

Complete the newspaper articles, using the verbs in the boxes in the infinitive form.

A

Do	*discover*	*give*	*prefer*

Infotech □ One man and his data log

Scientists in a field in Devon are hoping (1) ----------a little more about the eating habits of sheep when a new research project get under way next week. They are planning (2) ----------the sheep miniature computers which will monitor their eating habits. Farmers have known for a long time that sheep seem (3) ----------some types of glass to others, but so far no one has tried (4) ----------any experiments.

B

Earn	*hire*	*last*	*pay*

When a C + can mean good money

Things are looking good for software engineers, according to Tony Coombes of the recruitment consultancy Systems Resources. "There are a lot of big companies who want (1) "----------engineer for short-term contracts, and most of them will agree (2) ----------good money. Someone with two years experience, and who has trained in C++ and Visual Basic, could expect (3) ----------about $1000 a week. Most of the contract work tends (4) ----------for about six months, but some permanent jobs are becoming available.

THE PASSIVE IN ALL TENSES

Exercise 5

Put the verb in bracket in the passive or active form.

1. **AMS Trading** ---------- (found) by Alan Sugar in 1968. and the company's name ---------- (change) to Amstrad in 1972. The company ---------- (sell) electronic consumer goods, and then ---------- (move) into computers. Amstrad --------- (float) on the Stock Exchange in 1980. It ---------- (expand) rapidly until 1988, when it---------- (launch) the PC 2000 series of personal computers.

2. Less than a month after the fire at its plant in Ludwigshafen, Germany, the air bag manufacturer HTS is back in business. Sales Director Klaus Schiller explained: "The factory in Ludwigshafen ---------- (work) again, because one part -------- (not destroy) by the fire. So, for the moment, some of the other components ---------- (import) from the State, and the bags---------- (assemble) at our other plant in Poland." The company ---------- (plan) to build a much larger production plant at Ludwigshafen. This will be a large investment, but the air bag market ---------- (grow) rapidly, and more and more air bags ---------- (fit) in cars as a standard safety device.

Exercise 6

Put the verb in brackets in the correct form in this description of how smart cards work.

Smart cards prevent unauthorised users----------1 (access) systems and permit authorised users ----------2- (have) access to a wide range of facilities Some computers have smart cards readers ----------3- (allow) you ----------4 (buy) things on the Web easily and safely with digital cash. A smart card can also send data to a reader via an antenna----------5- (coil) inside the card When the card comes within range, the reader's radio signal----------6 (create) a slight current in the antenna----------7-- (cause) the card----------8 (broadcast) information to the reader which----------9-- (allow) the user, for example,--------10------- (withdraw) money from an ATM or ----------11 (get) access to a system.

Exercise 7

Fill each gap in the sentences with the correct form of the word in capital letters.

1. It took him three years of ----------to become an efficient programmer.

TRAIN

2. There have been ----------developments in the field of computer science in the past few years.

REMARK

3----------is a branch of mathematics for making----------without the use of a----------machine.

CALCULATE

4. Students lack of understanding of the basic concepts in computer science may----------the instructor to restructure the course.

NECESSARY

5. Do you have ----------to the student files in the database?

ACCESSIBLE

6. A load module which is the result of system routines linked with an object module is directly----------by the computer.

EXECUTE

7. Our university has a limited number of terminals installed. Consequently, it is not always easy to find one ----------for use.

AVAILABLE

8. Programming in COBOL require the student to be familiar with a list of around 300 words called----------words.

RESERVE

9. Our company brought three packages with very---------- applications: payroll, accounts receivable and accounts payable.

SPECIFY

10. The linkage editor links systems routines to be object module. The ----------program, referred to as the load module, is directly executable by the computer.

RESULT

Exercise 8

Fill each gap with one of the words from the box.

Specialists	*strategies*	*goals*	*services*	*problems*
materials	*solutions*	*games*	*instructions*	*turns*
abilities	*disks*			

GUIDELINES FOR USING COMPUTERS AND COMPUTER SOFTWARE IN THE CLASSROOM

1. A company that produces, distributes, or sells computers or computer materials should be willing to provide number of (1) .....: (a) installation assistance as part of the purchase, not as an add-on cost: (b) user training as part of the computer purchase; (c) a toll-fee or local number to call for answers to questions and (2) ..... to problems; and (d) updates to the software for little or no extra charge.

2. The use of the computer in the classroom should correspond with the school's (3) ..... .

3. If only one computer is available for class use, you will have to devise large-group instructions or divide the class into smaller groups that take (4) ..... at the computer. You will need several computers to permit several students to work on the program at the same time.

4. A group of teachers or curriculum (5) .....should preview software before it is purchased by the school. Individual teachers should preview material before using it in class.

5. Decide on what you want to do with the computer. Do you want to use it for practice and drill, problem solving, tutorial activities, simulation, (6) ..... ?

6. Establish criteria for use based on the objectives of your subject and (7) ..... and need of your students.

7. The software should be suitable for instructional grouping (individual, small group or large group)

8. The software should be easy to use. The screen format should be clear. The (8) ..... should be easy to follow. The software should have a complete menu (index or contents) for quick reference, a help section, and illustrations of input screen and output formats.

9. The software should be sound in terms of instructional and learning theory. It should motivate students more than conventional methods because if its cost. It should be designed to foster students' critical thinking, problem-solving (9) ....., and creativity. It should be accurate, up to date, and clearly organized.

10. The software should be capable of being integrated with other software and with traditional (10) ..... into a comprehensive curriculum and instructional package

11. You should know what supporting materials are available that can interface with your computer hardware and software.

12. You should know how to use both floppy and hard (11) ..... Hard disks hold more data and access it more rapidly; however, floppy disks cost less and have sufficient storage capacity for educational exercises.

13. Software should provide the user feedback on the display about what part of the process is taking place and whether it is proceeding normally. The user should be able to correct (12) .....

14. Periodically, review and evaluate the software for quality and variety on a team basis. Be prepared to recommend supplementary course materials.

Exercise 9

Read these, understand and then translate into Vietnamese

You should always use the latest operating system and updates when using new hardware to ensure full compliancy. You may use any version of Windows 98/2000/Millenium, but for Window 95, you must use OSR2.0 or later. For Windows NT4.o, you must use Service Pack 3.0 or later.

ASUS PC Probe is a convenient utility to continuously monitor your computer system's vital components, such as fan rotations, voltages, and temperatures. It also has a utility that lets you review useful information about your computer, such as hard disk space, memory usage, and CPU type, CPU speed, and internal/ external frequencies through the DMI Explorer.

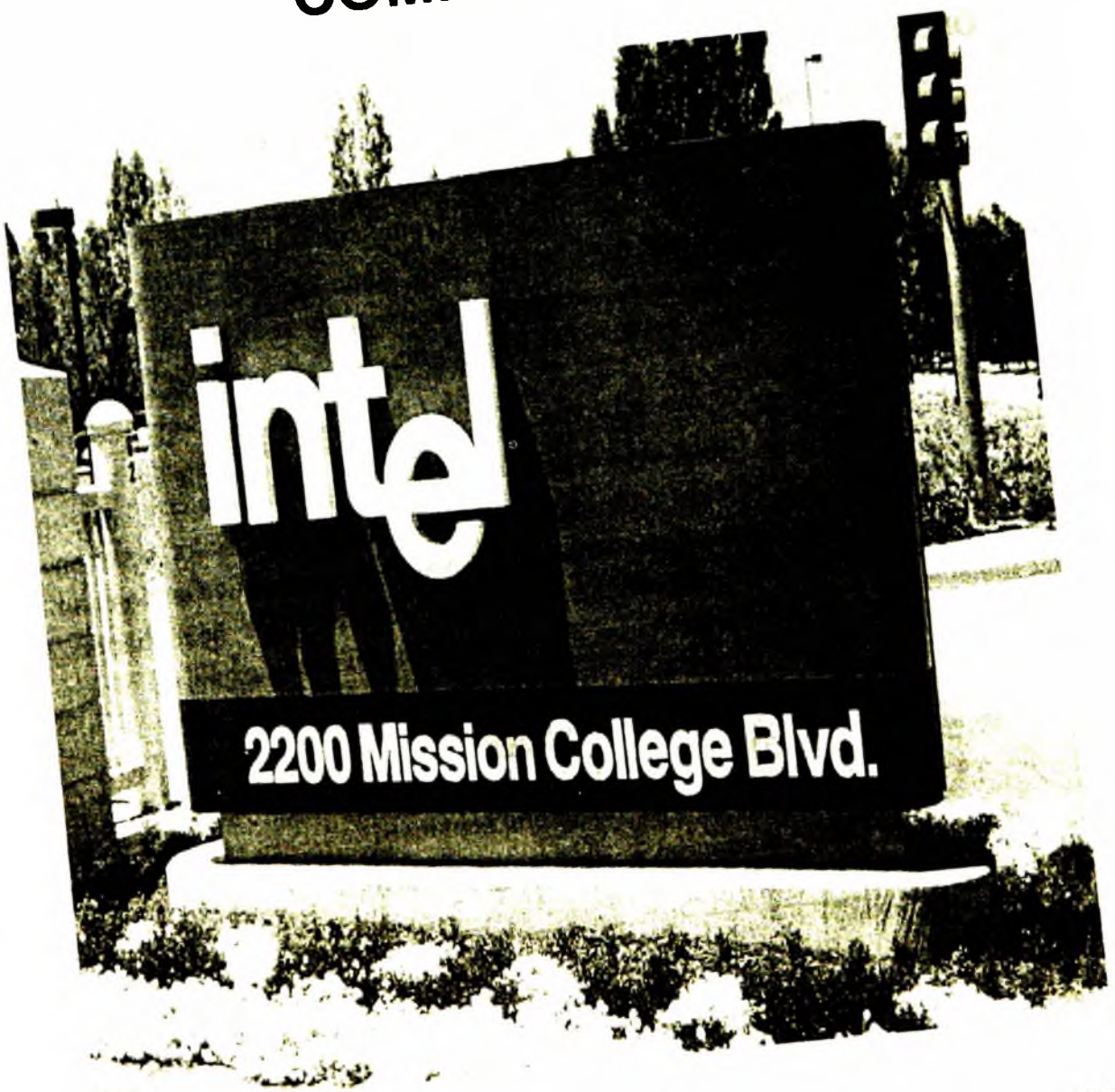
When ASUS PC Probe starts, a splash screen appears allowing you to select whether to show the screen again when you open PC Probe or not. To bypass this startup screen, clear the Show up in next execution check box.

To open ASUS PC Probe, click the Windows start button, point to Programs, and then ASUS Utility, and then click Probe Vx.xx.

The PC Probe icon will appear on the taskbar's system tray indicating that ASUS PC Probe is running. Clicking the icon will allow you to see the status of your PC.

Section 1

COMPUTERS



Unit 13

INFORMATION TECHNOLOGY

Objectives

- Understand the words and expressions related to electronic communication
- Understand and know how to use electronic communication
- Use grammartical structures to talk about some kinds of electronic communication.

Contents

***Reading*:** Channels of communication

***Listening* :** Listen to interview with the manager of an Internet cafe

***Speaking* :** Identify the different communications links between the office desktop in a San Francesco police station and the mainframe in Georgia State Police headquarters. Work in pairs. Try to think of other organizations which use long- distance computer communications to exchange information.

***Writing* :** The Global Positioning System Link each set of sentences to make one sentence.

***Language study*:** Prediction 1 : certainty expressions

WARM UP ACTIVITY

Carry out a survey of mobile phone use among your classmates. Find out:

1. How many have mobile phones
2. What they use them for
3. What makes they have
4. How often they use them per day
5. What additional features their phones have, e.g.

    phone book

    messages

    calls register

    games

    calculator

    alarm call

Study these examples of abbreviations used in mobile phone text messages. Try to get the meaning of the other abbreviations

1.	ATB	all the best
2.	BCNU	Be seeing you
3.	CU	See you
4.	CU L8R	
5.	Luv	
6.	Msg	
7.	NE	Any
8.	NE1	
9.	NO1	
10.	PPL	
11.	RUOK	
12.	THNQ	
13.	Wknd	
14.	4	

READING

Channels of communication

What are 'telecommunications' ?

This term refer to the transmission of information over long distances using the telephone system, radio, TV, satellite or computer links. Examples are two people speaking on the phone, a sales department sending a fax to a client or someone reading the teletext pages on TV. But in the modern world, telecommunications mainly means transferring information from one PC to another via modem and phone lines (or fiber- optic cables) .

What can you do with a modem?

A modem is your COMPUTER'S link to the external world. With a modem you can exchange e- mail and files with friends and colleagues; you can access the Web and search for information about the stock market; current affairs, entertainment; etc.; you can participate in news groups and live conversations; you can make bank transactions and buy things from the comfort of your home. You can also access your office from your computer at home or your laptop in a hotel room.

Modems

Your PC is a digital device (it works with strings of 1s and 0s) . However, the telephone system is an analogue device, designed to transmit the sounds and tones of the human voice. That's why we need a modem- a bridge between digital and analogue signals. The word 'modem' is an abbreviation of MOdulator/ DEModulator. When a modem modulates, it sends very rapid on/ off pulses. The computer on the other end translates (demodulates) those signals into intelligible text or graphics. Modem transmission speeds are measured in kilobits per second. Typical speeds are 28.8, 33.6 and 56 kbps .

Today a lot of companies find it more efficient to have some employees doing their work at home. Using a modem, they transfer their work into the office where it is printed and distributed. The list of applications is endless.

What do you need to telecommunicate?

You just need a PC (or a terminal) , a modem connected to the computer and the telephone line, and communication software. Once you have installed and configured your modem, you can communicate with people through bulletin boards and online services.

Local bulletin boards

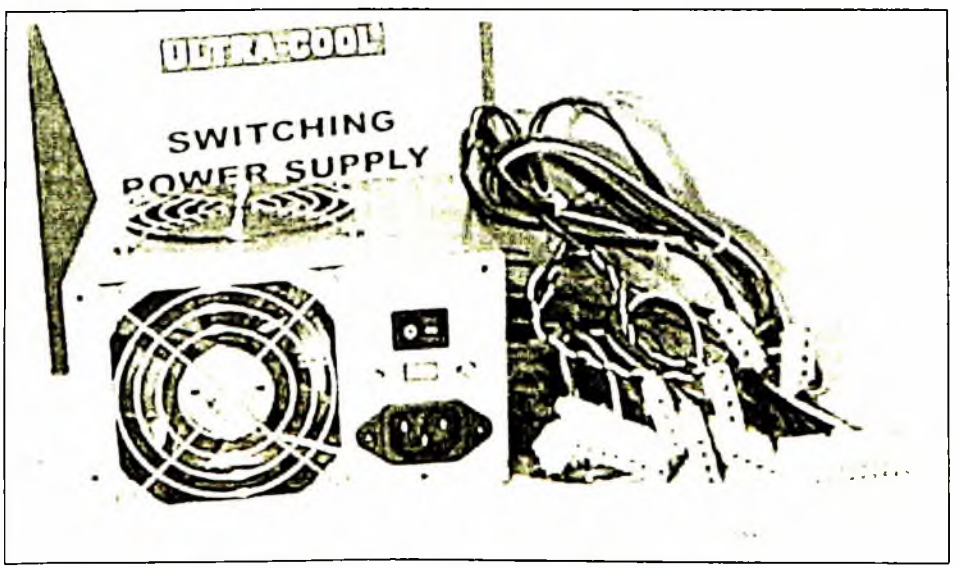
Bulletin boards systems (BBS) are frequently free because they are run by enthusiasts and sponsored by user groups or small businesses. The first time you make a BBS connection you as required to register your name, address, phone number and other information such as the kind of computer and modem you are using. The person who administers the BBS is called sysop (system operator) . You can use a BBS to download artwork, games and programs, or you can participate in ongoing discussions. You can also upload (send) programs, but make sure they are shareware or public domain programs.

Online service providers

To gain access to the Internet you must first open an account with an **Internet service provider** (ISP) or a commercial online service provider. Both offer Internet access, but the latter provides exclusive services

Internet service providers usually offer access to the Web and newsgroups, an e- mail address; a program to download files from FPT sites; and IRC software so that you can have live chats with other users. Most ISPs charge a flat monthly or annual fee that gives you unlimited access to the Internet.

The main commercial online services are America Online, CompuServe, Prodigy and the Microsoft Network. They differ from dedicated ISPs in two ways: (1) they use a smooth, easy- to- use interface, and (2) they have extra services for members only (but they charge higher pieces) . Fox example, they offer airline reservations, professional forums, online shopping and stories for children. They also let you search their online encyclopaedias and special databases.



Task 1

Match the data communication services on the left with the requirements on the right. Then read the passage and check your answer.

1. fax	a. To send a personal message to a friend who is at a different workstation.
2. electronic mail (e- mail)	b. To send a copy of a paper document- for instance, a scientific article- from Trento University to Cambridge University.
3. teletext	c. To access massive databases containing all kinds of information, or to be connected with an airline reservations service.
4. local bulletin board system (BBS)	d. To receive shareware and public domain programs from a user group.
5. commercial online service	e. to find out weather forecasts and sports information from the television.

Task 2

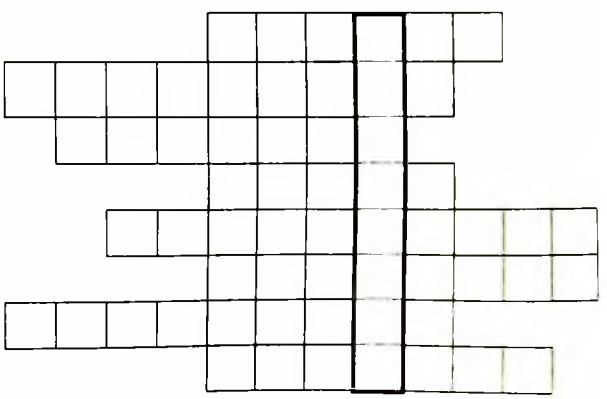
Complete these sentences by using a term from the text. Then write the words in the puzzle.

modem	*network*	*online*	*download*
newsgroups	*services*	*account*	*telephone*

1. When you are connected to the Internet you are described as being .....

2. To communicate via the Internet you need a PC, a modem and a ..... Line

3. To have access to the Internet you must first open an.....



4. You need a ..... to convert computer data into a form that can be transmitted over the phone lines.

5. The public discussion areas on the Internet are called.....

6. You can use a BBS to..... clip-art, games and shareware to your PC.

7. CompuServe and America Online offer exclusive..... to their customers.

8. The Internet is a global..... of computer networks.

Task 3

Match and link the pairs of expressions that have the same meaning.

file of structured data	*BBS*	*facsimile machine*	*FPT*	*sysop*
kilobits per second	*system operator*	*modem*		*Internet relay*
chat	*phone network*	*fax*	*database*	*bulletin board*
system	*IRC*	*modulator/ de modulator*		*file transfer*
protocol	*kbps*	*telephone wires*		

LISTENING

Task 4

Listen to these interviews with Daniel Sturdy, the manager of an Internet cafe in London. Then say whether these sentences are true (T) or false (F)

1. A cybercafe is a cafe where you can have access to the Internet and related services. ☐
2. You can talk to people over the Internet as if you were speaking on the phone. ☐
3. They don't help people who have problemss while using the Internet. ☐

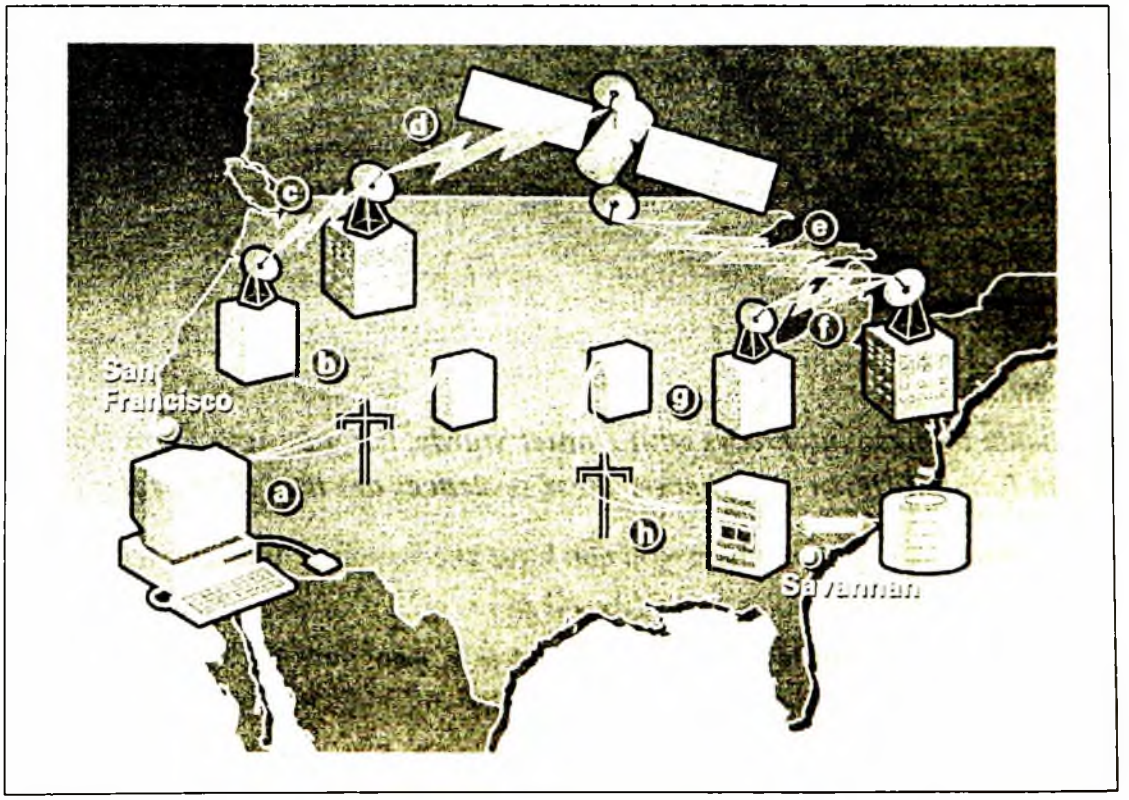
4. A private e-mail account costs . 10 a month. ☐
5. At the moment they have got many international users ☐
6. You have to pay long- distance rates on the Internet. ☐
7. In the cafe area you can sit, drink coffee and chat to people. ☐
8. Most of the computers are in an upstairs area. ☐

SPEAKING

Task 5

Identify the different communications links between the office desktop in a San Francisco police station and the mainframe in Georgia State Police Headquaters. Choose from this list.

fibre- optic cable	microway transmission
earth- satellite transmission	satellite- earth transmission
telephone wire	



Task 6

Work in pairs. Try to think of other organizations which use long-distance computer communications to exchange information.

WRITING

Task 7

The Global Positioning System link each set of sentences to make one sentence. You may omit, change or add words as required. Then form your sentences into two paragraphs to make a description of how the GPS works and its uses.

1. The GPS was developed by the US military.
   It was designed to pinpoit locations.
   The locations could be anywhere in the world.
2. It consists of 24 earth- orbiting satellites.
   The setellites are 17,000kms. Above the earth.
3. Earth setellite broadcasts a coded radio signal.
   The signal indicates the time and the setellite's exact position.
4. The setellites have atomic clocks.
   The clocks are accurate to one second every 70,000 years.
5. A GPS receiver contains a microprocessor.
   The microprocessor compares signals.
   The signals are from at least three setellites.
   The microprocessor calculates the latitude, longitude and altitude of the receiver.
6. GPS has many uses apart from military uses.
   GPS can be used for orienting hikers.
   GPS can be used for aiding the navigation of ships.
   GPS can be used for tracking trucks and buses.
   GPS cab be used for locating stolen cars.

LANGUAGE STUDY

Prediction 1: certainty expressions Rank these predictions according to how certain the speakers are. Put the most certain at the top of your list and the least certain at the bottom. Some predictions can have equal ranking.

a. Wap phones will revolutionize the way we communicate.

b. Wap phones may revolutionize the way we communicate.

c. It's likely Wap phones will revolutionize the way we communicate.

d. It's unlikely Wap phones will revolutionize the way we communicate.

e. It's expected Wap phones will revolutionize the way we communicate.

f. It's probable Wap phones will revolutionize the way we communicate.

g. It's possible Wap phones will revolutionize the way we communicate.

h. Wap phones will certainly revolutionize the way we communicate.

Study this list of certainty expressions:

More	Verbs	Adverbs	Adjective
	Will, will not	Certainty	certain
		Likely, unlikely	expected
		Probably	probable
	Could, may, might	possibly	possible

Less

Task 7

Make statements about these predictions for the next 5 years.

Use the certainty expressions above. For example:

All school children in my country will have mobile phones.

I think it is unlikely that All school children will have mobile phones but it is probable that many of the older pupils will have them.

1. ATM machine will use iris recognition rather than PIN number. You will get access to your account by looking at the machine.

2. People will vote in elections online.

3. Taxis will be robot- controlled.

4. TV journalists will be able to transmit what they see by using sensors in their optic nerves.

5. There will be more robots than people in developed countries.

6. Most computers will be voice- controlled.

7. Mobile phones will replace computers as the commonest way to access the Internet.

8. English will no longer be the commonest language for websites.

9. Email will be replaced by a voice- based system.

10. Computers will become more powerful.

PRACTICE

Task 8

Read the passage and fill in each gap with one suitable word

From the living room and family auto to the supermarket and office, it's impossible to escape the electronic (1) ..... that is transforming the way people live and work. Already, technological gams are bringing to people products, services, and (2) ..... they never dreamed of just a few years ago: stereophonic television, TV set that can be carried in a coat pocket portable radios with stereo sound, home telephones that signal when another caller is on the line and (3) ..... calls from home to business, bill paying without the (4) .....

Outside the home, the dazzle of (5) ..... is no less brilliant: a perfectly typed letter at the touch of a button, building an auto designs from a computer, cash from the bank at any hour, instant access to thousands of reference (6) .....

All this comes at piece. Robbery by computer now is the primary white-collar crime, (7) ..... to some criminologists, and costs society anywhere from $ 100 million to $ 3 billion a year. Another problem (8)

..... by the use of more computers is the risk of invasion of workers that their (10) ..... will be taken by computerized robots or some other form of automation.

NEW WORDS

fiber- optic cables (N)	cáp sợi quang
demodulates (N)	giải điều biến
browse (V)	đọc lướt qua, xem qua
cover (N)	vỏ bọc
globe (N)	quả cầu,
backgammon (N)	cờ thỏ cáo
server (N)	máy chủ
dedicate (V)	dành cho

Unit 14

LANS AND WANS

Objectives

- Understand the words and expressions related to computer network
- Use grammartical structures Describe the components and functions of a computer network in oral and written form.

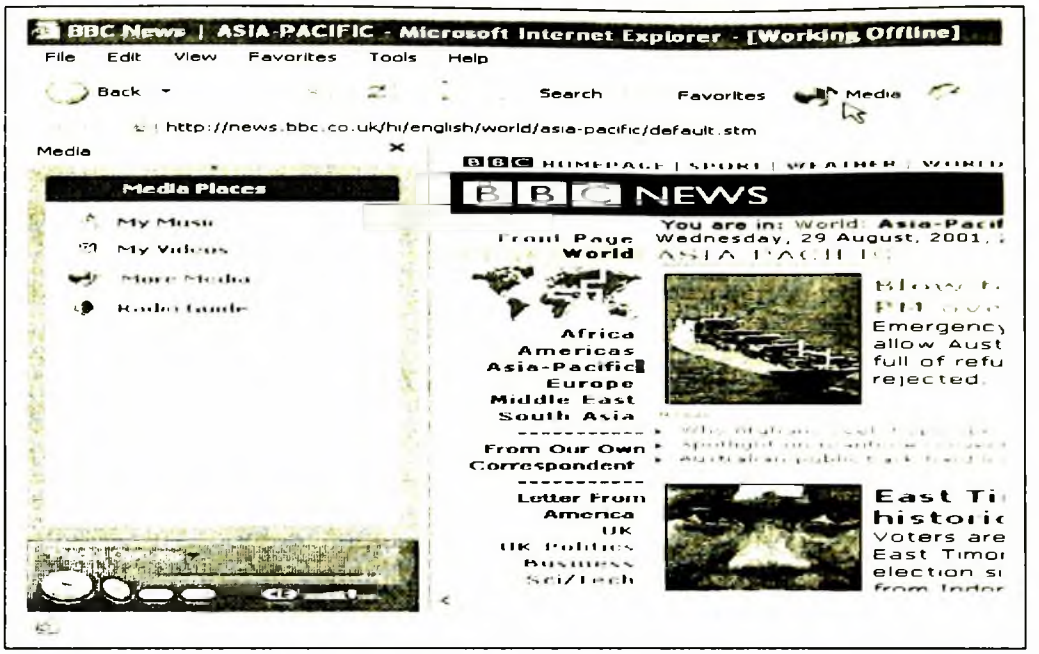
Contents

Reading:	Network configurations
Listening :	Listen to the description of computer network. Label the different elements
Speaking :	Study and discuss the illustration then prepare a description and give an oral report to the class
Writing :	Write a short description of your network
Language study:	Relative clauses with a participle

WARM UP ACTIVITY

Try to answer these questions

1. What is the computer network?
2. What are the benefits of connecting computers and peripherals in a network?



READING

Network configurations

A network is a group of devices (PCs, printers, etc.) or 'nodes' connected by communications circuits so that users can share data, programs and hardware resources. A network has two main elements: the physical structure that links the equipment and the software that allows communication.

The physical distribution of nodes and their circuits is known as network 'topology' or 'architecture'. The software consists of the protocols, i.e. the rules which determine the formats by which information may be exchanged between different systems. We could say that cables and transceivers (the architecture) allow computers to 'hear' one another, while the software is the 'language' that they use to 'talk' to one another over the network.

As regards the cables, they consist essentially of the transceiver- the hardware that sends and receives network signs. At present the most widely used transceivers are Token Ring, Ethernet and LocalTalk. Token Ring is the most common method of connecting PCs and IBM mainframes.

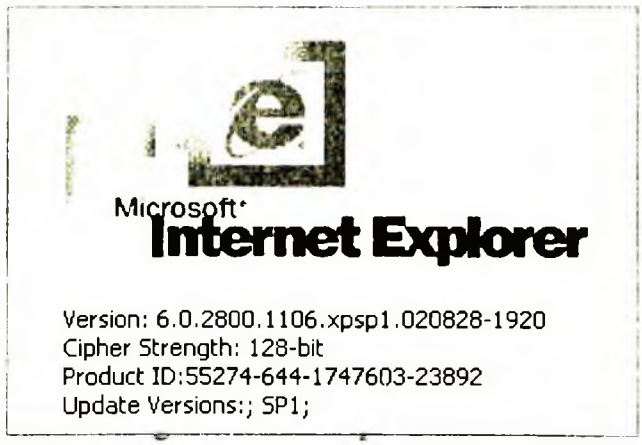
Most Token Ring adapters transmit data at a speed of 16 megabits per second. With Ethernet, data is transmitted at 100 Mbits/ sec. Ethernet provides a very robust, trouble- free architecture with good levels of performance. In this regard, , Ethernet is the best solution for fast and intensive activity.

LocalTalk transceivers are the cheapest of all because they are directly included in each Macintosh. How ever they are rules which describe things like transmission speed and physical interfaces. The Token Ring protocol avoids the possibility of collisions. To transmit data, a workstation needs a token, and as there is only one token per network, holding one guarantees sole use of the network. With Ethernet, there are other options, of which TCP/IP (Transmission Control Protocol/ Internet Protocol) is perhaps the most useful since it allows different operating systems to communicate with each other. With regard to LocalTalk network, they use AppleTalk protocols. The Macintosh operating system includes the AppleTalk manager and a set of drivers that let programs on different Macs exchange information.

LANs can be interconnected by gateways. These devices help manage communications and control traffic on large networks. They change the data to make it compatible with the protocols of different networks.

Task 1

Read the text , then match the technical terms from 1 to 7 with the explanations from a to g.



1. LANs
2. network architecture
3. nodes
4. protocol
5. transceiver
6. token
7. gateway

a. the hardware that emits and

b. a network contained in a relatively small area

c. the arrangement of nodes in a communication system (i.e. the distribution of elements in a network)

d. a device that translates protocols between different types of networks (e.g. it can link networks of PCs and Macs to mainframes and minicomputers)

e. a special unit of data which acts as a key on a Token Ring network; only the machine in possession of this piece of software can transmit on the net work.

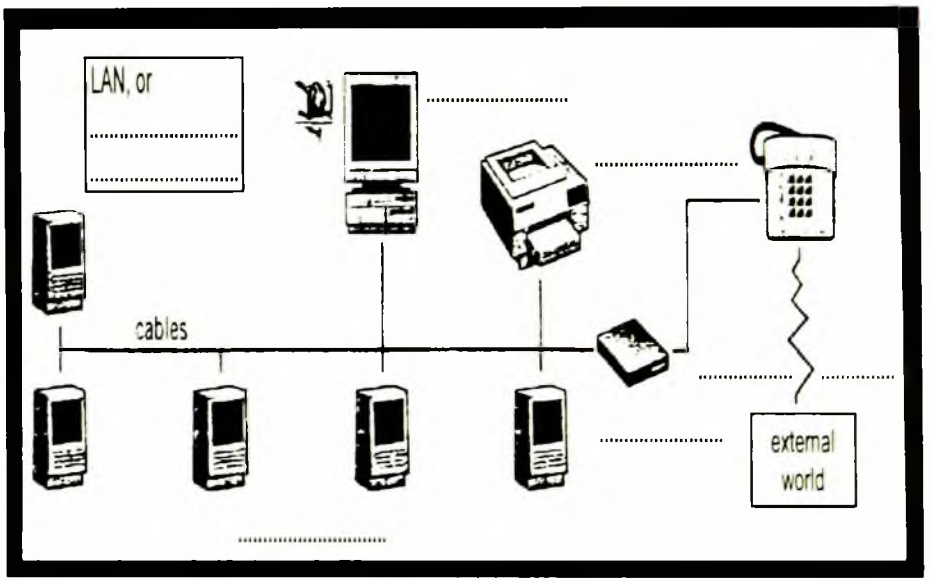
f. a set of rulers that allows the exchange of information over a network.

g. computer devices interconnected in a network.

LISTENING

Task 2

Listen to the description of this computer network. Label the different elements.



SPEAKING

Task 3

In small groups, study and discuss the illustration below. Then prepares a description and give an oral report to the class.

• This diagram represents a wide area network or WAN. Two network are linked via satellite. One network is in ..... and consists of.....

The other LAN is in ..... and contains.....

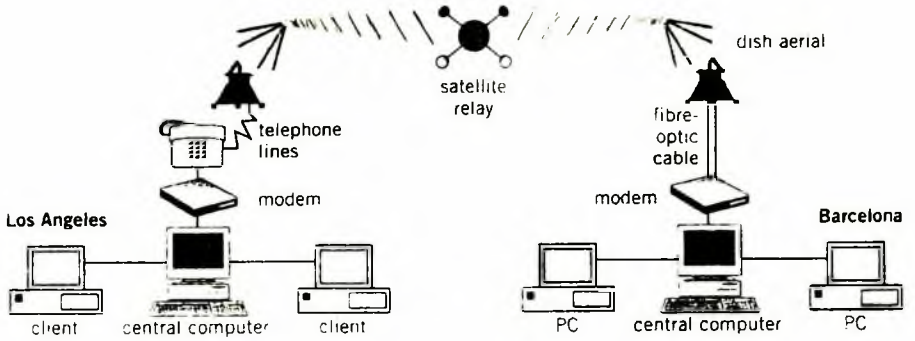
• In Los Angeles, the computers are connected to the telephone lines by ..... However, in Barcelona.....

• The satellite receives signals from .....

then the signals are retransmitted to.....

- The purpose of this integrated network may be .....

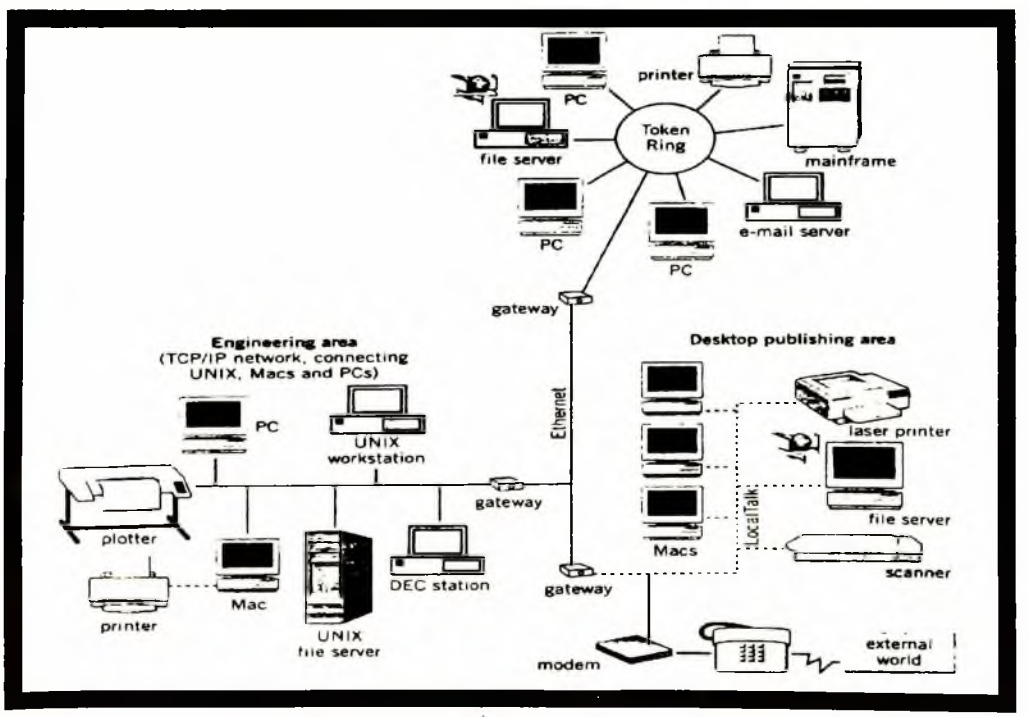
It allows large companies and institutions to ....



WRITING

Task 4

The diagram below illustrates the computer connections in three areas of a large company. Read the description of the office area network. Then write similar descriptions of the other two areas.



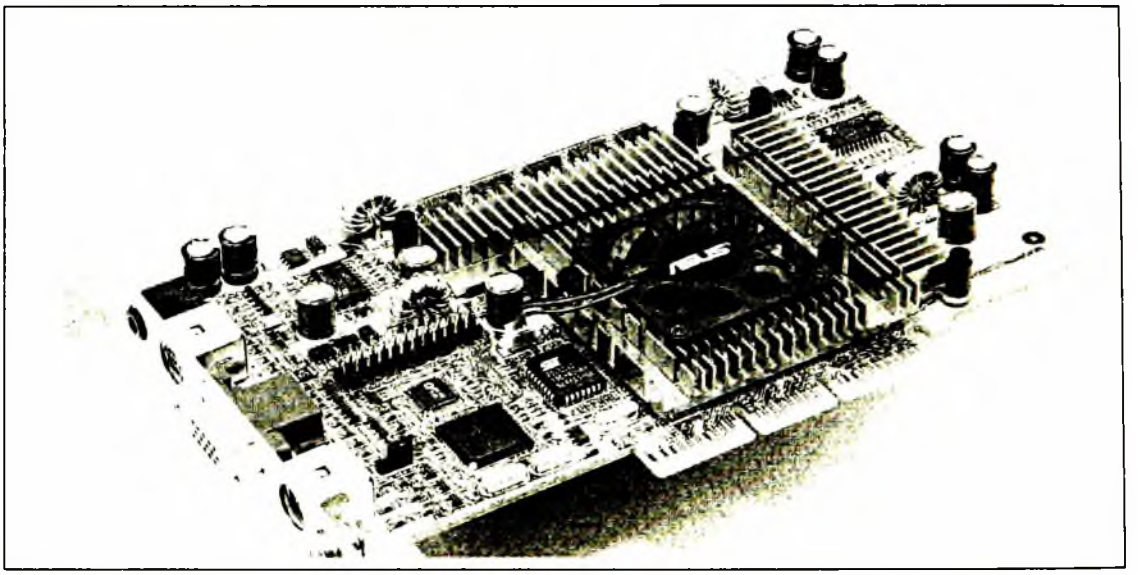
Task 5

If you use a network write a short description of it, with details of its architecture and protocol. Say what you and your colleagues use the network for.

In the office area, the computers are connected in a Token Ring network. Various PCs have access to a file server, an IBM mainframe, an e-mail server and printer.

The file server probably contains application programs like databases, spreadsheets and accounting packages. The mainframe contains large amounts of information about the company, administration work, etc.

LANGUAGE STUDY



Relative clauses with a participle	
Relative clauses with a participle are often used in technical descriptions. They allow you to provide a lot of information about a noun using as few words as possible. **Study these examples :**	1. The technology needed to set up a home network. = technology which is needed 2. PCs equipped with Ethernet adapters = Pcs which are equipped

1. The technology needed to set up a home network 2. PCs equipped with Ethernet adapters 3. Network modern allowing clients to access the Internet simultaneuosly 4. Data line linking client to server We can use the passive participle as in example 1 and	We can use an active participle as in examples 3 and 4. 3. Network modem allowing clients to access the Internet simultaneuosly = modem which allows clients to access the Internet simultaneously 4. data line linking client to serve = data line which links client to serve

Task 6

Complete these definitions with the correct participle of the verb given in brackets.

1. A *gateway* is an interface (enable) dissimilar networks to communicate.
2. A *bridge* is a hardware and software combination (use) to connect the type of networks.
3. A *backbone* is a network transmission path (handle) major data traffic.
4. A *router* is a special computer (direct) messages when several networks are linked.
5. A *network* is a number of computers and peripherals (link) together.
6. A *LAN* is a network (connect) computers over a small distance such as within a company.
7. A *server* is a powerful computer (store) many program (share) by all the client s in the network.
8. A *client* is the network computer (use) for accessing a service on a server.
9. A *thin client* is a computer (comprise) a processor and memory, display, keyboard, moause and hard drives only.
10. A *hub* is an electronic device (connect) all the data cabling in a network.

Task 7

Link this statements using a relative clause with a participle.

1. a. The technology is here today.
   b. It is needed to set up a home network

2. a You only need one network printer
   b It is connected to the server.
3. a Her house has a network
   b It allows basic file- sharing and multi-player gaming
4. a There is a line receiver in the living room.
   b It delivers home entertainment audio to speakers.
5. a Eve has designed a site
   b It is dedicated to dance.
6. a She has built in links.
   b They connect her site to other dance sites.
7. a She created the site using a program called Netscape Composer.
   b It is contained in Netscape communicator.
8. a At the centre of France Telecom's home of tomorrow is a network.
   b It is accessed through a Palm Pilot- style contril pad.
9. a The network can simulate the owner's presence.
   b This makes sure vital tasks are carried out in her absence
10. a The house has an electronic door — keeper.
    b It is programmed to recognise you.
    c This gives access to family only.

PRACTICE

Task 8

Link each action (1-10) with a suitable consequence (a-j)

Example: If you place a floppy disk near a magnet, you will destroy the data.

with	*to*	*in*	*for*	*as*	*on*	*the*
regard		*this*	*regards*	*matter*		*reference*
of		*respect*				

1. You place a floppy disk near a magnet	a. the cursor moves to the left
2. you press Print Screen	b. the computer hangs
3 you input the correct password	c. it is not lost when you switch off
4. you add memory to a computer	d. you damage the drive
5. you move the mouse to the left	e. you copy the screen
6. you store data in RAM	f. you have access to the network
7. you use a faster modem	g. you destroy the data
8. there is a memory fault	h. it runs faster
9. you press the arrow key	i. your phone bills are lower
10. you move a CD-ROM drive with the disk in place	j. the cursor moves across the screen

Task 9

Read this summary of the text and fill in the gaps using the list of words below

Computer network links computers locally or by external communication lines and software (1) ....., allowing data to be exchanged rapidly and reliably. The (2) ..... between local area and wide area networks is, however, becoming unclear. Networks are being used to perform increasingly diverse tasks, such as carrying email, providing access to public databases, and for (3) ..... . Networks also allow users in one locality to share resources.

Distribute systems use networks computers. PCs or (4) ..... provide the user (5) ..... . Mainframes process (6) ..... and return the results to the users. A user at his PC might make query against a central database. The PC passes the query, written in a special language, to the mainframe, which then (7) ..... the query, returning to the user only the data requested. This allows both the network and the individual PC to operate efficiently.

In the 1980s, at least 100,000 (8) ..... were set up world-wide. As (9) ..... orbit satellites have lowered the price of long-distance telephone calls, data can be transmitted more cheaply. In addition, (10) ..... cable has been installed on a large scale, enabling vast

amounts of data to be transmitted at a very high speed using light signals. This will considerably reduce the price of network access, making global networks more and more a part of our professional and personal lives. Networks should also improve our work (11) ..... and technical abilities.

distinction	fiber- optic	protocols	Synchronous
distributed	LANs	queries	workstations
systems	parses	screen	
environment		handling	

NEW WORDS

topology (N)	cấu trúc liên kết mạng
format (V)	định dạng
tiver (N)	máy thu phát
interface (N)	thiết bị ghép tương thích
TCP (Transmission Control Protocol)	là thành phần của tàng truyền tải trong Internet
IP (Internet Protocol)	giao thức Internet
gateway (N)	cổng vào
mainframe (N)	dàn máy chủ
query (V)	thắc mắc

Unit 15

NEW TECHNOLOGIES

Objectives

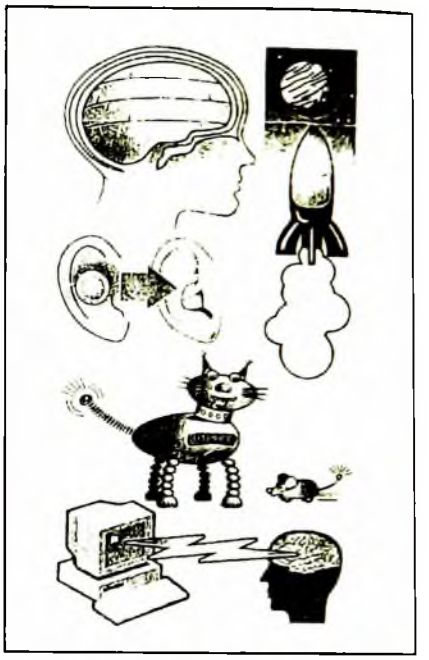
- Understand the words and expressions related to information technology
- Understand how a pen computer works.
- Use grammartical structures to talk and write about new technologies and make predictions about the impact of computers on our life

Contents

Reading:	Some new electronic products
Listening :	Listen the interview with a writer and a computer magazine
Speaking:	Give your own point of view on the prediction of applications of robotic systems
Writing :	Write a report recommending that your institution or company introduce a smart card system
Language study:	Prediction 2

WARM UP ACTIVITY

Study these predictions. Tick (V) those you agree with and cross (X) those you disagree with.



2005 Computers which write their own software ☐

2007 Smart clothes which alter their thermal properties according to the weather ☐

2010 Robotic pets ☐

2015 Artificial lungs ☐

2020 Regular manned flights to Mars ☐

2030 Direct connections between brain and computer ☐

2035 Artificial brain ☐

Compare your answers with other student in your group.

Explain why you agree or disagree with these predietions.

READING

Smart phones for sending and receiving voice, e- mail and internet data are already available. One example is Mobile Access, the wireless phone from Mitsubishi. The software from Unwired Planet connects you to a server, displaying a directory of databases and information services.

You can connect Mobile Access to your laptop and use its modem to access the Internet. The technology is based on the **cellular digital packet data** (CDPD) .

Internet TV sets allow you to surf the Web and have e- mail while you are watching TV, or vice versa. Imagine watching a film on TV and simultaneously accessing a Web site where you get information on the actors in the film. This is ideal for people who are reluctant to use PCs but are interested in the Internet.

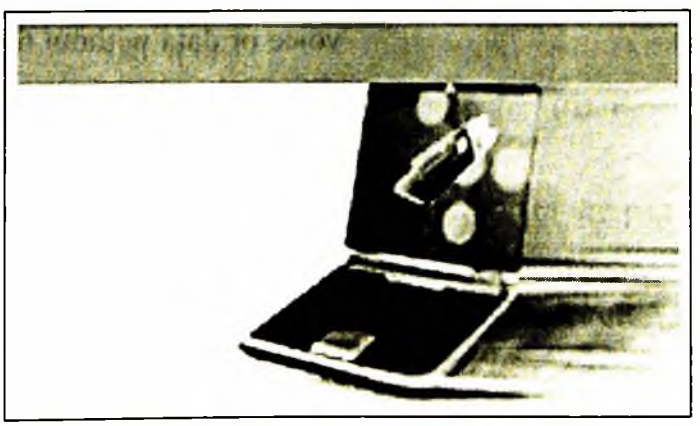
Web TV was the first company which brought Internet services to TV viewers through a set- top computer box. Another option is WorldGate's technology, which offers the Internet through cable TV.

The model built by OEM Metec integrates a complete Windows PC in a TV set. The next generation of Internet- enabled televisions will incorporate a smart- card for home shopping, banking and other interactive services.

Vitual reality lets people interact with artificial objects and environments through three- dimensional computer simulation. In a VR system, you are hooked to a computer through a controlling device, such as a glove, and head-mounted displays give you the feeling of being propelled into an artificial three- dimensional world. The computer brings to life events in a distant, virtual world using databases or real- time objects and sound. Your senses are immersed in an illusionary, yet sensate, world.

VR can be applied to anything from video games, testing a motor vehicle, visiting a virtual exhibition, to checking out imaginary kitchen designs.

Video teleconferencing is a new technology that allows organizations to create 'virtual' meetings with participants in multiple locations.



A video teleconferencing system combines data, voice and video.

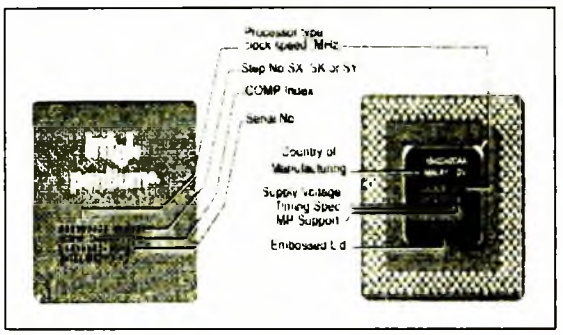
Participants see colour images of each other, accompanied by audio, and they can exchange textual and graphical information.

In video teleconferencing, images are captured by computer- mounted cameras. Video processors digitize and compress the imagines, which are transmitted over a network bidirectional. Data and sound travel via telephone lines.

Task 1

Match the terms on the left with the explanations on the right

1. Internet- enabled TV
2. Web site
3. virtual reality
4. to compress files
5. video teleconferencing
6. wireless smart phone



a. location on the Internet where a company puts Web pages.

b. technology that integrates data, sound and video: participants in different/ distant virtual places hold a meeting as if they were face to face.

c. to squeeze data into smaller files by coding it into specific formats that take less space.

d. TV set used as an Internet device.

e. technology that allows users to see a computer- simulated world in which they can move.

f. device that can send and receive voice or data without the use of wire.

LISTENING

Task 2

Listen to this interview with Tom. Bryant, a writer with a computer magazine. Are the following sentences true (T) or false (F) ?

1. A pen- based interface uses an electronic stylus as an input device. ☐
2. Pen computers do not require specialized operating systems to recognize pen gestures and characters. ☐
3. Pen computers come with operating systems that can be trained to recognize handwriting. ☐
4. Some pen computers are more powerful than desktop PCs. ☐
5. A personal digital assistant is a hand- held pen computer designed to organize and communicate personal information. ☐

6. You cannot transmit data from pen computers to desktop PCs and peripherals. ☐

7. Business people will make up a large section of the pen computer market. ☐

Task 3

Read this extract from the interview and fill in the missing worlds. The first letter of each missing word is given.

Interviewer: Can you explain how a (1) p..... computer works?

Tom Bryant: Sure. A pen computer usually (2) r..... on rechargeable batteries. You hold the computer with one hand and with the other you use an electronic (3) s..... to write, draw and make selections on a flat LCD (4) s.....

Interviewer: That means it doesn't have a keyboard.

Tom Bryant: That's right. You write (5) I..... with the stylus like a pen.

Interviewer: And how does the computer (6) r..... what you write?

Tom Bryant: It reads the (7) p..... of the pen and sends signals to the screen. The computer then translates the movements of the pen into characters or performs the functions like 'delete'. The operating system recognizes specific gestures like drawing a circle or crossing out a (8) w..... .

Interviewer: Can these operating systems really recognize (9) h.....?

Tom Bryant: Yes, they can be trained to recognize (10) c..... written in your own handwriting. A lot of hand- held computers Microsoft Windows CE or the Palm OS from Palm Computing.

Task 4

Now listen again and check your answers.

Task 5

How do you say these expressions in your language?

1. rechargeable batteries
2. a flat LCD screen
3. a pen- based interface
4. handwriting recognition
5. a Personal Digital Assistant
6. an infra- red port
7. a portable supplement

SPEAKING

Task 6

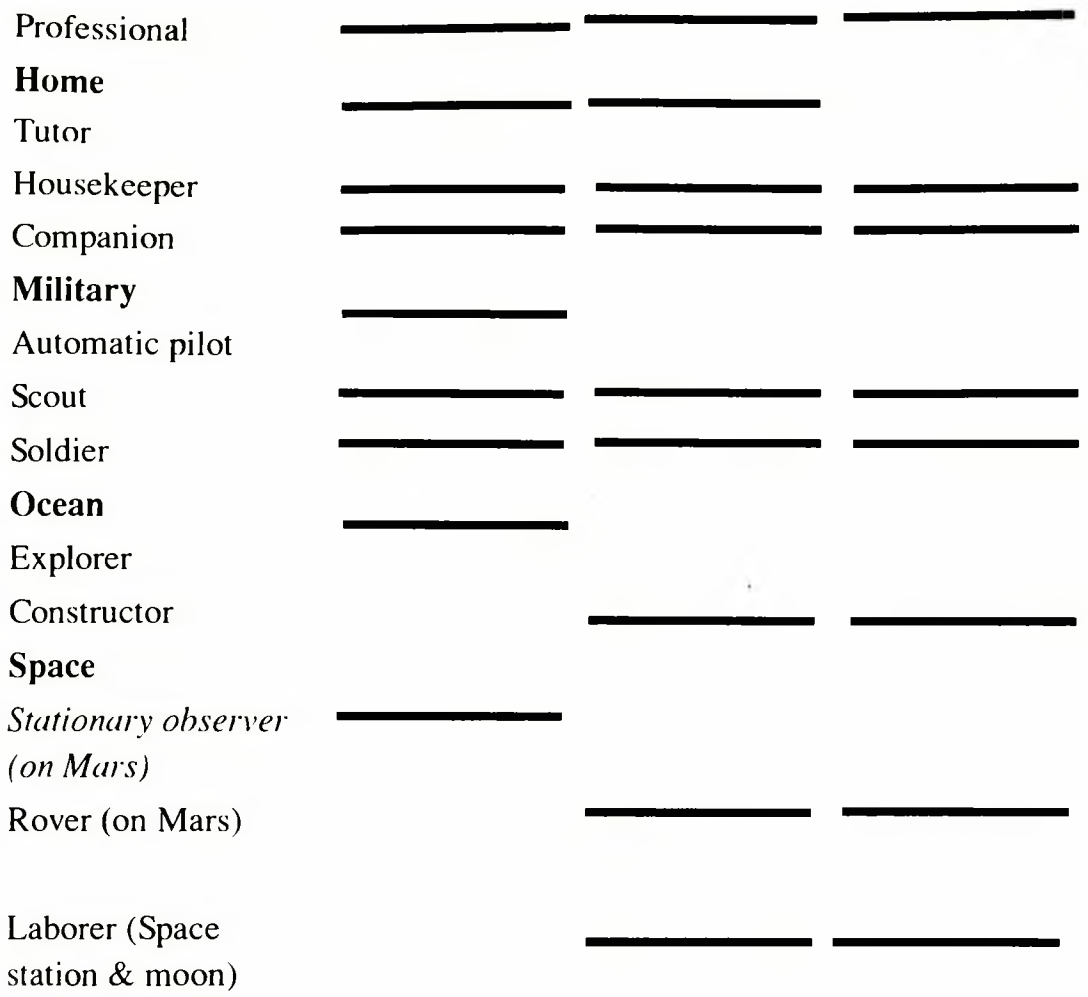
Look carefully at the table below showing past, present, and future applications of robotic systems, then discuss the following questions

1. Do you agree with the prediction made?
2. What are the implications for society if these predictions become reality?

Task 7

Applications of robotic systems.

Domain	Pre 1990	1990s	Post 2000
Industry			
Production	———		
Materials handling	———		
Assembly	———	———	
Inspection	———	———	
Office			
Mail handler	———		
Clerk	———	———	
Cleaning	———	———	



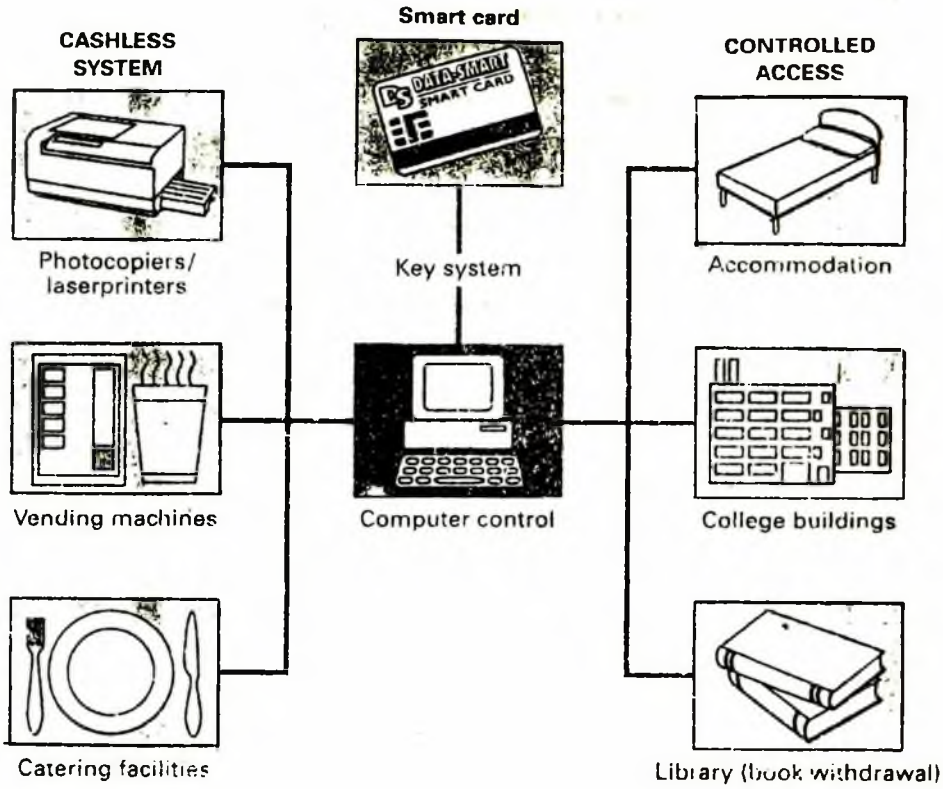
WRITING

Task 8

Study this graphic which shows how a smart card system could be used in a college, or other large organization. Use it to write a report recommending that your institution or company introduce smart card system.

Start like this: A student/ company smart card can be used in many ways. It

can be used as a key to the building. Only cardholders can open the doors.



LANGUAGE STUDY

MAKING PREDICTIONS

Look at the help box and then expand these sentences using the future perfect tense.

1. In ten years' time/ a lot of people/ connect their television to the telephone line
2. Portable computers/ replace/ desktop computers/ in a few years' time
3. With the help of computers/

Help box

Making predictions

- Future with *will/ shall*

A computer program will be the world chess champion

- Future continuous (*will be*+ present participle)

In twenty years' time, some people will be living in space, inside a computerized colony.

doctors/ find/ cure/ AIDS and cancer/ by the year 2005

4. By this time next year/ software manufacturers/ make/ hundred of new programs

5. By 2020/ post offices and bookshops/ disappear

6. By this time next year/ I/ buy/ pen computer

• Future perfect (*will have* + past participle)

By 2020, new technology will have revolutionized communications

• Special structures

- Possibility (*may/ might/ could*)

Scientists may discover new electronic components

- Probability (likely to)

Talking machines are likely to be built

- Certainty (*certainly, definitely, certain to*)

Working hours will definitely become shorter with the help of computers. Prices are certain to go up.

Task 9

Here are some predictions made by an intelligent supercomputer. In small groups, write your own predictions

▪ Work/ Jobs

e.g. By the year 2030 human labor in industry will have been replaced by robots.

Your: .....

.....

▪ Homes:

e.g. Families will have robots to do the housework.

Your: .....

.....

▪ Education/ Schools

e.g. By the end of the next century, every student in every school in the world will have a PC

Your: .....

.....

Money/ Holidays

e.g. Most families will have videotext systems, with which they can shop and make financial transactions. Cash will disappear.

Your: .....

.....

PRACTICE

Task 10

Read the passage and fill in each gap with one suitable word.

There is a body of literature making forecasts- most of them are believable about the near future and this catalogue of (1) ---------is getting fatter by the day. These predictions (2) ----------from the listing of new devices to the way (3) ----------which they will alter the daily habits of the citizen. In general, we shall spend (4) ----------time at home as it becomes easier to communicate without (5) ----------to meet other people- for example, shopping (6) ----------TV and (7) ----------video conferences. It is said that it will be easier than ever not to leave the (8) ----------. In fact, this (9) ----------of horizons is already (10) ----------offer, particularly in the (11) ----------of leisure.

There are computerized programs on the market that can take you to visit a museum. You (12) ----------on the computer screen and select---------- rout. You enter the room you have selected and look at the (14) ----------.

You can stop in (15) ----------of a picture, enlarge (16) ----------detail you may wish to and (17) ----------for information. You can say as (18) ---------as you like, at any time of the day or night, (19) ----------meeting any

tourists. You don't need to pay an (20) ----------fee — all you have to do is connect the computer in the comfort of your own home.

Task 11

Choose the best answer.

1. When he spoke over the telephone, his voice was so---------that i could hardly hear him.

A. faintB. dimC. dullD. unnoticeable

2. Hello! Is that 210034? Please put me ----------to the manager?

A. acrossB. aboutC. thinkingD. through

3. I was just----------to go out when you telephoned.

A. aroundB. aboutC. thinkingD. planned

4. Do you ----------my turning the television on now?

A. mindB. disapproveC. wantD. object

5. She was unable to warn her mother that she would be late because the telephone was----------

A. out of orderB. off workC. out of workD. off duty

6. There is a fault at the television station. Please do not----------your set.

A. changeB adjustC. repairD. switch

7. The person who read the news on television is called a (n) ----------

A. announcerB. commentatorC. journalistD. newsreader

8. Tom's boss does not want him to----------a habit of using the office phone for personal calls.

A. makeB. doC. haveD. increase

9. As----------as I know, we have not received a bill for the new computer.

A. much B. longC. soon D. far

10. Phone me before ten; ----------I'll be too busy to talk to you.

A. unless B. whetherC. otherwiseD. if

11. ----------many times I tell him, he always forgets to pass on phone messages

A. WhereverB. WhateverC. howeverD. whenever

12. Could you----------me how to use this new computer ?

A. explainB. showC. sayD. remember

13. The computer engineer explained in great----------how the computer worked.

A. clairityB. detailC. informationD. example

14. Where is the book of ----------for using this television?

A. instructionsB. directivesC. regulationsD. orders

15. Could you please ----------me to the nearest post office?

A. explainB. pointC. indicateD. direct

NEW WORDS

CDP D (Cellular Digtal Packet Data) (N)	là đặc tả xác định cách đóng gói dữ liệu
cellular (N)	ngăn nhỏ
VR (virtual reality)	thực tế ảo
LCD (liquiid crystal display)	màn tinh thể lỏng
rechargeable (Adj)	có thể nạp lại
battery (n)	pin
stylus (N)	bút trâm
delete (V)	xoá
gesture (V)	điệu bộ, làm diệu
handwriting (N)	chữ viết tay

REVIEW OF UNITS 13-15

Objectives

- Consolidate the contents of units 13, 14, 15
- Use grammartical structures to do exercises

+ Prediction

+ Relative clause with a participle

Contents

- Grammartical exercises
- Vocabulary exercises
- Writing
- Translation

GRAMMAR

Making prediction

To make predictions we can also use *would* as a 'less definite' form of *will*

Often we imly that something else must happen first. For example:

A body chip ***would include*** *a microprocessor. (first we have to develop body chips)*

The national Grid ***would link*** *all schools and colleges. (first we have to make sure there is enough money to make it happen)*

Exercise 1

Link these words to make predictions with would.

1. computers / write / own software

2. implants / stimulate / muscles of disabled
3. screen / unfold / wristwatch
4. clothes / alter / thermal properties
5. robot pets / require / no food
6. articficial lungs / help / cancer patients
7. people / be able / travel / Mars
8. a body chip / correct / poor vision

Certainty

Exercise 2

Match the if - clauses (1 to 6) to the main clauses (a to f) to make complete sentences.

1. If you never read computer magazines....	a...you would be able to access our bulletin board.
2. If you never back up your hard disk...	b...it is likely that you will have a problem with computer viruses.
3. If you had a modem....	c...you would have a bigger range of typefaces and fonts to choose from.
4. If you don't copy pirated software.	d...you will miss important new products.
5. If I knew more programming languages...	e...I would get a better job
6. If we bought a better printer...	f...you will probably lose some important files.

Exercise 3

Complete the sentences with the words below. Are the sentences first (f) or second (S) conditional?

1 If you_____your VDU in direct sung light, it_____ damage.

2 If you_____your screen for too long, you_____a headache.

3 IF you_____to link your PCs with a mainframe, you_____to install a network.

4 If the market for portable computers_____, prices_____even more next year.

5 If we_____a fax machine and e-mail facility, we_____so many letters each day.

Exercise 4

Complete the sentences with be + certain to, likely to, or unlikely to.

1. They have very little experience of the entertainment industry, so they ----------win the contract for a national television network.

2. She----------get the job. She has the experience and the qualifications in computing and none of the other applicants were any good.

3. I will offer them a 10% discount, but they.....ask for more because they are sometimes very tough negotiators.

4. Of course the stock market goes up and down, but you ..... lose all your money in such a safe investment.

5. I can give Harriet the message. She.....be here at some stage tomorrow, because she usually comes into the office on Thursdays.

6. The consortium.....need some extra finance for the bridge; they have spent all of their money and the project is only half- finished.

7. We are relocating to a site that is quite close, so most of the staff...stay with the company.

8. I have booked a hotel room in Lodon for the 18th , because the dinner.....finish before 11p.m., and then it will be too late to get a train back to Liverpool.

9. The new manager.....make a number of changes in the department; the only question is exactly what those changes will be.

10. computers .....become more powerful.

REVISION OF VERB TENSES

Exercise 5

Put the verbs in brackets into the correct tense

1. Bill..... (work) for the company for the last twenty- five years

2. He..... (graduate) in business studies and ..... (take) a job in London.

3. He..... (train) as a systems analyst while he..... (work) in London.

4. Now he ..... (look after) all the system used by the Technical Services Division.

5. At the moment he..... (develop) a system for handling repairs.

6. When something..... (go) wrong in a pub, a service engineer..... (send) to fix it.

7. Details of every repair..... (download) to the company mainframe each night.

8. No changes can..... (make) until the system..... (test).

9. Bill thinks that communications..... (get) faster and faster in the future.

10. He thinks that a paper- free office..... (not happen) .

Exercise 6

Fill in the gaps with the correct form of an appropriate verb from this list.

may	*might*	*must*	*should*	*will*

1. Technicians.....have normal colour vision to follow colour coding of wires.

2. You .....try to remove a floppy disk when the drive is running.

3. Biological computers.....replace electronic computers in the future.

4. You.....update your webpage regularly.

5. You.....have pages with dead-ends on your website.

6. You.....know your password to gain access to the network.

7. Computers.....get cheaper and more powerful.

8. You.....back up your files regularly.

VOCABULARLY

Verb ending in —*ise* (US -*ize*) often have a causative meaning.

For example:

New phones will *revolutionise* the way we communicate.

= New phones will *make a revolution* in the way we communicate.

Exercise 7

Repalce the words in italics in each sentence with the appropriate form of an — ise verb. All the verbs have been used in this book.

1. Players let you group songs into playlists and *make* the selection *random*.

2. If you adopt differential backup, this *reduces* to a *minimum* the size of your backup set.

3. Most hotels use systems *which have been converted for computers*.

4. Software developers can produce solutions *which are tailored to the customer*.

5. Some software houses produce *specially written applications*.

6. Utilities can be put *into categories* as editors, filters or communication programs.

7. You can protect data by putting it in a form only users *with authority* can understand.

8. It is an offence to make copies of software *which are done without authority*.

READING

Exercise 8

Read the three opening paragraphs of the text below and answer these questions:

1. How does the author justify his claim that we are 'in the midst of convergence'?

2. What will be the difference between computers and humans after 2015?

3. What does he mean by a 'positive feedback loop' in computer development?

4. Why will knowledge of a major language be the only IT skill needed?
5. Which of the author's predictions do you accept?

The future of Information Technology

We are in the midst of convergence. At the hardware layer, computers, phones and consumer electronics are converging. At the applications layer, we see convergence of information, entertainment, communications, shopping, commerce, and education.

Computers have come from nowhere 50 years ago and are rapidly catching up in capability with the human brain. We can expect human: machine equivalence by about 2015. But after this, computers will continue to get smarter. There is a noticeable positive feedback loop in technology development, with each generation of improved computers giving us more assistance in the design and development of the next.

Ultimately, they will design their offspring with little or no human involvement. This technology development will push every field of knowledge forwards, not just computing. It will be almost as though extraterrestrials had landed in 2020 and given us all their advanced technology overnight.

But we will never get far unless we can solve the interface problem. In the near future we may have electronic pets, with video camera eyes and microphone ears, linked by radio to the family computer. With voice and language recognition we will have easy access to all that the Internet can provide. We can tell the pet what we want and it will sort it out for us. It will be impposible to be technophobic about such an interface, and the only IT skill needed will be to speak any major language.

Exercise 9

Translate the last paragraph into your language

KEY

UNIT 1

Task 1

1. A computer can store or handle any data which is input.
2. T
3. T
4. F. All computer can perform arithmetic operations, make comparisons ıl output information.
5. T
6. T
7. T
8. F. Computer can only decide these things: is one number less than ɔther? are two number equal? and is one number greater than another?
9. T

Task 3

ɔeaker	*Job*	*What they use computer for*
1	Composer	To record what he plays on keyboard To get different sounds from the synthesizers
2	Secretary	To write memos, letters, faxes To communicate with other offices by e-mail
3	Electrical engineer	To design electrical installations and lighting systems To make drawing To keep records (of tests)

4	Librarian	To find information for people To catalogue the books in the library To record the books that readers borrow

Task 7

1. calculate the bill
2. control machine
3. hospital
4. control our money
5. provide entertainment and information

UNIT 2

Task 1

1. T
2. T
3. F
4. T
5. F
6. T
7. F
8. T

Task 4

1. Software
2. Hardware
3. CPU
4. RAM
5. Peripherals
6. optical disk
7. hard disk
8. floppy disk
9. mouse
10. monitor
11. keyboard
12. printer

Task 7

1. The control unit (CU) , the arithmetic logic unit (ALU) , and the registers
2. random access memory
3. ROM
4. The information contained in the RAM section

5. Megabyte, Mega or MB

6. Single In- line Memory Module

7. A megahertz is equivalent to one million cycles per second. It is the unit used to measure the processor speed.

8. The arithmetic logic unit. It performs mathmetical calculations and logical operations.

9. Bit

10. We use magnetic disks (floppies or hard disks) , optical disks, etc.

UNIT 3:

Task 1

1. T
2. T
3. T
4. T
5. T
6. T
7. T
8. F
9. T
10. T

Task 2

a. Microcomputer (desktop)
b. minicomputer
c. portable (laptop or notebook)
d. mainframe

Task 3

1. b
2. c
3. b
4. c
5. c

Task 9

1. desktop
2. task
3. terminals
4. systems
5. memory
6. applications
7. CAD

Task 12

1. haybrid computer- digital- analog
2. digital- digits- code
3. mainframe- compute installation
4. programming- digital

UNIT 4

Task 2

Imac	
Processor speed	***266MHZ***
RAM standard	***64 MB expandable to 256 MB.***
Hard disk capacity	***6 GB***
Price	***Ê. 850***
Power	**Macintosh G3**
Processor speed	***400 MHz***
RAM standard	***128 MB expandable to 1 GB***
Hard disk capacity	***9GB***
Price	***£1, 720***

Task 3

1. models
2. microprocessor
3. running
4. faster
5. RAM
6. expanded
7. 1 GB

Task 5

1. hardware
2. software
3. peripheral
4. hardware
5. applications software
6. softwatre
7. hardware
8. peripheral

Task 7

1.

a. integrated

b. integration

c. integrating

2.

a. coordinate

b. coordinating

c. condination

3.

a. diagrammatic

b. diagram

c. diagrammed

4.

a. interchangeably

b. interchange

c. interchanged

5.

a. divide

b. divisible

c. division

UNIT 5:

Task 8

The details of Monitor B could be expanded into descriptive sentences this:

1. It has a 19- inch colour monitor. (Note: 19- inch to 21 inch displays are ropriate for those applications that require detail, like electrical or :hanical CAD, 3- D modeling and industrial design. Similarly, magazine lishers require large monitors because they need to see two facing pages ultaneously.)

2. This display systems has a resolution of 1, 024 x 768 pixels. (Note: This is enough for WYSIWYS: "what you see is what you get".)

3. It displays many colours simultaneously.

4. The scan rate is 75 hertz, which means that this monitor will produce a steady, flicker- free picture.

5. The words "tilt- and- swivel" mean that you can change the orientation of the monitor.

6. It includes a video card. (Note: A video card is required to get a high resolution in multimedia applications) .

UNIT 6:

Task 13:

1. Should
2. Must
3. might
4. should
5. must
6. must
7. will
8. should

UNIT 7:

Task 2

1. d
2. c
3. e
4. g
5. b
6. h
7. f
8. a

Task 4

1. virus detector
2. screen saver
3. printing aid
4. crashed disk rescuer and data recovery

Task 5

1. printing aid (print- spooler)

2. crashed disk rescuer and data recovery
3. screen saver
4. virus detector (anti- virus program)

UNIT 8:

Task 2

1. WYSIWYS
2. Justification
3. font menu
4. Type style (x 2)
5. format
6. Mail merging
7. indent (x 2)

Task 3

1. b
2. f
3. a
4. d
5. c
6. e

Task 4

1. First
2. Command
3. Now
4. Insertion
5. Next
6. Edit
7. Finally
8. mistake

Task 8

Possible answer

The picture is a visual representation of the "Cut and Paste" editing :chnique. By using these commands you can move text (or graphics) within a ocument, between documents or between programs.

First, select the portion of text that you want to move. Then, choose Cut rom the Edit menu, and the selected text disappears and is placed on the :lipboard- temporary storage inside the computer. Next, scroll to the new osition and click to insert the cursor. Finally, choose Paste from the Edit nenu, this inserts the content of the Clipboard into the active document at the nsertion point.

UNIT 9

Task 3

1. A database is used to **store, organize and retrieve a large collection of related information.**
2. Information is entered on a database via **fields.**
3. Each field holds **a separate piece of information.**
4. 'Updating' a file means **making changes, adding new records or deleting old ones.**
5. The advantages of a database program over a manual filing system are:

a. it is much faster to consult

b. it occupies much less space

c. **records can be easily sorted**

d. **information can be easily updated**

e. **computer databases can be shared by a lot of users on a network.**

6. Access to a common database can be protected by using **security devices such as passwords.**

Task 4

1. Create the data document with a database program or with the right spreadsheet software. This document contains rows with names, addresses and other information that will be merged with the standard letter.

2. Create the main document with a word processor. Type the standard letter and insert the appropriate field names into it.

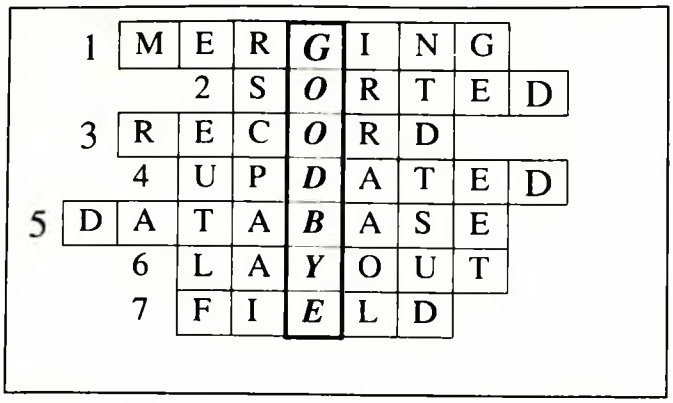
3. Activate the Mail Merge command (Print Merge in some programs) . This combines the main document and the data document.

4. Click 'Print' and the program generates a single letter for each record in the data document.

Task 5

The three types of documents involved in the example of mail merging are: the data document, the main document (the standard letter) ; and the personalized versions of the letter (multiple copies of the main document) generated after merging the two previous documents.

Task 12



UNIT 10

Task 1

1. a
2. f
3. e
4. c
5. b
6. g
7. d

Task 2

1. b
2. b
3. a
4. a
5. a

UNIT 11

Task 1

1. Because the Internet is an open system and we are exposed to hackers who break into computers for fun, to steal information or to propagate viruses. Security is vital when we want to send information such as credit card numbers.

2. They display a lock when the Web page is secure and they warn you if the connection is not secure. They can also disable or delete cookies.

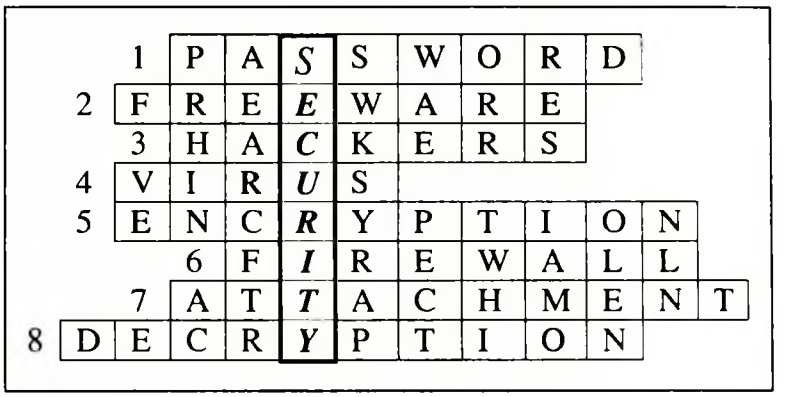
3. Banks use digital certificates: A popular standard is SET, or Security Electronic Transactions.

4. We can encode our e- mail using an encryption program like Pretty Good Privacy.

5. The most common methods to protect private networks are password access control, encryption and decryption system, and firewalls.

6. Viruses can enter a PC through files from disks, the Internet or bulletin board systems. We have to take care when opening e- mail attachments or downloading files from the Web.

Task 2



Task 3

1. education
2. privacy
3. pornography
4. propaganda
5. oriented
6. filtering
7. rate

Task 9

Hackers

1. Kenvin Mitnick's most famous exploit- hacking into North American Defense Command in Colorado Springs- inspired the movie War Games.

2. Nicholas Whitely was arrested in 1988 in connection with virus propagation.

3. Fifteen

4. Kevin Poulsen was known as 'Dark Dante' on the networks. He was used of the theft of US national secrets.

5. The German Chaos Computer Club.

UNIT 12

Task 1

1. No, computers don't understand human languages because the central cessor operates only on binary code numbers (machine code, 1s and 0s) .

2. In a low-level language, each instruction is equivalent to a single chine code instruction. However, in a high- level language, each statement enerally translated into many machine code instructions.

3. A assembler is a special program which converts a program written in a - level language into machine code.

4. The function of compilers is to convert a source program into an project gram. Compilers convert a program written in a high- level language.

5. A 'source program' is written in a language that can not be directly cessed by the computer but requires compilation into an 'object program'.

6. In the future, computers may be able to understand natural languages ıks to Artificial Intelligence.

Task 2

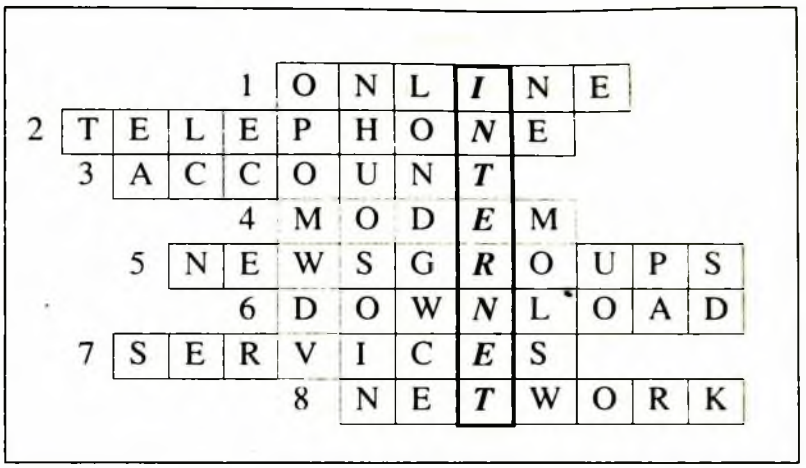
1. Understand the problem and plan the solution
2. Make a flowchart of the program.
3. Write the instructions in coded form and compile the program.
4. Test and correct the program.
5. Provide documentation of the program.

UNIT 13:

Task 1

1. b
2. a
3. e
4. d
5. c

Task 2



Task 4

1. T
2. T
3. F
4. F
5. T
6. F
7. T
8. F

UNIT 14

Task 1

1. b
2. c
3. g
4. f
5. a
6. e
7. d

Task 3

- This diagram represents a wide area network or WAN. Two network are linked via satellite. One network is in **Barcelona** and consists of **a central computer and various PCs.** The other LAN is in **Los Angeles** and contains a **central computer and several clients.**
- In Los Angeles, the computers are connected to the telephone lines by **a modem** However, in Barcelona **the network is linked to fiber- optic cables.**

• The satellite receives signals from **the disk aerial**. Then the signals are ransmitted to **workstations in Barcelona or Los Angeles.**

• The purpose of this integrated network may be **to establish nmunications services on a transcontinental scale.** It allows large npanies and institutions to **exchange information over long- distance.**

Task 4

In the engineering area, there are several workstations running under firent operating systems (UNIX, Macintosh, Digital) . They all share a ıter and plotter. This area is adequate for CAD/ CAM applications and ca be d to generate engineering drawing and detailed graphics. The network is ɛed to the whole system by a gateway. In the DTP area, we have a LocalTalk work with various Macs sharing a laser printer, a file server and a scanner. s network is used to create corporate publications (catalogues, leaflets, orts and other materials) with high publishing standards. It is connected to other areas by a gateway. The whole network is linked to the external world a modem.

UNIT 15:

Task 2

1. T
2. F
3. T
4. F
5. T
6. F
7. T

Task 3

1. pen
2. runs
3. stylus
4. screen
5. information
6. recognize
7. position
8. word
9. handwriting
10. characters

WORKBOOK

UNIT 1

I. The artist is being interviewed. Make question to match his answers. Use the correct form of the Past simple or Present perfect, whichever is correct.

Example:

Question: What did you do yesterday?
Answer: worked on the computer.

1 Q What....
  A Worked on the CD of my paintings.....
2 Q How many.....
  A About a third.
3 Q What.....
  A I destroyed them
4 Q How.....
  A I scanned them in.
5 Q How.....
  A I've organized them into themes.
6 Q have.....
  A Yes, I've added a sound tract.
7 Q How long .....
  A It's taken me about a week.
8 Q When .....
  A I started about ten years ago.
9 Q What.....
  A Before I had a computer, I had to use slides.

10 Q Have.....

A yes, I've sold a few.

II. Put the tenses in this dialogue in the correct form: Past simple or Present perfect

1 A What (do) today?

2 B I (work) on my project. I (search) the Web for sites on digital cameras.

3 A (find) any good ones?

4 B (find) several company sites — Sony, Canon, ...but I (want) one which (compare) all the models.

5 A Which search engine (use) ?

6 B Dogpile mostly. (ever use) it?

7 A Yes, I (try) it but I (have) more luck with Askjeeves. Why don't you try it?

8 B I (have) enough for one night. I (spend) hours on that project.

9 A I (not start) on mine yet.

10 B Yes? I bet you (do) it all.

III. Read the passage and fill each gap with a suitable preposition.

The computer is the machine that perform tasks, such (1) .....as..... mathematical calculations or electronic communication, (2) ..... the control of a set of instructions called a program. Programs usually reside (3) ..... the computer and are retrieved and processed (4) ..... the computer's electronics, and the program results are stored or routed to output devices, such as video display monitors and printers. Computers are used to perform a wide variety (5) ..... activities with reliability, accuracy, and speed.

IV. Read the passage and choose the best answer

Birth of the computer

Many people think of computers as very modern inventions, products of our new technological age. But actually the idea for a computer (1) worked out over two centuries ago by a man (2) Charles Babbage.

Babbage was born (3) 1791 and grew up to be a brilliant mathematician. He drew up plans for several calculating machines (4) he called "engines". But despite the fact that he (5) building some of these he never finished any of them. Over the years people have argued (6) his machines would ever work. Recently, however, the Science Museum in London has finished building (7) engine based on one of Babbage's designs, (8) has taken six years to complete and more (9) four thousand parts have been specially made. Whether it works or not, the machine will be on show at the special exhibition in the Science Museum (10) remind people of Babbage's work.

1.	A. has	B. was	C. had	D. is
2.	A. known	B. recognized	C. written	D. called
3.	A. on	B. in	C. by	D. for
4.	A. whose	B. who	C. these	D. which
5.	A. wanted	B. made	C. started	D. missed
6.	A. until	B. whether	C. while	D. through
7.	A. some	B. the	C. an	D. that
8.	A. One	B. He	C. They	D. It
9.	A. than	B. therefore	C. when	D. then
10.	A. to		C. for	D. so

UNIT 2

I. Complete each sentence using the correct preposition.

1 The CPU is a large chip..in memory.....the computer.

2 Data always flows.....the CPU.....the address bus.

3 The CPU can be divided.....three parts.

4 Data flows.....the CPU and memory.

5 Peripherals are devices.....the computer but linked.....it.

6 The signal moves.....the VDU screen.....on side.....the other.

7 The CPU puts the address.....the address bus.

8 The CPU can fetch data.....memory.....the data bus.

II. Put each verb in brackets into a suitable tense.

Have you ever wondered what exactly you ..... (do) in ten years' time? Well, according to computer expert Tom Vincent, computers ..... (soon be able) to make accurate predictions about the future. Professor Vincent, from Cambridge University, ... (hold) a press conference next week to describe the computer which he call s *Computafuture*. "This computer can tell us what life ..... (be) like, based on data describing past events," explains Professor Vincent. For example, Computafuture can predict how many people ..... (live) in a particular area, or whether there ..... (be) a lot of rain during a particular period. Professor Vincent also believes that by the year 2050, computers ..... (replace) teachers, and..... (also do) most of the jobs now being done by the police. "Computers are becoming more intelligent all the time", says Professor Vincent, "Soon they ..... (direct) traffic and ..... (teach) our children. And telling us about the future".

III. Put the verbs in brackets in correct tense form

Computers ..... (become) more and more prevalent our schools; even five- year- olds ..... (learn) how to use them. Many child development experts are worried that computers may deprive children of their childhood by pushing them into formal education too early in life. Others feel that computers..... (not replace) child play; they simply enhance it by freeing the imagination, for example in allowing children to write stories on the computer. Most people would probably agree, however, that it is too soon to know how computers ..... (affect) the education of children.

***Interview*:** Should computers..... (encourage) in schools?

Reply 1: We ..... (have) many others fads in education, like tape recorders and television, and these things were not the salvation of your schools. The computer is just another fad. It'll die out in a few years, you ..... (see) .

Reply 2: Educators are too conservative to use computers wisely in the schools. So far, computers ..... (use) mostly for drill work, and

doing drills is not the best way to learn. I'm against..... (use) computers in school unless some more imaginative uses ..... (find) for them.

Reply 3: Using the computer to write can be very freeing for children. Because they do not have to worry about holding a pencil and shaping letters, they can concentrate on what they ..... (write) , and their stories can become very imaginative. I think using computers for writing is very worthwhile. Let's keep them.

Reply 4: Children should learn the basic of computers simply because computers are affecting our everyday world in so many ways. We don't want to raise computer illiterates. We'd better ..... (let) children become acquainted with them in school.

Reply 5: If you start children with computers too early in life, the computers will control the children. Children need to be active, to be outdoors; they don't need to be silently ..... (hook) to a computer.

Reply 6: As long as children get a balance education, I see nothing wrong with ..... (encourage) children to learn to use computers in school; Working with the computer can help you to learn math and accounting. And if writing on the computer ..... (help) you become a better reader, what's wrong with that.

IV. Read the following conversation and choose the best answer.

David: Are there any good (1) ..... on television tonight?

A. showing B. screens C. programmes D. performances

Linda: Yes, there is a very interesting (2) .....about life in the Arctic.

A. news B. documentary C. service D. entertainment

David: That's a (3) ....., isn't it? I think I saw it about a fortnight ago.

A. second B. repeat C. cop y D. return

Linda: That's right. It's part of a (4) .....on living in strange places

A. set B. collections C. series D. group

David: Do you watch a lot of (5) ..... films?

A. travel B. journey C. tour D. sightseeing

Linda: Not really. I prefer television (6) .....

A. stages B. screens C. acts D. dramas

David: What about (7) ..... programmes?

A. playing B. gamming C. sports D. match

Linda: I like to see "Match of the Day" on Saturday. That's my (8.....

A. popular B. favourite C. preferable D. likeable

David: Is Cliff Lion still the (9) ..... ?

A. presenter B. talker C. actor D. reader

Linda: Yes, he is. He usually discusses the matches with two or three footballers in the (10) ..... . Anyway, what are you going to watch tonight?

A. stage B. theatre C. studio D. floor

David: I'm watching "Science Review". Chas Merton has asked me to write a (11)..... of the programme for the centre city Daily News.

A. judgement B. value C. review D. paper

UNIT 3

I. Choose the best answer

1, Oh, dear. The phone is dead. I can't hear John at all now. Why are we suddenly cut.....?

A. back B. off C. up D. out

2. What's your new phone.....?

A. number B. figure C. dial D. letter

3. Tell me when you're coming to London — Certainly. I will ..... you before I set off.

A. strike B. sound C. phone D. dial

4. I'd like to make a ..... to 054- 923579, please.

A. ring B. call C. phone D. dial

5. Has Susan got a phone? — I'm afraid I don't know. Why don't you find out from the phone.....?

A. register B. list C. number D. book

6. The phone's ringing. Could you ..... it?

A. reply B. tell C. pick D. answer

7. Hello. Something's wrong with my phone. — Call the .....

A. madam B. receiver C. operator D. controller

8. Could you please tell me the ..... for New York?

A. code B. figure C. dial D. phone

9. Could you speak to Mary Jane, please?- .....

A. Talking B. Speaking C. Calling D. Answering

10. What number have you just.....?

A. turned B. circled C. revolved D. dialed

11. Is Dave in?- No, he's out. Would you like to leave a .....?

A. message B. letter C. telephone D. call

12. The music is so loud. ..... you please turn down the radio?

A. May B. Could C. Should D. Do

13. Some people ..... that watching television is one of the best ways of relieving stress.

A. thought B. are thinking C. think D. will think

14. Carol ..... talking on the telephone now for over two hours.

A. had been B. was C. is D. has been

15. he was watching television ..... the burglar alarm went off.

A. when B. where C. why D. that

II. Decide whether the sentences express equivalence, non-equivalence, or the superlative, then underline the words expressing the comparison

1 equivalence Speeds for performing decision-making operations are comparable to those for arithmetic operations.

2----------Even the most sophisticated computer, no matter how good it is, must be told what to do.

3----------A computer can perform similar operations thousands of times, without becoming bored, tired or careless.

4 ----------For example, modern computers can solve certain classes of arithmetic problems millions of times faster than a skilled mathematician.

5 ----------One of the most important reasons why computers are used so widely today is that almost every big problem can be solved by solving a number of little problems.

6 ----------Finally, a computer, unlike a human being, has no intuition.

III. Use suggested words to make sentences with appropriate comparisons

1. Products / Digital Research / consider / good / than / Microsoft's.
2. Mainframe / consume / much power / microcomputer.
3. Learning/ use / computer / not / difficult / learning / program.
4. BASIC probably / least difficult programming language / learn.
5. Desktop publishing / the same / electronic publishing.

UNIT 4:

I. Fill each gap in the sentences with the correct form of the word in capital letters.

1.A computer can perform mathematical ..... very quickly.

OPERATE

2. The students are still waiting for their ..... into the Computer Science program.

ACCEPT

3. It may take a lot of time to find a ..... to a complex problem in programming.

SOLVE

4. Today's computers are..... faster than their predecessors.

REMARK

5. Some people working in computer installations aren't very ..... because they are shy.

COMMUNICATE

6. A computer can do many kinds of ..... quickly and accurately.

CALCULATE

7. Today's computers are less ..... than they used to be.

MECHANIC

8. A good programmer isn't ..... going to be a good systems analyst.

NECESSITY

9. The length of time a programmer takes to make a program will vary ..... on the complexity of the problem and his ability and experience.

DEPEND

10. The ..... improvements of computers are reducing man's workload.

TECHNOLOGY

11. A computer is limited in its ability by the ..... of man.

IMAGINE

12. Many terminals can be ..... to a basic system if the need arises.

ADD

13. There can be many ..... involved in setting up a computer in an old building.

COMPLICATE

14. There are many..... computer manufacturers today.

DIFFER

15. Computers are ..... machines

RELY

II. Fill each blank with one suitable preposition. You can use some of them more than once

Evaluating computer software

Future teachers will be expected to know not only something (1) ..... how to use computers in the classroom, but also how to evaluate software. Several characteristic contribute (2) ..... quality and usability. In many ways, the evaluation of computer software is (3) ..... the evaluation of any other instructional material, whether it is a textbook, film, or television program.

1. Contents: The program should be current and accurate. There should be no spelling or grammatical errors. Terminology and subject matter should be compatible (4) .....student achievement level, students' learning experiences, and course objectives.

2. Educational quality: The presentation of material should be well sequenced, it should built on prior learning, feedback should be provided promptly, and there should be time (5) .....review.

3. Directions: Clear, concise, well- organized directions about use should be given (6) .....the program itself or (7) ..... a supplement. The directions must match the skills and developmental levels of the students.

4. User interaction: Student should be able to control the pace of the program. The program should encourage students to answer or respond (8) ..... the questions or problems. The best programs are user-friendly, that is easy to you, helpful and stimulating.

5. Data flexibility: The computer's ability to handle data quickly and easily to makes it possible (9) ..... software to include branching. In branching the answer to one question determines what materials will come next. It is valuable for promoting individualized learning.

6. Graphics and sound: Graphics and sound should be designed to highlight data, elaborate (10) .....explanations, and emphasize causal relationships. It should be possible to turn (11) ..... the sound, if the users want to do so.

7. Tracking and monitoring: Parts (12) ..... the program (or another program) should record scores and indicate problems or types of answers the students handle well or poorly. Access to this data should have security provisions, such (13) ..... a secret password, to protect confidential information.

8. Evaluation: Does the program fit the curriculum? Is it compatible with available computer equipment (14) ..... the school? Is it mistake-free? Is it easy to use? How does it deal (15) ..... incorrect student responses? Does it promote student interaction? Is it too short or too long? What is the cost? How does it compare (16) ..... other software packages.

III. Read the text below and complete ut with the phrases in the box

Applications software	*software*	*operating system*
	system software	

Information provided by programs and data is known as (1) -------.

Programs are sets of instructios that make the computer execute operations and tasks. There are two main types of software:

The (2) ----------refers to all the programs which control the basic functions of a computer. They include operating systems, system utilities (e.g. an anti- virus program, a back- up utility) and language

translators (e.g. a compiler- the software that translates instructions into machine code) .

The (3) ----------refers to all those applications- such as word processors and spreadsheets- which are used for specific purposes. Applications are usually stored on disks loaded into the RAM memory when activated by the user.

The (4) ----------is the most important type of system software. It is usually supplied by the manufacturers and comprises a set of programs and filesthat control the hardware and software resources of a computer system. It controls all the elements that the user sees, and it communicates directly with the computer. In most configurations, the OS is automatically loaded into the RAM section when the computer is started up.

IV. Complete each sentences using the correct preposition

1 The CPU is a large chip----------the computer.

2 Data always flows----------the CPU----------the address bus.

3 The CPU can be divided----------three parts.

4 Data flows----------the CPU and memory.

5 Peripherals are devices----------the computer but linked ---------- it.

6 The signal moves----------the VDU screen----------one side----------the other.

7 The CPU puts the address----------the address bus.

8 The CPU can fetch data----------memory----------the data bus.

UNIT 5

I. Match each item in column A with its function in column B. Then describe its function in two ways

A Item	**B Function**
RAM	Control the curso
Processor	Inputs data through key like a typewriter
Mouse	Display the out put from a computer on a screen
Clock	Reads DVD- ROM

3.5" floppy drive	Reads and writes to removeable magnetic disks
monitor	Holds instructions which are needed to start up the computer
keyboard	
DVD - Rom drive	Holds data read or written to it by the processor
Cache	Provides extremely fast access for sections of a program and its data
ROM	
	controls the timing of signals in the computer
	Controls all the operations in a computer.

II. Fill each gap in the sentences with the correct form of the word in capital letter

1. There are some people who ..... arrive late to class whenever they are working on a program because they forget the time.

REPEAT

2. Renting a computer isn't ..... to owning one.

COMPARE

3. When the computer breaks down, it needs to be .....

REPAIR

4. A computer is always ..... in its results if well prepared.

ACCURACY

5. It is often difficult for computer science students to ..... their time up proportionally between studying and programming.

DIVISION

6. It is usually not ..... to smoke in a computer installation.

PERMIT

7. Computers can do repetitive operations..... without getting bored.

CONTINUE

8. Because computer equipment is often bulky, the are used for a computer installation must be ..... out carefully

MEASURE

9. There are many computer ..... around the world to which computer professionals belong.

ASSOCIATE

10. Using a pocket calculator to do simple calculations is an ..... way of working.

EFFICIENCY

11. Battery ..... calculators occupy less space than their predecessors.

POWER

12. Some people are ..... to certain computer companies because of the success rate.

PART

13..... purpose computers are larger than mini computers.

GENERALIZE

14. Computer ..... is a must for most large- scale companies today.

SPECIALIZE

15. Computer personnel often have to take refresher courses in the ..... field of computer science.

CHANGE

UNIT 6

I. Read the text to find the answers to these questions.

1 How are computer viruses like biological viruses?

2 What is the effect of a virus patching the operating system?

3 why are some viruses designed to be loaded into memory?

4 What examples of payload does the writer provide?

5 What kind of programs do viruses often attach to?

6 Match each virus routine to its function.

Routine	**Function**
1 misdirection	a does the damage
2 reproduction	b attaches a copy of itself to another program
3 trigger	c hides the presence of the code
4 payload	d decides when and how to activate the payload

7 How does a Trojan differ from a virus?

The anatomy of a virus

A biological virus is a very small, simple organism that infects living cells, known as the host, by attaching itself to them and using them to reproduce itself. This often causes harm to the host cells.

Similarly, a computer virus is a very small program routine that infects a computer systemand uses it resources to reproduce itself. It often does this by patching the operating system to enable it to detect program files, such as COM or EXE files. It then copies itself into those files. This sometimes causes harm to the host computer system.

When the user runs an infected program, it is loaded into memory carrying the virus. The virus uses a common programming technique to stay resident in memory. It can then use a reproduction routine to infect other programs. This process continues until the computer is switched off.

The virus may also contain a payload that remains dormant until the trigger event activates it, such as the user pressing a particular key. The payload can have a variety of forms. It might do something relatively harmless such as displaying a message on the monitor screen or it might do something more destructive such a deleting files on the hard disk.

When it infects a files, the virus replace the first instruction in the host program with a ommand that changes the normal execution sequence. This type of command is known as a JUM command and causes the virus instructions to be executed before the host program. The virus then returns control to the host program which then continues with its normal sequence of instructions and is executed in the normal way.

To be a virus, a program only needs to have a reproduction routine that enables it to infect other programs. Viruses can, however, have four main parts. A misdirection routine that enables it to hide itself; a reproduction routine that allows it to copy itself to other programs; a trigger that causes the payload to be activated at a particular time or when a particular event takes place; and a payload that may be a fairly harmless joke or may be very destructive. A program that has a payload but does not have a reproduction routine is known as a Trojan.

II. Some verbs beginning or ending with en have a causative meaning. Replace the words in italics in these sentences with the appropriate form of en verb from this list.

enable	encrypt	ensure
encode	enhance	brighten
encourage	enlarge	widen

1 A MIDI message makes sound into code as 8-bit bytes of digital information.

2 The teacher is using a new program to give courage to childrent to write stories.

3 The new version of sSimCity has been made better in many ways.

4 A gateway makes it possible for dissimilar networks to communicate.

5 You can convert data to secret code to make it secure.

6 Make sure the machine is disconnected before you remove the case.

7 Designers can offer good ideas for making your website brighter.

8 Electronic readers allow you to make the print size larger.

9 Programmers write software which makes the computer able to carry out particular tasks.

10 You can make the picture on your monitor wider.

III. Decide in your group what these kinds of computer crime are. Then match the crimes to the short descriptions which follow.

1 Salami Shaving

2 Denial of Service attack

3 Trojan Horse

4 Trapdoorrs

5 mail bombing

6 Software Piracy

7 Piggybacking

8 Spoofing

9 Defacing

10 Hijacking

a. Leaving, within a completed program, an illicit program that allows unauthorised- and unknown- entry.

b. Using another person's identification code or using that person's files before he or she has logged off.

c. Adding concealed instructions to a computer program so that it will still work but will also perform prohibited duties. In other words, it appears to do something useful but actually does something destructive in the background.

d. Tricking a user into revealing cofidential information such as an access code or a credit card number.

e. Inundating an email address with thousands of messages, thereby slowing or even crashing the server.

f. Manipulating programs or data so that small amounts of money are deducted from a large number of transactions or accounts and accumulated elsewhere. The victims are often unware of the crime because the amount taken from any individual is so small.

g. Unauthorised copying of a program for sale or distributing to other users.

h. Swamping a server with large numbers of requests.

i. Redirecting anyone trying to visit a certain site elsewhere.

j .Changing the information shown on another person's website

IV. Up- and -up verbs complete each gap in these sentences with the appropriate form of the correct verb from this list:

back up	*keep up*	*upupdate*
build up	*setup*	*upgrade*
catch	*upstart*	*upupload*
free up		

1 To avoid losing data, you should.....your files regularly.

2 You can.....your PC by adding a new motherboard.

3 Delete some files to.....space on your hard disk.

4 data is.....from regional PCs to the company's mainframe each night.

5 The operating system boots when you.....your computer

6 she is taking a course to.....her knowledge of computing.

7 The computer checks the memory when it.....

8 He.....a website to advertise his travel company.

9 You can with developments by reading PC magazines.

10 If you miss a class, you can study the handouts to.....

11 The image in a digital camera is.....from a red, green and blue image.

V. Read the passage and fill each gap with a suitable word.

Computer viruses spread when the instructions- or executable code- that run program (1) ..... exchanged from one computer to another. Once a virus is active, it may replicate by writing itself to (2) ..... disks, to the hard drive, into legitimate computer programs, or across computer networks. Such infection is much more frequent in personal computers (3) ..... in professional mainframe systems because the programs on personal computers are exchanged primarily by (4) ..... of floppy disks or over unregulated computer networks.

Viruses operate, replicate, and deliver their payloads only (5) ..... they are run. Therefore, if a computer is simply attached to (6) ..... infected computer network or downloading an infected program, it will not necessarily become infected. Typically a computer user is not likely to knowingly run potentially computer code. However, viruses often trick the computer's (7) ..... system or the computer user into running the viral program.

Some viruses (8) ..... the ability to attach themselves to otherwise legitimate program is created, opened, or modified. When that program is run, so is the virus. Viruses can also reside on portions of the hard disk or floppy disk that load and run the operating system when the computer is (9) ....., and such viruses thereby are run automatically. In computer networks, some viruses hide in the software (10) ..... allows the user to log on (gain access to) the system.

VI. Read the passage and fill each gap with a suitable preposition.

Cracking the computer codes (known ..... (1) hacking) of banks, large companies or even government departments is the latest game (2) super- intelligent teenagers. One young hacker said, "Hacking is just

intellectual. It's your brain (3) the computer . It's like climbing Mount Everest- it's something you have to do. You don't even need a very expensive computer - but you must understand everything (4) all kinds of computers.

(5) the moment most of these games are just fun for young people. But how long will it be before criminal gangs (6) the Mafia start to use computer experts to help them (7) their crimes? Future bank robbers will not need explosives to blow open bank safes- all they will need is someone who can break computer codes.

Already in Britain people say that computer crimes are costing companies (8) 500 million pounds and 2 and ½ billion a year.

UNIT 7

I. There are eight phrases that have been removed from the passage. Fill each gap (1-8) with a suitable phrase (A-H)

A. led to success with Windows applications, such as

B. call for Microsoft to change the way

C. introduced Windows CE

D. has been its application software business

E. resulted in tremendous success for

F. produces database software

G. launched The Microsoft Network (MSN)

H. invested $1 billion in Comcast Corporation

One of the most significant aspects of Microsoft's business (1) . In 1984 Microsoft was one of the few established software companies to develop application software for the Macintosh, a personal computer developed by Apple Computer. Microsoft's early support for the Macintosh (2) Microsoft's word processing and spreadsheet programs for the Macintosh. When Microsoft later released Windows, its graphical operating system for IBM- compatible personal computers, Microsoft's experience on graphical applications for the Macintosh (3) the Microsoft Excel spreadsheet and the Microsoft Word processing program. Today, these applications are designed to behave similarly on Windows and the Macintosh.

Other product areas include local area network systems that link computers, and hardware, such as the Microsoft Mouse pointing device. Microsoft also (4) , such as Microsoft Access, and multimedia applications that range from children's products to reference materials. The company published computer- related and technical books through its Microsoft Press division.

II. Make the question for the underlined words in the sentences

1. A man named Bell invented the telephone.
2. Telephones became common in the 20th century.
3. They have a telephone in the kitchen.
4. Cheap electricity made wide use of the telephone possible.
5. The telephone failed because ice broke the wires.
6. You can find out the correct time by dialing a certain number.
7. She asked for the nearest telephone.
8. A long- distance call is a call from one city to another.
9. Not long ago it became possible to make telephone calls across the Atlantic Ocean.
10. Automatic dialing has reduced the number of operator.

III. Read the passage and fill each gap with a suitable word.

Computers for the masses

From the living room and family auto the supermarket and office, it's impossible to escape the electronic (1) ..... that is transforming the way people live and work. Already, technological gains are bringing to people products, services, and (2) .....they never dreamed of just a few years ago: stereophonic television, TV sets that can be carried in a coat pocket portable radios with stereo sound, home telephones that signal when another caller is on the line and (3) ..... calls from home to business, bill paying without the (4) ..... .

Outside the home, the dazzle of (5) ..... is no less brilliant: a perfectly typed letter at the touch of a button, building and auto designs from a computer, cash from the bank at any hour, instant access to thousands of reference (6) ..... .

All this comes at a price. Robbery by computer now is the primary white-collar crime, (7) ..... to some criminologists, and costs society anywhere from $100 million to $3 billion a year. Another problem (8) ..... by the user of more computers is the risk of invasion of personal privacy. There is also concern (9) ..... the part of many workers that their (10) ..... will be taken by computerized robots or some other from of automation.

UNIT 8

I. Combine these two sentences in to one by using expression of purpose.

1. I am buying a computer. I want to do my work quickly.

2. He fixed a metal ladder to the wall below his window. he wanted to be able to escape if there was a fire.

3. Write your name in the book. He may forget who lent him.

4. The manufacturers have made the taps of their new gas cooker very stiff. They don't want young children to be able to turn them on.

5. Safe the data. I don't't want you lose it in case electricity goes out.

6. He had a telephone installed in his car. He wanted his secretary to be able to contact him whenever necessary.

7. The debate on education has been postponed. The government want to discuss the latest crisis.

8. Aeroplanes carry parachutes. The crew can escape in case of fire.

9. The notices are written in several languages. The government wants everyone to understand them.

10. We use automatic hyphenation because we want the text will fit better in the page.

II. Finish the second sentence so that it means the same as the first one, using the word in capital letters which must not be altered in any way

1. I haven't decided yet whether to buy a new television or not.

MIND

I haven't..... whether to buy a new television or not.

2. I told him that he should apply for a job as a programmer.

ENCOURAGED

I..... for a job as a programmer.

3. The TV program was so boring that I turned the TV off at once.

SUCH

It was ..... I turned the TV off at once.

4. They decided to build new computer center immediately.

SHOULD

They decided .....immediately.

5. "I don't mind which program we watch." I said.

MATTER

I said that.....me which program we watched.

6. If you don't take care of your computer, it won't last for long

LOOK

Unless..... last for long.

7. You are tired because you worked with your computer so long last night.

IF

You..... with your computer so long last night.

8. I was the only person who wanted to watch the program.

ELSE

There was ..... me who wanted to watch the program.

9. He watched films on television all day.

ENTIRE

He spent..... films on television.

10. This is the most exciting computer game I've ever played.

SUCH

I've never played..... before.

UNIT 9

I. Finish the second sentence so that it means the same as the first one, using the word in capital letters which must not be altered in any way

1. "You've broken my radio, Frank" said Jane.

ACCUSED

Jane..... her radio.

2. My television set really needs to be repaired soon.

MUST

I really..... repaired soon.

3. Do you know who this radio belong to?

WHOSE

Do you know..... is?

4. Harry couldn't get his parents' permission to buy a computer.

LET

Harry's parents..... a computer.

5. Sheila had to finish the accounts and type several letters as well.

ADDITION

Sheila had to finish ..... several letters.

6. When he was a child, Mark used to play computer games.

HIS

Mark used to..... childhood.

7. "Why don't you wait by the phone box, Brenda?" said Leslie.

SHOULD

Leslie suggested..... by the phone box.

8. I' d rather you didn't phone me at work.

PREFER

I'd..... me at work.

9. When Mary wanted a computer, she had to save up for three month.

TOOK

It..... to buy a computer.

10. The TV program I watched last week was better than this one.

GOOD

This TV program ..... the one I watched last week.

II. Fill the gap in the passage with one of the words or phrases from the box

next	*after that*	*thirdly*	*finally*
firstly	*another*	*then*	

Computers can do wonders, but they can waste a lot of money unless careful consideration goes into buying them. Any businessperson thinking of buying a computer system should (1) ..... admit he knows very little about computers. (2) ..... , he must realize that the computer salesman does not know how his business works. (3) ..... , that he should get ouside advice is a must, not necessarily from consultants but from other executives who have had recent experience in buying a computer system (4) ....., he should try to see systems similar to ones under consideration in operation. Because his operations will have differences that must be accommodated, he should (5) .....find out what would be involved in upgrading a system. (6) ..... important thing to know before buying a computer is the financial situation of the supplier because computer companies come and go and not all are financially stable (7) ....., the prospective buyer should demand that every detail be covered in writing, including hardware and software if they are supplied by different companies. There is nothing wrong with computers, it is how and why they are used that can cause problems.

II. Fill the gap in the passage with one of the words or phrases from the box

In calculating an employee's salary, a computer must go through a number of operations in a logical manner. (1) ..... it must read the number of hours worked and the rate of pay for each hour worked. (2) ..... it must calculate the gross salary; (3) .....multiply the hours worked by the rate of pay for each hour worked. (4) ..... doing these two operations it must find out whether the employee has worked overtime or not.

(5) ..... he has not worked overtime the computer prints out the gross salary, (6) ..... if the

employee has worked overtime, two more operations has necessary (7) .....printing out the gross salary, (8) ..... the overtime pay must be calculated; (9) .....the number of overtime hour must be multiplied by the overtime pay is added to the gross salary. (10) .....the computer printed out the employee's salary and stops.

UNIT 10

I. Fill each gap in the passage with the correct form of a suitable verb from the box.

carry	*weld*	*allow*	*perform*	*store*
draw	*be*	*call*	*connect*	*present*

The physical computer and its components (1) ..... known as hardware. Computer hardware includes the memory that (2) ..... data and instructions; the central processing unit (CPU) that (3) ..... out instructions; the bus that (4) ..... the various computer components; the input devices, such as a keyboard or mouse, that (5) ..... the user to communicate with the computer; and the output devices, such as printers and video display monitor, that enable the computer to (6) ..... information to the user. The programs that run the computer are (7) ..... software. Software generally is designed to (8) ..... a particular type of task- for example, to control the arm of a robot to (9) ..... a car's body, to (10) ..... a graph, or to direct the general operation of the computer.

UNIT 11

I. Write the second sentence so that it means exactly the same as the first one, using the word in capital letters which must not be altered in any case.

1. Can you tell me where the television is

DIRECT

2. She was so busy that she couldn't answer the telephone.

TOO.

3. Many people say that computer games are very interesting.

SAID

4. "Don't worry about your computer . I'll see to it".

TOLD

5. Why didn't you turn off the computer before leaving the computer room?

SHOULD

6. As soon as Sandra bought a new radio. Daisy bought a better one.

SOONER

7. This television program was so exciting that everyone wanted to watch

SUCH

8. Though he tried hard, he didn't make the computer work.

HOWEVER

9. You will have to pay at least US $450 to get the computer you want.

IMPOSSIBLE

10. Can you tell me what a computer screen looks like?

DESCRIBE

II. Rewrite these sentences using the passive, beginning with the words indicated.

1 You have sent us the wrong items again.
The wrong.....

2 You should have delivered this consignment last week.
This consignment.....

3 Someone broke two of the VDUs during trasportation.
Two.....

4 Someone sent the order by sea mail instead of air mail.
The order.....

5 Please let me know when you think you can sort this matter out.
Please let me know when this matter.....

6 You should have sent the documents by registered post.
The documents.....

7 A faulty connection could have caused the problems with the hard disk.
The problems with the hard disk.....

8 You omitted the manuals from the order.
The manuals.....

9 You delivered the printers over three weeks later.
The printers.....

10 We will not pay the invoice until this problem is rectified.
The invoice.....

UNIT 12

I. Read the following conversation and choose the best answer

David: Are there any good (1) ..... on television tonight?

A. showing B. screens C. programmes D. performances

Linda: Yes, there is a very interesting (2) .....about life in the Arctic.

A. news B. documentary C. service D. entertainment

David: That's a (3) ....., isn't it? I think I saw it about a fortnight ago.

A. second B. repeat C. cop y D. return

Linda: That's right. It's part of a (4) .....on living in strange places

A. set B. collections C. series D. group

David: Do you watch a lot of (5) ..... films?

A. travel B. journey C. tour D. sightseeing

Linda: Not really. I prefer television (6) .....

A. stages B. screens C. acts D. dramas

David: What about (7) ..... programmes?

A. playing B. gamming C. sports D. match

Linda: I like to see "Match of the Day" on Saturday. That's my (8)

A. popular B. favourite C. preferable D. likeable

David: Is Cliff Lion still the (9) ..... ?

A. presenter B. talker C. actor D. reader

Linda: Yes, he is. He usually discusses the matches with two or three footballers in the (10) ..... . Anyway, what are you going to watch tonight?

A. stage B. theatre C. studio D. floor

David: I'm watching "Science Review". Chaos Merton has asked me to write a (11) ..... of the programme for the Centre City Daily News.

A. judgement B. value C. review D. paper

II. Read the passage and fill each gap with a suitable word.

A computer program is a set of instructions (1) ..... directs a computer to perform some processing function or combination of functions. For the instructions to (2) ..... carried out, a computer must execute a program, that is, the computer reads the program, and (3) ..... follows the steps encoded in the program in a precise order (4) ..... completion. A program can be executed may different times, with each execution yielding a potentially different result depending (5) .....the options and data that the user gives the computer.

Programs fall into major classes: application programs (6) ..... operating systems. An application program is one that (7) ..... out some function directly for a user, (8) ..... as word processing or game- playing. An operating system is a program that manages the computer and the various resources and devices connected (9) ..... it, such as RAM, hard drives, monitors, keyboards, printers, and modems, (10) ..... that they may be used by other programs. Examples of operating systems are DOS, Windows 98, OS/2, and UNIX.

UNIT 13

I. Read the passage and fill each gap with a suitable word.

Computers are electronic machines that process information. They are (1) ..... of communicating with the user, of doing find kinds of arithmetic operations, and of making three kinds of decisions. (2) ..... they are incapable of thinking. They accept data and instructions as input, and after processing the information, they (3) .....the results.

When talking about the computers, (4) ..... hardware and software need to be considered. The former refers to the actual machinery, whereas the (5) ..... refers to the programs that control and coordinate the activities of the hardware.

The first computer was built in 1930 but (6) ..... then computer technology has evolved a great deal. There are three different (7) ..... of computers in use today: the mainframe, the minicomputer, and the microcomputer. All three kinds have one thing in (8) .....- they operate quickly and accurately in solving problems.

II. Finish the second sentence so that it means exactly the same as the first one.

1. This is the worst television program I've ever seen.

Never.....

2. It is wonderful program and I recommend it to anyone.

It is such.....

3. I read some books on computers while I was on holiday in the summer.

During.....

4. I was going to buy a computer but because of what she said, I didn't

She persuaded .....

5. This is a three- month course on information technology.

This course.....

6. Tom is the best programmer in his company.

No one in Tom's company is.....

7. He learned to programme when he was twenty years old.

He is.....

8. John hasn't played computer games for over six years.

It is.....

9. She asked John how he liked her new computer.

"How....."

10. No one can deny that he is a very good computer programmer.

It.....

UNIT 14

I. Read the passage and choose the best answer.

Can you imagine what life would be (1) ..... if there were no telephone? You could not call (2) .....your friends on the phone and talk to them. If a fire breaks (3) .....in house you could not call the fire department. If somebody were sick, you could not call a doctor.

(4) .....our daily life we need to communicate with (5) ..... We do this mostly by speaking to other people and listening to (6) .....they have to say to us, and when we are close (7) ..... them we can do this very easily. However, our voices will not travel very far even when we shout.

The man who (8) ..... this possible was Alexander Graham Bell, a Scotsman, born (9) ..... Edinburgh in 1847. Bell, a teacher of visible speech who later moved to Canada, (10) ..... all his spare time experimenting. (11) ..... enthusiastic was he in his research (12) .....a means for sending speech (13) .....electricity that he spent (14) ..... time on his day- to- day work and one time (15) ..... almost penniless.

1.	A. as	B. like	C. of	D. for
2.	A. on	B. for	C. in	D. up
3.	A. out	B. in	C. up	D. off
4.	A. With	B. In	C. On	D. At
5.	A. you	B. one another	C. them	D. other
6.	A. that	B. this	C. what	D. which
7.	A. with	B. to	C. from	D. for
8.	A. had	B. did	C. made	D. brought
9.	A. at	B. in	C. on	D. from
10.	A. took	B. wasted	C. cost	D. spent
11.	A. So	B. Very	C. Too	D. Such
12.	A. at	B. for	C. to	D. by
13.	A. in	B. with	C. by	D. on
14.	A. some	B. much	C. little	D. enough
15.	A. being	B. is	C. was	D. be

UNIT 15

I. Read the passage and fill each gap with the correct form of a verb from the box.

teach	*relate*	*lead*	*involve*	*predict*
hope	*generate*	*foster*	*use*	*deny*
share	*number*	*provide*	*be*	*derive*

Since the late 1950s, computer- literate educator have (1) ..... enthusiastically promoting the user of computer, technology in education. Until recently, that advocacy has (2) ..... solutions to either non- existent or non- compelling problems. However, the advent of the microcomputer and the national focus on growing educational issues could (3) ..... the linking of technology- related solutions to compelling problems. Among these challenges are growing illiteracy; the need for education reform and restructure; and the challenge of (4) ..... in the information age.

Having made the connection between the possible solution and a recognizable problem has, however, in turn (5) .....still another difficulty- implementing a computer- based solution. There are on the average approximately 30 students (6) ..... each computer in the country's elementary and secondary schools. If those computers were pencils, one would hardly consider the "bi- functional" pencil a viable student writing instrument. The multi- functional computer with a student- to- computer ratio of 30:1 could certainly be (7) .....to be equally ineffective in producing a national impact.

With the total number of computers in the elementary and secondary schools being about two million and the aggregate teacher population (8) .....about two and one- half million, perhaps it would have been more rational first to address teacher needs as these (9) .....to teaching in the information age.

Few would dispute that computers through not works (10) ..... access to information, to computing, and most certainly to

people. But today, only one in five faculty actually (11) ..... computers in the teaching process. The remainder, either because of personal choice or the lack of access to computers, (12) ..... their students the benefits (13) ..... from information searchers, interactive computing, and the elimination of teacher isolation through computer conferencing.

With pencils in the hands of virtually all students and teachers, the author of this text has chosen not to dedicate a segment to "pencil technology". I (14) ..... that practical thinking and logical implementation of computer technology will (15) ..... on similar terms to the demise of "pencil technology" as well.

II. Read the following passage and choose the best answer.

Everything changes. Once a lot of people (1) ..... to the cinema to see silent films. Then (2) ..... talking pictures started, nobody wanted to see silent films any more. But people still went to the cinema and every more. But people still went to the cinema and everybody knew the names of all great film (3) ..... .

Now we have television. People sit at home night after night watching their (4) ..... programs. Television stations broadcast programmes which are so (5) ..... that they can satisfy every taste. Young boys and girls can tune in to the children programme while sports fast can watch live football or basketball matches.

1.	A. went	B. go	C. had gone	D. came
2.	A. while	B. when	C. before	D. during
3.	A. stories	B. fans	C. cameramen	D. stars
4.	A. like	B. fond	C. favorite	D. interesting
5.	A. different	B. varied	C. good	D. much

PAIRWORK: STUDENT A

UNIT 2

- Workgroup server
- Dual Pentium IV 1.4GHz processor.
- 133MHz system bus
- 256MB ECC SDRAM (upgradeable to 2GB)
- Hot plug 60 GB 7200rpm LVD SCSI hard drive upgradeable to 180GB of internal storage
- Dell 19'' (17.9" VIS) SVGA colour monitor
- 24/52X EIDE CD-ROM drive and 3.5" 1.44MB floppy disk drive.

Options

- APC 1400 SmartUPS
- High performance RAID adapter with 128MB cache
- Hot- plug redundant power supplies
- 3 Year Next- business- day on- site service

UNIT 6

Monitor power light flashing but display screen is completely blank.

System	**Solution**	
Make and model	**Instructions**	**Result**
Dell, GS205X **Service Number** X3547 **Processor**	Check to see if the computer systemunit power light comes on when the computer is switched on	Computer power seems to be O.K.
Pentium IV **Memory** 256MB **O.S.**	Check that the monitor data cable is connected correctly to the VGA port at the rear of the computer.	Data cable is plugged in O.K.

Windows XP **Configuration** standalone	Chek that the graphics expansion card is installed properly by: • Switching off the computer. • Disconnecting the powercable. • Opening the computer case by removing the four securing screws. • Inspecting the graphics card to see if it is seated properly in the expansion slot.	Graphics card is loose.
	Correct the fault and check the system by: • Pushing the graphics card fully into the expansion slot. • Replacing the casing. • Reconnecting the power supply. • Switching on the computer and checking that the monitor is functioning correctly.	Monitor functioning O.K.

UNIT 7

Mac OS The graphically oriented operating system used on Apple Macintosh microcomputers.

MS - DOS the most widely used operating system ever on PC- compatible microcomputers; MS-DOS has been technologically surpassed in recent years and is no longer being revised.

MVS, VM, OS/390 operating systems used on IBM mainframes.

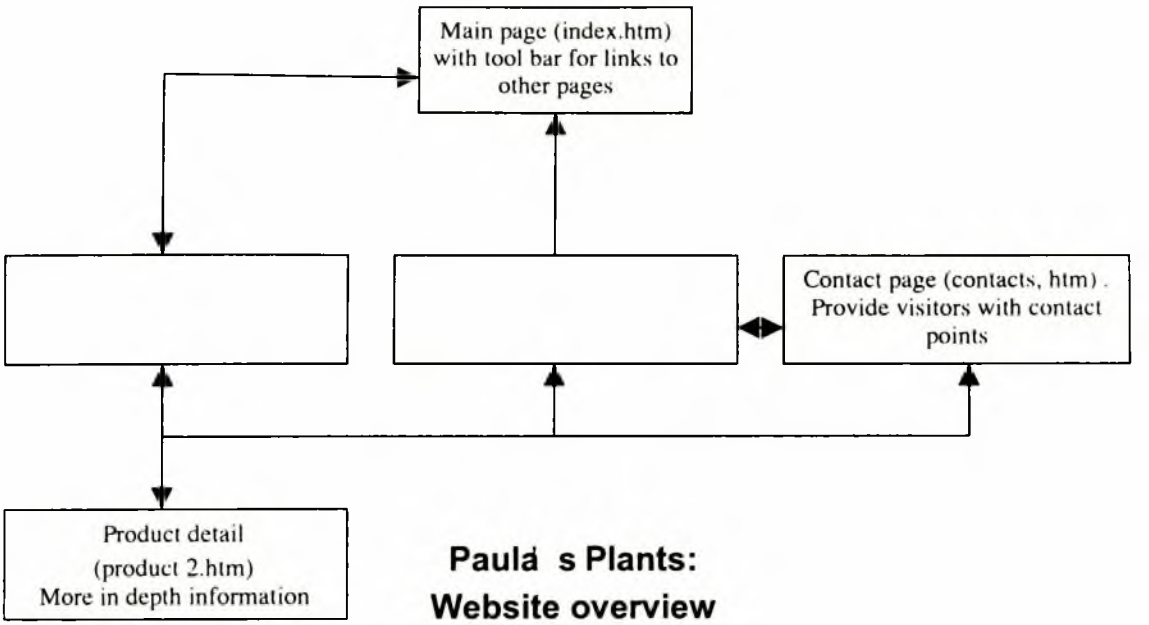
NetWare A widely used operating system on local area networks (LANs)

OS/2 The operating system designed for high- end PC- compatible microcomputers; was available in both desktop version and a version for network administration.

Penpoint An operating system designed for pen- based computers.

Windows NT Microsoft Windows operating system built from ideas developed in VMS and used for servers and workstations. More secure and stable than Windows 9X systems.

UNIT 10



PAIRWORK: STUDENT B

UNIT 2

Portable

* Mobile Pentium III Processor 850 MHz

*100 MHz system bus

*20 GB EIDE Hard disk

- 128 MB SDRAM
- Modular 16/40X DVD Drive and 3.5" Floppy Drive
- High Performance 256- bit 32 MB Graphics
- 15" SXGA (1400x 1050) High Resolution TFT Display
- Microsoft Windows 2000

Options

- Upgrade to 256MB RAM
- 56Kbps PCMCIA Modem
- 3 Year International Next- business- day on site service
- Spare lithium ion battery
- 10/100 Ethernet Port Replicator

UNIT 6

The monitor display screen is flickering.

SYSTEM	**SOLUTION**	
	Instructions	**Result**
Make and model Compaq, CV602 Service Number 8JD3	*Change the monitor refresh rate setting by:* • Right clicking with the mouse on the desktop selecting 'Properties- Setting' • Clicking on the Advanced button	Monitor no longer flickering.

Processor Pentium III Memory 128MB O.S. Windows 2000 Configuration Windows 2000 network	• Choosing the 'Monitor' tab • Making sure that the 'Hide modes that this monitor cannot display' checkbox is ticked. • Selecting a higher refresh rate (i.e.75Hz or more) . • Rebooting the computer. • Checking that the monitor is functioning properly.	

UNIT 7

PC-DOS An operating system similar to MS-DOS that has been widely used on IBM microcomputers.

Unix An operating system used on all sizes of computers, but mostly large ones; available in many versions, such as Linux, HP- UX, Xenix, Venix, Ultrix, A/UX, AIX, Solaris, and PowerOpen.

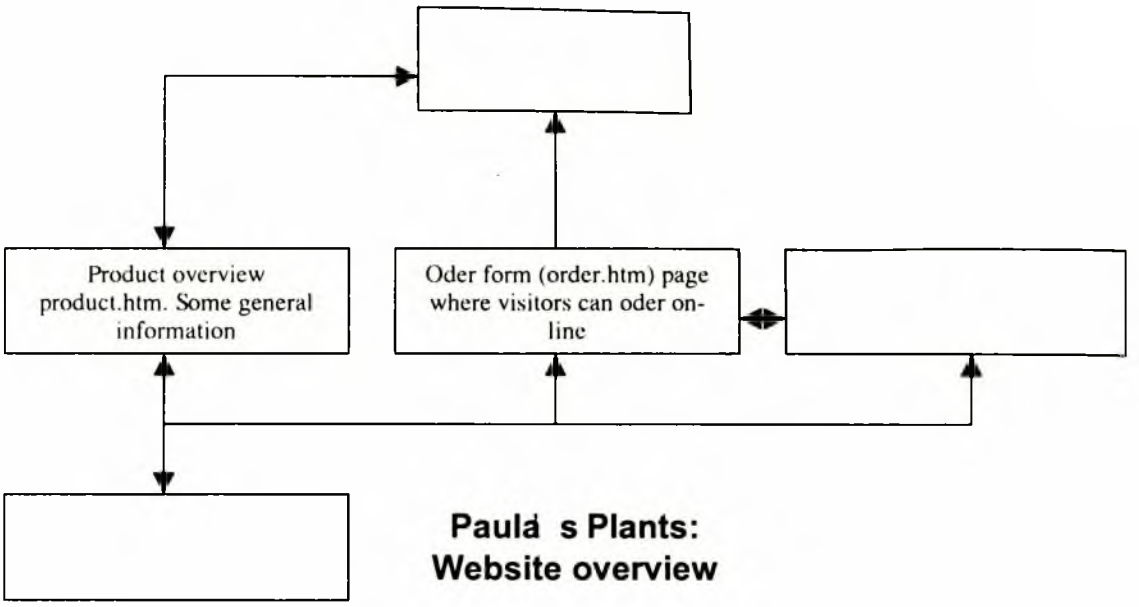
VAX/VMS An operating system used by DEC VAX minicomputers.

Windows 3.x* Refers to the windows 3.0 and Windows 3.1 operating environments, and to variants such as Windows for workgroups 3.11; each of these is a graphically- oriented shell program for Microsoft's MS-DOS operating system.

Windows 9X The operating system that replaced MS-DOS and windows 3.1, combining the functionality of both programs and much more into a single package; two versions were produced, Window 95 and Window 98, although various editions were made available.

Windows 2000 An operating system targeted primarily to corporate client- server applications; available in both a desktop version and a version for network administration.

UNIT 10:



Paulá s Plants: Website overview

TAPESCRIPT

UNIT 1 WHAT IS A COMPUTER?

I write music mainly for videos and plays. I work on a keyboard connected to a computer. I use the computer in two ways really: first of all, to record what I play on the keyboard, in other words to store what I play on the keyboard. Secondly, the computer controls the sounds I can make with the different synthesizers. The computer is the link between the keyboard which I play and the synthesizers which produce the sounds.

I use the computer to do the usual office things like write memos, letters, faxes and so on, but the thing which I find really useful is electronic mail. We are an international company and we have offices all over the world. We're linked up to all of them by e- mail. With e- mail I can communicate with the offices around the world very efficiently. It's really changed my life.

Well, I use computers for almost every aspect of my job. I use them to design electrical installations and lighting systems: for example the program will tell you how much lighting you need for a particular room, or how much cable you need, and it will show where the cable should go. I also use the computer to make drawing and to keep records. We have to test our installations every five years and the information is stored on computer.

I use computers to find information for people. Readers come in with a lot of queries and I use either our own database or the national database that we're connected to to find what they want. They might want to know the name and address of a particular society, or last year's accounts of a company and we can find that out for them. Or they might want to find a particular newspaper article but they don't know the exact date it was published so we can find it for them by checking on our online database for anything they can remember: a name or the general topic. And we use computers to catalogue the books in the library and to record the books that readers borrow.

UNIT 2 WHAT IS INSIDE A COMPUTER?

A computer system consists of two parts: the software and the hardware. the software is the information in the form of data and program instructions. The hardware components are the electronic and mechanical parts of the system. The basic structure of a computer system is made up of three main hardware sections: (I) the central processing unit or CPU, (ii) the main memory, and (iii) the peripherals.

The CPU is a microprocessor chip which executes program instructions and coordinates the activities of all the other components. In order to improve the computer's performance, the user can add expansion cards for video, sound and networking.

The main memory holds the instructions and data which are currently being processed by the CPU.

The internal memory of microcomputer is usually composed of two sections: RAM (random access memory) and ROM (read only memory) .

The peripherals are the physical units attached to the computer. They include input/ output devices as well as storage devices. Input devices enable us to present information to the computer; for example, the keyboard and the mouse. Output devices allows us to extract the results from the computer; for example, we can see the output on the monitor or in printed form. Secondary storage devices such as floppy, information permanently.

UNIT 3 KINDS OF COMPUTER

Digital computers can be divided into three main types, depending on their size and power: mainframes, minicomputers and microcomputers.

'Mainframes' are the largest and most powerful computers. The basic configuration of a mainframe consists of a central systems which processed immense amounts of data very quickly. This central system provides data information and computing facilities for hundreds of terminals connected together in a network. Mainframes are used by large companies, factories and universities.

'Minicomputer' are smaller and less powerful than mainframes. They can handle multitasking, that is, they can perform more than one task at the same

time. Minicomputers are mainly used as file servers for terminals. Typical applications include academic computing, software engineering and other sophisticated applications in which many users share resources.

'Microcomputers' are small than mainframes and minis, and carry out their processing on a single microchip. They are used as personal computers in the home or as workstations for group work. Examples of micro are the IBM PC or the Apple Macintosh. Broadly speaking, there are two classes of personal computers: (a) desktop PCs, which are designed to be placed on your desk and (b) portable PCs, which can be as tiny as a notebook. This is why they are also called 'notebook' and 'laptop'. These are the smallest models can run as fast as similar desktop computers and can have similar configurations. They are ideal for business executives who travel a lot.

UNIT 4 HARDWARE AND SOFTWARE

Assistant: ***Do you need any help?***

Paul: Um yes, we' re looking for a personal computer. Have you got any fairly basic ones.

Assistant: Yes, sure. If you'd like to come over here....

Paul: What different models are there?

Assistant: At the moment we've got these two models: the IMac, which has a microprocessor operating at 266 megahertz, and the Power Macintosh G3 which has a processor running at 400 megahertz.

Sue: So the Power Macintosh G3 is the faster one. And which one has the most memory? I mean- which has the most RAM?

Assistant: Well, the IMAC has 64 megabytes of RAM, which can be expanded up to 256, and the Power Macintosh G3 has 128 megabytes which can be expanded up to 1 gigabyte. It all depends on how much memory you think you're going to need.

UNIT 6 ISSUES IN COMPUTING

Tony: As you may know, researchers have begun to worry about the health risks of spending a lot of time in front of a computer. Anyone spending more

than four hour a day working on a PC may start to suffer from aching hands neck or shoulders, occasional headaches any eye strain. These can all make you feel irritable and stressed. Yes?

Student 1: Is there anything we can do to avoid these risks?

Tony: Yes, there's quite a lot you can do. For example, if you take the trouble to position your computer properly you can avoid backache. Get a good chair- one that supports your lower back and is adjustable so you can have both your feet on the floor.

Position the keyboard at the same height as your elbows, with your arms parallel to the work surface, and position the monitor so it is at, or just below eye level. You should look down at it slightly, not up. Don't put your monitor in front of a window, and make sure that there isn't a lamp shining directly into your eyes or reflecting off the screen. The monitor should also be fitted with a tilt- and- swivel stand. Does anyone know what that is?

Student 2: Yes, I think it's a kind or stand that lets you move the monitor up or around so you can use it at the right angle and height.

Tony: Yes, that's right. Have any of you had any health problems from using a computer?

Student 3: Well, often my eyes feel really sore and tired after I've been using the computer for a few hours. How do I stop that happening?

Tony: Well, as a general rule, don't use a monitor that's fuzzy or that distorts the image. Give your eyes a rest- look away from the monitor from time to time, out of the window or across the room.

Student 4: I've heard that monitors can be dangerous because they emit electromagnetic radiation. Is that true?

Tony: Well, all monitors, excepts LCD displays , emit extremely low frequency radiation. We don't really know how serious prolonged exposure to this radiation can be but recent results are not very hopeful. To minimize your risk, stay at arm's length away from the front of the monitor when you are working . If you work in a room with a lot of computers, make sure you sit at least 1m 20 cm away from the sides or backs of any monitors as the radiation fields can be strong there.

Student 5: What do you think of radiation guards? Are they really useful?

Tony: Yes. I think they are. As you know, they are protective filters that fit over the front of the monitor. They can't absorb all the ELF radiation but they do reduce it substantially. Anyway, the effects of radiation from screens are still being studied, so don't get too alarmed.

UNIT 9 DATABASES AND SPREADSHEETS

If you want to personalize a standard letter you can use 'mail merging' which is a technique that combines a database file with a standard letter typed on a word processor.

To merge the file with the letter you have to do four things.

First you create the data document with a database program or with a spreadsheet which database facilities. This document contains the fields and the information that will vary in each version of the letter. Save this in a format that a word processor can understand.

After this, create the standard letter and include in it where you want the information from the database to go. You do this by putting in the field names from the data documents.

Then activate the Mail Merge or Print Merge command in the File menu of the word processor. This combines the two documents.

Finally, just click the appropriate Print button and you will get personalized versions of the standard letter.

UNIT 10 FACES OF THE INTERNET

Journalist: Everybody says the Internet is really exciting. But what exactly is the Internet?

Mr. Morgan: Well, it's a global network of computer networks, which allows users to share all sorts of information and computer resources. The system comprises networks interconnected all over the world, from universities and large corporations to commercial online systems and non- profit organizations.

Journalist: And how you do connect yourself up to the Internet? What do you need?

Mr. Morgan: Well, you just need a PC, a modem and a telephone line. Not a lot really.

Journalist: And is it easy to install a modem?

Mr. Morgan: Oh yes, you just connect one cable of the modem to the communications port of the computer and the other to the telephone line.

Mr. Morgan: Yes, that's right. You need telecommunications software. This enables you to transmit and receive data. To get your Internet identity you have to set up an account with an Internet service provider - a commercial company that offers connection for an annual fee.

Journalist: Do you have to pay a lot of money?

Mr. Morgan: Not really. With a standard Internet account you pay just a few pounds. Of course you also have to pay your phone bill for the time connected.

Journalist: Right. And what services are offered by the Internet?

Mr. Morgan: It offers services such as e- mail, file transfer, newsgroups, real- time chats and information retrieval on the World Wide Web.

Journalist: The Web is the most important part of the Internet, Isn't it? What is the Web?

Mr. Morgan: The Web is a huge collection of 'page' stored on computers all over the world. Web pages contain all sorts of information in the form of text, pictures, sounds and video. They also have links to other resources on the net.

Journalist: OK, right. Thanks very much, Mr. Morgan. You've been very helpful.

UNIT 11 INTERNET ISSUES

Journalist: The Internet is a great resource for the presence of 'indecent' material. Can the Internet be dangerous for children?

Mrs. Wilson: Well, I think the Internet brings a lot of benefits for educations and entertainment, but it's not always a friendly place for children. We all have heard of things like commercial manipulation of children, invasions of privacy, child pornography, violence and neo- Nazi propaganda, and other risks.

Journalist: And what sort of precaution should parents take?

Mrs. Wilson: Um, it's impossible for parents to be with their children at every moment. But there are plenty of Web sites oriented for children and some Internet programs can help parents to control information. But this isn't a substitute for education. It's the parent's role to make their children aware of both the benefits and dangers of the Internet.

Journalist: And what else can parents do? I mean, are there any technological solutions?

Mrs. Wilson: Yes, software companies like Cyber Control and SurfWatch that let parents block objectionable Web sites and restrict access to specific aspects of the Internet.

Some organizations have also proposed that Web sites should rate their content with a label, from child- friendly to over- 18 only. Other people think that Internet rating are not good because they limit free expression on the Net.

Journalist: Um, I guess that' s a very controversial matter. And what is your final recommendation?

Mrs. Wilson: Well, in my opinion we should forget about online demons. Let's teach our children to enjoy the advantages of the Internet and to avoid the negative things.

UNIT 12 PROGRAMMING

First of all, you have to understand exactly what the problem is, and define it clearly. This means you have to decide in a general way how to solve the problem.

The next steps is to design an algorithm, which is a step- by- step plan of instructions used to solve the problem. You do this in a flowchart. You use special symbols to show how the computer works through your program- where it makes decisions, where it starts and ends, and things like that.

Then you translate the steps in the flowchart into instructions written in a computer language. You usually write these in a high- level language like BASIC or PASCAL. You have to then use something called a compiler which translates the instructions into machine code, which is the only language understood by the processor.

Once you've written your program you have to test it with sample data to see if there are any bugs or errors. Usually there are, so the program has to be cleared of them or 'debugged'.

And then last of all you have to write instructions explaining to people how to use it. A great program is not much use unless people know how to use it.

UNIT 13 ELECTRONIC COMMUNICATIONS

Journalist: What exactly is a Cybercafe?

Daniel: Essentially it's a place where you can use computers to access the Internet. Once you've accessed the Internet, it's up to you what you do. There's arrange of services that we'll allow people to use, from browsing the Web to Internet telephone.

Journalist: And what about people who need some help with using this?

Daniel: Not a problem. We always try and be available to help if they've got problems during the day. Um, for beginners we prefer to give them a tutorial to get them going.

Journalist: And how much do you charge for using the computers?

Daniel: What most of our customers do is buy a private e- mail account from us. This costs Ê7 a month and gives you half price access to the machines. So what people do is pay the Ê7 for month, come in ten minutes a day, it's a pound. Can't be bad.

Journalist: And what sort of people tend to come?

Daniel: We've got huge numbers of Latin American users, we've got Americans, Greeks, Russians. We pretty much cover the globe at the moment. Um, we don't tend to get that many English users. Probably because they' ve got access at home, but we're able to provide communication services to people that would otherwise have to make long- distance telephone calls. And we can be considerably cheaper than that.

Journalist: Is it possible to have the friendly atmosphere of a traditional café?

Daniel: I think we try to. We've had to separate out the computers from the café a little bit. So upstairs is the café area where you can sit and drink coffee and play chess and cards and backgammon and sit and chat to people. There are computers

upstairs but we've moved most of them downstairs so that people can have a bit of privacy.

UNIT 14 LANS AND WANS

Small networks are called local area networks or LANs. They are groups of computers connected within a small physical area like a building or an office.

In the diagram, the central computer is a file server dedicated to managing communications and storing common files. The file server acts as a kind of traffic controller which regulates the communication between the computers and peripherals on the network. A file server usually has a large hard disk used to store common files and applications programs. The computers connected to the central computer act as clients, and are linked to a laser printer and other hardware resource. This local are network is linked to the telephone lines by a modem. This allows users to send and receive data and electronic messages to and from other computers over long- distance.

UNIT 15 NEW TECHNOLOGIES

Interview: Can you explain how a pen computer works?

Tom: Sure. A pen computer usually runs on rechargeable batteries. You hold the computer with one hand and with the other you use an electronic stylus to write, draw and make selections on a flat LCD screen.

Interview: That means it doesn't have a keyboard.

Tom: That's right. You write information with the stylus like a pen

Interview: And how does the computer recognize what you write?

Tom: It reads the position of the pen and sends signals to the screen. The computer then translates the movements of the pen into characters or performs the functions like 'delete'. The operating system recognizes specific gestures like drawing a circle or crossing out a word.

Interview: Can these operating systems really recognize handwriting?

Tom: Yes, they can be trained to recognize characters written in your own handwriting. A lot of hand- help computers use Microsoft Windows CE or the Palm OS from Palm Computing.

Interview: So anyone who can use a pen should be able to use a pen computer?

Tom: Yes, that's right. Pen computers are very easy to use and portable. However they' re not really powerful enough to run very demanding applications- their performance isn't as good as that of PCs.

Interview: Right. So what sort of things can you do with them?

Tom: They're usually designed to store personal information. For example, 'personal digital assistants' have an address book , a date book and a notepad on which you can write and make diagrams. They are also have infra- red port, like those on TV remote controls, to communicate with printers, fax- modems and other PCs.

Interview: And how do you see the future of pen computers? How will they develop, do you think?

Tom: Well, I think they'll become more and more popular with business executives who'll use them as a supplement to their desktop systems.

GLOSSARY OF TECHNICAL TERMS AND ABBREVIATIONS

A

ADSL	abbreviation for asymmetric digital subscriber line. A form of DSL that has a different bandwidth for the upstream and the downstream.
AGP	abbreviation for accelerated graphics port. A video bus interface that allows the use of the fast video card and allows the use of three dimensional graphics.
Al	abbreviation for artificial intelligence.
Alt (key)	the alternative key on a computer keyboard that change the function of the other keys when it is held down.
ASCII	acronym for American Standard Code for Information Interchange. A standard character encoding scheme
ASP	abbreviation for application service provider.
AT&T	abbreviation foe American Telephone and Telegraph Company. One of the world's largest IT suppliers.
ATM	abbreviation for automatic teller machine. The type of machine used by bank s for enabling customers to withdraw money from their bank accounts

B

BIOS	acronym for Basic Input System. A part of the operating system stored on the ROM chip that controls the input and output of data to peripherals
BT	abbreviation for British Telecom. The organization that provides the telephone system in Great Britain.

C

C++	an object-oriented superset of the C programming language commonly used for writing applications programs for the Microsoft Windows operating system.
D-ROM (disk)	abbreviation for compact disk read only memory. A read only storage device in the form of a disk that is read using laser light.
CD-ROM (drive)	a storage device for reading CD-ROM disk
CD-RW (drive)	abbreviation for compact disk rewriteable. A storage device use for reading from and writing to a special type of CD known as a re-writeable CD
CMC	abbreviation for computer mediated communication
CNE	abbreviation for Certified Novell Engineer. A qualification aimed at people interested in installing and planning the rollout of Novell based networks
COBOL	acronym for Common Business Oriented Language
CPU	abbreviation for Central Processing Unit
CRT	abbreviation for Cathode Ray Tube

D

DEC VAX	a range of computers produced by the Digital Equipment Corporation using their Vax range of processor.
DHTML	abbreviation for Dynamic Hypertext Markup Language.
DNS	abbreviation for Domain Name System
DSL	abbreviation for Digital Subscriber Line
DTP	abbreviation for Desktop Publishing. A process of designing documents for publishing using a computer system
DVD- (ROM)	abbreviation for Digital Versatile Disk

E

EAN	abbreviation for European Article Number system
ECC memory	abbreviation for Error Code Correcting memory

EIDE	abbreviation for extended intergraded device electronics.
EPOS till	acronym for Electronic Point- Of- Sale till. A computerized cash register that edits records in sales and stock control databases
ERP	abbreviation for enterprise Resource Planning
	F
FAQ	acronym used on websites for Frequently Asked Question
FORTRAN	acronym for Formula Translation
FPT	abbreviation for File Transfer Protocol
	G
Gb/GB	abbreviation for Gigabyte
GHz	abbreviation for gigahertz
GPRS	abbreviation for General Packet Radio Service
GPS	abbreviation for Global Positioning System
GUI	acronym for Graphical User Interface
	H
HNC	abbreviation for Higher National Certificated
HND	abbreviation for Higher National Diploma
HTML	abbreviation for Hypertext Markup Language. A page description language that uses a system of tags for creating web pages
	I
IBM	abbreviation for International Business Machines
IC	abbreviation for Integrated Circuit. A complete electronic circuit built on a single silicon chip.
IMAP	acronym for Internet Mail Access Protocol
IP	abbreviation for Internet Protocol
IRC	abbreviation for Internet Relay Chat. An Internet service that allows user to have a conversation by sending text messages to each other in real- time
IS manger	abbreviation for Information Systems manager

ISDN	abbreviation for Integrated Services Digital Network
ISP	abbreviation for Internet Service Provider
IT	abbreviation for Information Technology
	J
JPEG	abbreviation for Joint Photographic Expert Group
	K
Kb/KB	abbreviation for a kilobyte
Kbit/ s	abbreviation for kilobits for second
kbps	abbreviation for kilobits for second. A unit of signal speed equal to 1024 bits every second.
	L
LAN	acronym for local area network
LCD	abbreviation for Liquid Crystal Display. An electronic display device that uses liquid crystal cells to control the reflection of light
LVD	abbreviation for Low Voltage Differential
	M
m	abbreviation for meter
mA	abbreviation for milliamp. a unit of current equal to one thousandth of an amp
MAC	acronym for Message-Authentication Code
Mb/MB	abbreviation for Megabyte
Mbit/ s	abbreviation for Megabyte per second. A unit of signal speed equal to 1 048 576 bits every second.
MHz	abbreviation for Megahertz
MIDI	acronym for Musical Instrument Digital Interface
MO	abbreviation for Magneto- Optical. Used to describe storage devices that use a combination of magnetism and laser light.
MOO	acronym for Multi-user Object Oriented.
MP3	abbreviation for MPEG Audio Layer 3.
MPEG	abbreviation for Motion Picture Experts Group

MS-DOS	abbreviation for Microsoft Disk operating System. The command line operating system that was used in the first PCs.
MVS	abbreviation for Multiple Virtual Storage
mW	abbreviation for milliwatt
	N
Net	the common name for the Internet
	O
OCR	abbreviation for Optical Character Recognition
OOP	acronym for Object Oriented Programming
OS	abbreviation for Operating System
	P
pA	abbreviation for Picoamp. A unit of current equal to a millionth of a millionth of an amp
PC	abbreviation for an IBM type of Personal Computer
PC-DOS	an operating system for desktop PC computer that is similar to MS-DOS
PDA	abbreviation for Personal Digital Assistant
PIM	acronym for Personal Information Manager. A computer program that provides a variety of tools for organizing work.
PIN	acronym for Personal Identification Number
	R
RAID	acronym for redundant Array of Inexpensive Disks
RAM	acronym for Random Access Memory
RDBMS	abbreviation for Relational Database Management System. A database systems that link files together as required.
RDRAM	abbreviation for Rambus Dynamic Random Access Memory
RF	abbreviation for Radio Frequency
ROM	acronym for Read Only Memory

rpm	abbreviation for revolutions per minute
	S
s/w	abbreviation for software
SAP	a widely used enterprise resource planning tool program
SCSI	acronym for small Computer System Interface
SDRAM	abbreviation for Synchronous Dynamic Random Access Memory
SGML	abbreviation for Standard Generalized Markup Language
SMS	abbreviation for Short message Service. A method of sending text messages that are 160 characters in length or shorter over a mobile phone
SMTP	abbreviation for Simple Message transfer Protocol
SQL	abbreviation for Structured Query Language. A language used for searching databases
SVGA	abbreviation for Super Video Graphics Array
SXGA	abbreviation for Super extended Graphics Array
	T
TA	abbreviation for Terminal Adapter
TCP	abbreviation for Transfer Control Protocol . A part of the TCP/IP protocol used on the Internet
TTI	abbreviation for Text To Speech. A system computer reads text to the user using a speech synthesiser
	U
UDP	abbreviation for User Datagram Protocol
URL	abbreviation for Uniform Resource Locator
UTMS	abbreviation for Universal Mobile Telecommunications System
	V
v	abbreviation for volt
VB	abbreviation for Visual Basic
VCR	abbreviation for Video Cassette Recorder

VDU	abbreviation for Visual Display Unit
VIS	abbreviation for Viewable Image Size. The actual size of the image that can be seen by the user on a computer display screen.
VR	abbreviation for Virtual Reality

W

WAV	an audio file format
WML	abbreviation for Wireless Markup Language. A language similar to HTML used for designing web pages suitable for mobile phones.
WRAP	acronym for Web- Ready Application Protocol
WWW	abbreviation for the WORLD wide Web. The internet service used for connecting to multimedia web pages.

X

XGA	abbreviation for extended Graphics Array. An IBM display screen standard with a resolution of 1024 x 768 pixels and up to 65.536 colours.
XML	abbreviation for extensible Markup Language.

GLOSSARY

A

abbreviation (n)	viết tắt
absolutely	hoàn toàn
academic (n)	trừu tượng, không thực tế
access (v)	truy cập
accomplish (v)	hoàn thành
accuracy (n)	độ chính xác
accurate (adj)	chính xác
accuse (v)	buộc tội, kết tội
acquire (v)	đạt được, thu được
adapter (n)	bộ tương hợp
addition (n)	phép cộng
adjust (v)	điều chỉnh
advantage (n)	ưu điểm
algorithm (n)	thuật toán
alleviate (v)	làm nhẹ bớt
allocate (v)	phân phối
alphabetical (adj)	bảng chữ cái
analog computer (n)	máy tính tương tự
analyze (v)	phân tích
annotation (n)	chú giải, chú thích
anti- glare filter (n)	máy lọc ánh sáng
appear (v)	xuất hiện, hiện ra
application (n)	ứng dụng
arithmetic logic unit (ALU)	bộ số học- logic

arithmetic (n)	số học
aspect (n)	bề ngoài, diện mạo
attack (v)	bắt đầu, bắt tay vào
attempt (v)	cố gắng
authorize (v)	uỷ quyền, cho phép

B

backgammon (n)	cờ thỏ cáo
backup (n)	bản sao dự trữ
battery (n)	pin
binary adder (n)	bộ cộng nhị phân
binary digit (n)	bộ số nhị phân
blast (v)	phá hoại
breakthrough (v)	chọc thủng phòng tuyến
browse (v)	đọc lướt qua, xem qua
bulky	(ADJ) cồng kềnh
bulletin (n)	bản tin

C

CAD	thiết kế bằng máy tính
category (n)	hạng, loại
CDPD (Cellular Digtal Packet Data)	là đặc tả xác định cách đóng gói dữ liệu
cellular (n)	ngăn nhỏ
centre processing unit (CPU)	bộ xủa lý trung tâm
chaos (n)	lộn xộn, hỗn loạn
character (n)	ký tự
chipcomponent (n)	là một mạch điện tử siêu nhỏ
circuit (n)	mạch

clone (n)	vô tính
code (n)	mã
collection (n)	tập hợp
combination (n)	phối hợp
commission (n)	phận sự, nhiệm vụ
communication (n)	thông tin
compatible (adj)	hợp nhau, tương hợp
compiler (n)	người biên soạn
confidential (adj)	bí mật
configuration (n)	cấu hình
configuration (n)	hình thể, hình dang
conform (+ *to*) (v)	làm thích hợp với
connect (v)	kết nối
consists of (v)	bao gồm
controversial (adj)	tranh luận, tranh cãi
converter (n)	máy đổi dòng điện
coordinate (v)	kết hợp
core (n)	lõi
cover (n)	vỏ bọc
crucial (adj)	cốt yếu, chủ yếu
cursor (n)	con trỏ

D

damage (v)	làm hỏng
dash (n)	nét viết, gạch ngang, gạch đầu dòng, dấu nối, quãng ngắt
data (n)	dữ liệu
database (n)	cơ sở dữ liệu
deal with (v)	giải quyết

decipher (v)	giải mã
dedicate (v)	dành cho
defense (v)	phòng thủ
delete (v)	xoá
delivery (n)	chuyển hàng
demagnetize (v)	khử từ
demodulate (v)	giải điều biến
demon (adj)	độc ác, hung ác
depressed (adj)	chán nản, thất vọng
diagnose (v)	chuẩn đoán
diagrammatically (adv)	theo biểu đồ, sơ lược
digital computer (n)	máy tính kỹ thuật số
disk drive (n)	ổ cứng
diskette (n)	đĩa mềm
disrupt (v)	phá vỡ
distinct (v)	riêng biệt
distinguish (v)	phân biệt
distribute (v)	phân phối
divide into (v)	chia thành
domain (n)	vùng
dormant (adj)	không hoạt động, im lìm
download (v)	tải xuống
drag (v)	kéo
duplicate (n)	bản sao

E

editor (n)	người biên tập
effectively (adv)	hiệu quả
electromagnetic (adj)	điện từ
elude (v)	tránh, né

embodied (adj)	hiện thân, tiêu biểu
encoded (adj)	mã hoá
encryption (n)	giải mã
enemy (n)	kẻ thù
enormous (adj)	to lớn, khổng lồ
entertainment (n)	giải trí
eradicate (v)	bài trừ
erase (v)	xoá, bỏ
estimate (v)	đánh giá, ước lượng
ethical (adj)	đúng qui cách
evaluate (v)	định giá, đánh giá
execute (v)	thực hiện
expand up (v)	mở rộng
exponentiation (n)	luỹ thừa

F

fear (n)(v)	sợ hãi
fiber- optic cables (n)	cáp sợi quang
fiber optics (n)	sợi quang
filtration (n)	lọc
firewall (n)	bức tường lửa
firmware (n)	vi chương trình, chương tình cơ sở
fit (v)	điều chỉnh cho vừa
flash (v)	chiếu sáng
flexible (adj)	mềm dẻo, linh hoạt
flicker (v)	lập loè, bập bùng
floppy disk (n)	đĩa mềm
flowchart (n)	biểu đồ tiến trình
forensic (n)	pháp lý
format (v)	định dạng

former (adj)	xưa, cũ
fraction of time (n)	thời gian ngắn
fundamental (adj)	cơ bản, cơ sở, chủ yếu

G

gambling (n)	trò cờ bạc ăn tiền
gateway (n)	cổng vào
generic (n)	giống loài
gesture (v)	điệu bộ, làm điệu
globe (n)	quả cầu,
gobbledegook (n)	khó hiểu, biệt ngữ
grab (v)	nắm

H

handwriting (n)	chữ viết tay
hard disk (n)	đĩa cứng
hardware (n)	phần cứng
harmless (adj)	vô hại , vô tội
have a secret (v)	giữ bí mật
heap (n)	là vùng lưu trữ đặc biệt trong bộ nhớ, dùng để lưu trữ những tài liệu quan trọng
hidden (v)	ẩn, dấu
hide (v)	giữ kín
horoscope (n)	sự dự đoán
host (n)	máy chủ
household (n)	trong gia đình
hunt down (v)	lùng sục, dồn vào thế cùng
hyphen (v)	gài vào, lồng vào

I

imitate (v)	bắt cước, làm theo
immense (adj)	rộng lớn
imply (v)	ngụ ý
indecent (v)	xâm phạm, xâm chiếm
index (n)	bảng chú dẫn
infect (v)	đầu độc
infect (v)	làm cho, gây cho
initially (adv)	ban đầu
injure (v)	làm hại
inkjet (n)	lọ mực
input (v)	nhập
insertion (n)	điều kiện tốt nhất
installation (n)	cài đặt
instruction (n)	lệnh
interact (v)	tác động lẫn nhau
interactive (adj)	tương tác
interface (n)	thiết bị ghép tương thích
internal memory (n)	bộ nhớ trong
Intranet (n)	mạng nội bộ
intricate (v)	rắc rối, phức tạp
intruder (n)	người xâm nhập
invasions (n)	xâm lược, xâm chiếm
inventory (n)	hàng tồn kho
IP (Internet Protocol)	giao thức Internet
IRC (Internet Relay Chat)	là phương tiện cho phép những người ở xa đối thoại thời gian thực
ISP (Internet Service Device)	nhà cung cấp dịch vụ Internet
joystick	cần điều khiển

K

keyboard (K)	bàn phím

L

LAN	mạng cục bộ
laptop (n)	máy tính sách tay
LCD (liquiid crystal display)	màn tinh thể lỏng
Leap (v)	nhảy, lao vào
Legend (n)	lời chú giải
leisure (n)	rảnh rỗi
logical operations (n)	các phép toán logic

M

Magnetize (v)	từ hoá
main memory (n)	bộ nhớ chính
mainframe (n)	dàn máy chủ
manipulate (v)	thao tác
manipulation (n)	thao tác
manual (n)	sách giáo khoa
margin (n)	rìa, lề
matrix (n)	ma trận
microchip (n)	mạch vi xử lý
microcomputer (n)	máy vi tính
microprocessor (n)	bộ vi xử lý
minicomputer (n)	máy tính mini
miscellaneous (adj)	hỗn hợp
mnemonic (adj)	trí nhớ
modem (n)	bộ điều giải

monitor (n)	màn hình
monstrosity (n)	kỳ quái, quái dị
mouse (n)	chuột
mouse cursor (n)	con trỏ
multivendor (n)	nhiều máy bán hàng tự động

N

navigation (n)	không quân
net (n)	tịnh, thực (trọng lượng)
network (n)	mạng máy tính
nonsense (n)	vô lý, vô nghĩa
numerous (adj)	đông đảo, nhiều

O

online (n)	trực tuyến
operating system (n)	hệ điều hành
optical disk *(n)*	đĩa quang học
optimum (n)	chú giải, chú thích
output (n)	xuất

P

palette (n)	bảng màu
password (n)	mật khẩu
payload (n)	trọng tải
peripheral device (n)	thiết bị ngoại vi
permanent copy (n)	copy thường xuyên
pirating (n)	sao chép, mô phỏng

pixel (n)	ảnh điểm
pointer (n)	con trỏ
pornography (n)	sự khiêu dâm
portable (adj)	di động
precise (adj)	rõ ràng, chính xác
predecessor (n)	cha ông, tổ tiên
primary memory (n)	bộ nhớ chính
principle (n)	cơ bản, nguồn gốc
printer (n)	máy in
privacy (n)	riêng biệt
processor (n)	bộ xử lý
propaganda (n)	sự tuyên truyền
propagate (v)	truyền bá
proportionally (adv)	tương ứng, cân xứng
protocol (n)	hiệp ước
psychiatric (n)	bệnh tâm thần
psychologist (n)	nhà tâm lý học
punishment (n)	trừng phạt, trừng trị

Q

query (v)	thắc mắc

R

radiation (n)	phát xạ nhiệt
RAM	bộ truy cập ngẫu nhiên
random access (n)	truy cập ngẫu nhiên
range (n)	phạm vi, lĩnh vực
real- time processing (n)	xử lý thời gian thực

rechargeable (adj)	có thể nạp lại
recommendation (n)	giới thiệu
refers to (v)	dựa vào
release (v)	thoát khỏi
reliable (adj)	tin cậy
remote (adj)	xa xôi, hẻo lánh
removable (adj)	có thể mở được
removal (n)	di chuyển
resist (v)	chống lại
ROM	bộ nhớ chỉ đọc

S

scanner (n)	máy quét
scratch (adj)	tạp nham, hỗn tạp
screen (n)	màn hình hiển thị
SCSI Small Computer System Interface)	Một giao diện mà trong đó có thể cắm các thiết bị ngoại vi vào
secondary storage (n)	bộ nhớ thứ cấp
secondary storage device (n)	thiết bị lưu trữ thứ cấp
separate (v)	riêng rẽ, riêng biệt
sequential (adj)	tuần tự
server (n)	máy chủ
similarly (adv)	tương tự, giống nhau
simulate (v)	mô phỏng, mô tả
simultaneously (adv)	đồng thời, cùng một lúc
slide (n)	tờ chiếu
socket (n)	ổ cắm
software (n)	phần mềm
sophisticates operating system	hệ thống hoạt động phức tạp
sort (n)	thứ, loại, hạng

spectacular (adj)	kỳ lạ, ngoạn mục
speedometer (n)	đồng hồ đo tốc độ
spread (v)	tuyên truyền
spreadsheet (n)	bảng tính
state (n)	trạng thái
statistics (n)	tập hợp, số liệu thống kê
stilt-and- swivel (n)	trụ xoay
storage capacity (n)	khả năng lưu trữ
stretch (v)	căng ra
stylus (n)	bút trâm
symbol (n)	biểu tượng
syntax (n)	cú pháp

T

task (n)	nhiệm vụ
tax (n)	thuế
TCP (Transmission Control Protocol)	là thành phần của tàng truyền tải trong Internet
tedium (adj)	chán ngắt, buồn tẻ
temporary (adj)	tạm thời, nhất thời
tempt (v)	cám dỗ, lôi cuốn
terminal (n)	thiết bị đầu cuối
theft (n)	ăn trộm, ăn cắp
tool (n)	công cụ
topology (n)	cấu trúc liên kết mạng
trackball (n)	quả cầu đánh dấu, bóng xoay
transaction (n)	giải quyết, giao dịch
transceiver (n)	máy thu phát
transform (v)	biến đổi
treatment (n)	sự giải quyết

trigger (v)	gây ra
turnkey system (n)	hệ thống chìa khoá trao tay

U

unauthorizebis (n)	trái phép
unscrupulous (adj)	không nguyên tắc, không cẩm thận
update (n)	cập nhật

V

vary (v)	thay đổi, biến đổi
VDU (video display unit)	màn hình
Version (n)	bài dịch
Via (Prep)	theo đường
victim (n)	nạn nhân
viđeo display monitors (n)	màn hình video
VR (virtual reality) (n)	thực tế ảo

W

weld (v)(n)	hàn, mối hàn
whistle (n)	tiếng còi hiệu
willing (adj)	bằng lòng
wire (n)	dây
workstation (n)	mạng cục bộ
worm (n)	tên một loại vi rút máy tính

Y

yielding (adj)	dễ uốn, mềm, dẻo

TÀI LIỆU THAM KHẢO

- KS. Nguyễn Ngọc Tuấn, KS TrươngVăn Thiện - ***Từ điển tin học và công nghệ thông tin Anh- Anh - Việt***

- Eric H. Glendinning- ***Basic English for computing*** - Oxford university press

- Eric H. Glendinning, John Mc Ewan - ***Oxford English for Information Technology***- Oxford university press

- Keith Boeckner & P.charles Brown - ***English for computer science*** - Nhà xuất bản Thống kê.

- Santiago-Remacha Estera — ***Infotech***- Nhà xuất bản Thống kê.

TABLE OF CONTENT

NHÀ XUẤT BẢN HÀ NỘI
4 - TỐNG DUY TÂN, QUẬN HOÀN KIẾM, HÀ NỘI
ĐT: (04) 8252916, 8257063 - FAX: (04) 8257063

GIÁO TRÌNH
TIẾNG ANH CHUYÊN NGÀNH TIN HỌC
NHÀ XUẤT BẢN HÀ NỘI - 2007

Chịu trách nhiệm xuất bản
NGUYỄN KHẮC OÁNH
Biên tập
PHẠM QUỐC TUẤN
Bìa
VĂN SÁNG
Kỹ thuật vi tính
HẢI YẾN
Sửa bản in
PHẠM QUỐC TUẤN

In 500 cuốn, khổ 17x24cm tại Công ty cổ phần in Khoa học Kỹ thuật. Quyết định xuất bản số: 154-2006/CXB/604GT-15/HN cấp ngày 28/02/2006. In xong và nộp lưu chiểu quý I/2007.