



Ibn Khaldoun University – Tiaret
Faculty of Mathematics and Computer Science
Department of Computer Science



Module : English

Level : 1LMD

Semester : 1

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UNIT THREE :

Parts of a computer

Learning Objectives: Upon completion of this unit, students should :

1 be better at :

- matching pictures of components to their English names and functions,
- reading for specific detail,

2 be able to :

- make simple instructions,
- use sequence words,

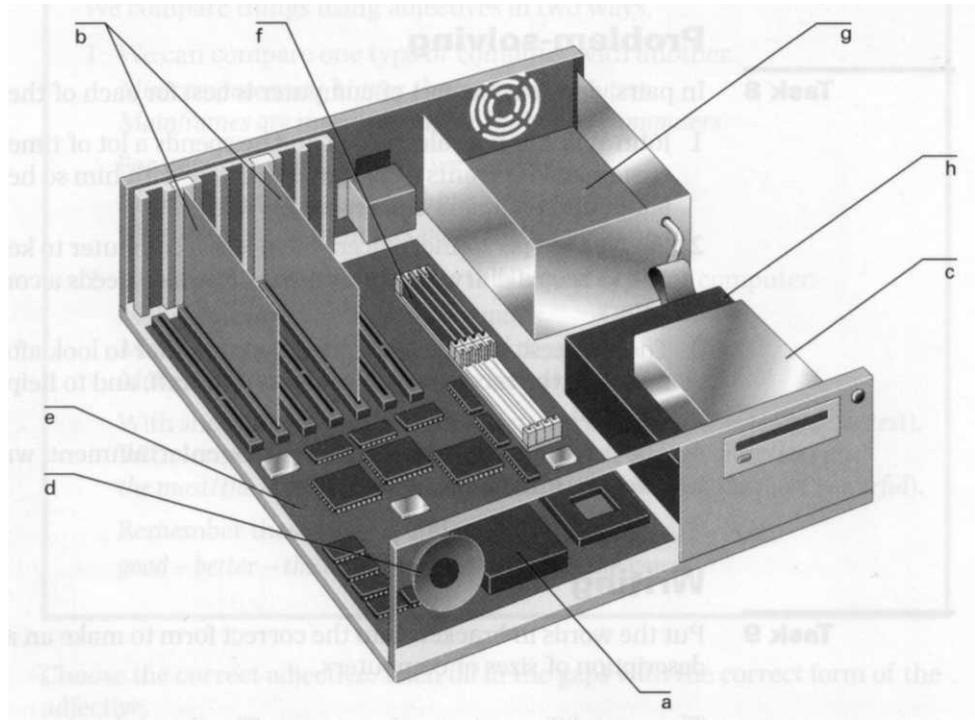
3 know and be able to :

- use these words and abbreviations: *byte, kilobyte, megabyte, gigabyte, megahertz, motherboard, port, RAM, ROM, cache, memory, expansion card.*

A- PREREADING :

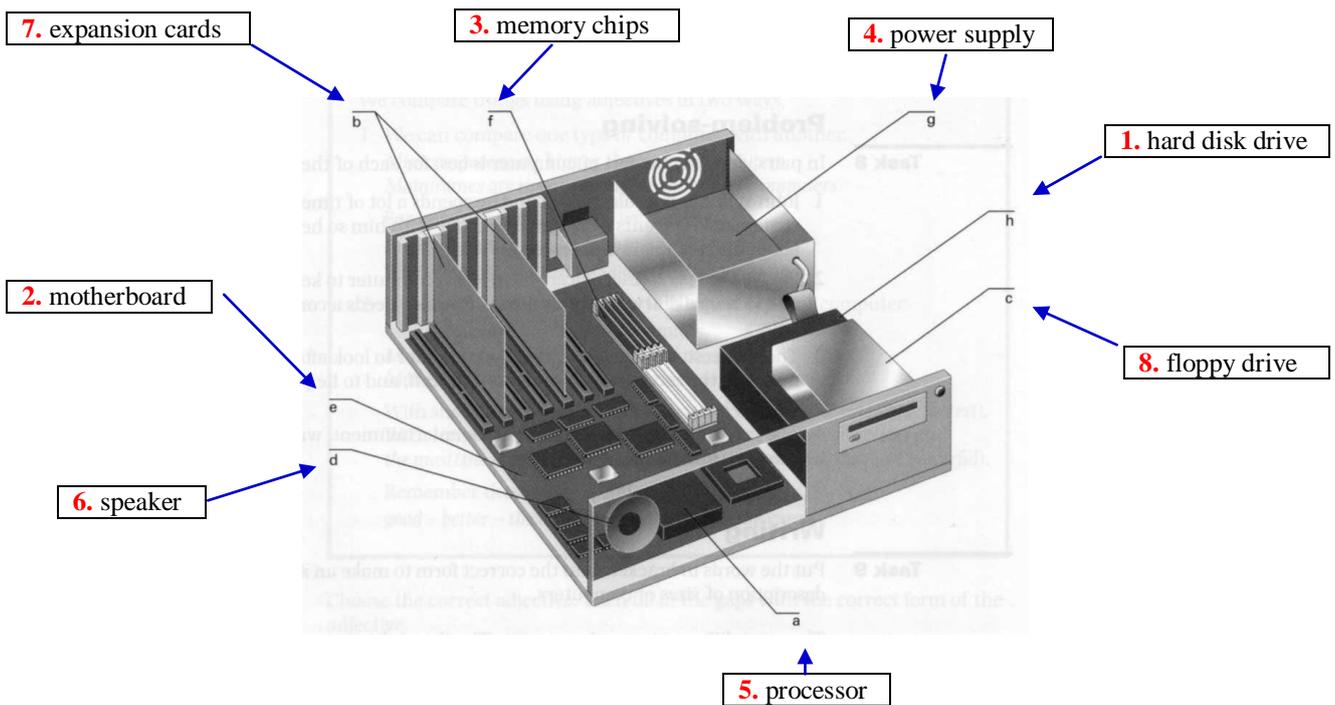
Task 1 (Warming up): Study this diagram of the inside of a computer and label the components.

- 1. hard disk drive
- 2. motherboard
- 3. memory chips
- 4. power supply
- 5. processor
- 6. speaker
- 7. expansion cards
- 8. floppy drive



Key:

Names	1	2	3	4	5	6	7	8
Components	h	e	f	g	a	d	b	c



 <p>hard disk drive</p>	 <p>motherboard</p>
 <p>memory chips</p>	 <p>power supply</p>
 <p>computer processor</p>	 <p>internal speaker</p>
 <p>expansion card</p>	 <p>floppy drive</p>

Task 2 : What do the following terms mean?

1. byte 2. Gb 3. Kb 4. Mb 5. MHz

Key:

byte /baɪt/ n C [3] a unit of capacity. A byte is made up of eight bits and stores one character, i.e. a letter, a number, a space or a punctuation mark.

kilobyte /'kɪləbaɪt/ n C [3] a capacity of 2^{10} bytes, i.e. 1024 bytes

gigabyte /'gɪɡəbaɪt/ n C [3] a capacity of 2^{30} bytes, i.e. 1024 megabytes

megabyte /'megəbaɪt/ n C [3] a unit of capacity equal to 2^{20} bytes, i.e. 1024 kilobytes
megahertz /'megəhɜ:ts/ n C [3] a unit of frequency equal to 1 million cycles per second

B- READING - 1

Buying a computer - 2

Task 3: Read the following conversation about buying a computer and complete the units in the table below.

Component	Capacity/speed measured in	Component	Capacity/speed measured in
1. processor	4. cache memory
2. RAM	5. hard disk
3. video memory		

Conversation : *Buying a computer - Part 3*

A : What about things like power and speed, that sort of things? What do I look for?

B : Well, power depends on speed and capacity – the speed of the processor and the capacity of the memory and the hard disk.

A : The speed of the processor?

B : How fast the computer processes data. Speed is usually given in megahertz or gigahertz. The faster the processor, the more powerful the computer.

A : And capacity?

B : How much storage space there is, how big the hard disk is. You measure RAM and video memory in megabytes. You’ve also got cache memory. That’s in kilobytes. Always look for the highest numbers.

A : What about the hard disk ?

B : Hard disk capacity is in gigabytes. Get a big hard disk for multimedia. Audio and video files use enormous amounts of space. Once again, the higher the numbers, the more powerful the computer.

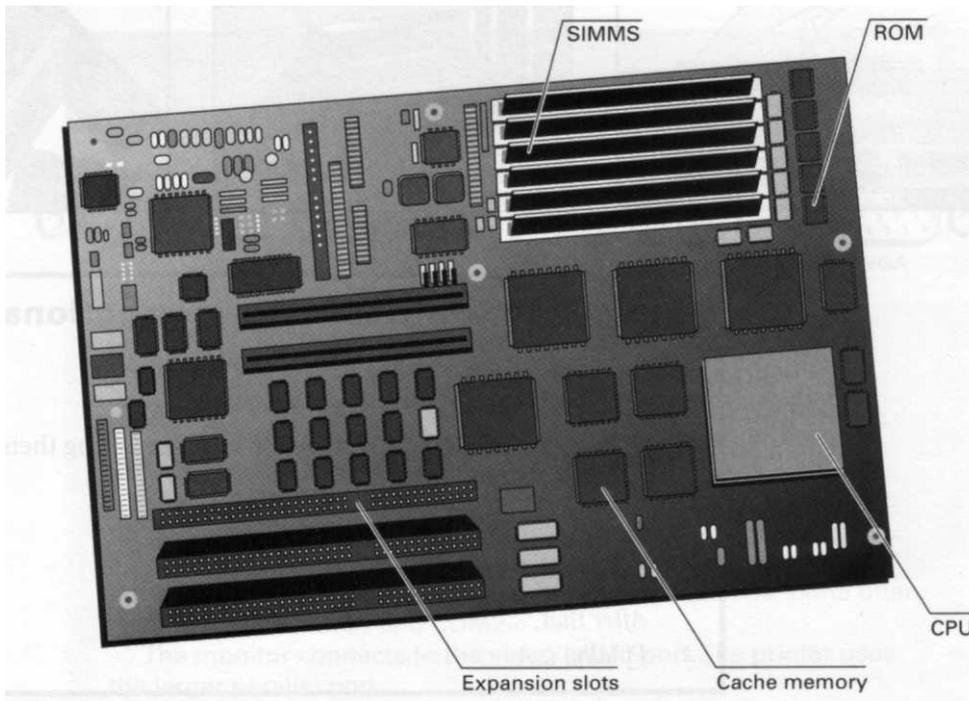
Key :

Component	Capacity/speed measured in	Component	Capacity/speed measured in
1. processor	Mhz	4. cache memory	Kb
2. RAM	Mb	5. hard disk	Gb
3. video memory	Mb		

C- READING - 2

The motherboard

Task 4: Study this diagram of a PC motherboard and match the components to their descriptions.



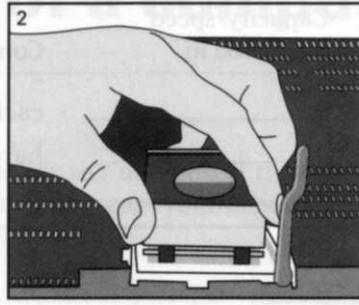
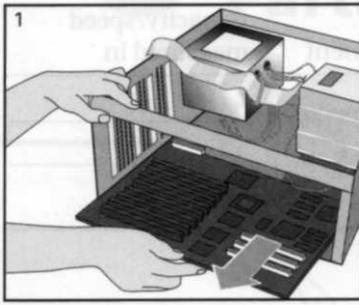
Descriptions:

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 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.

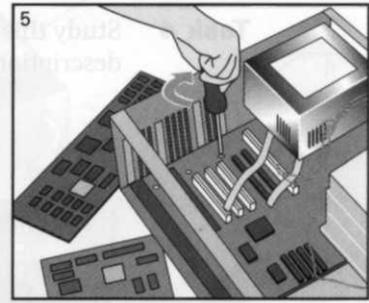
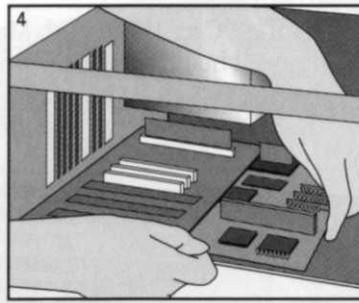
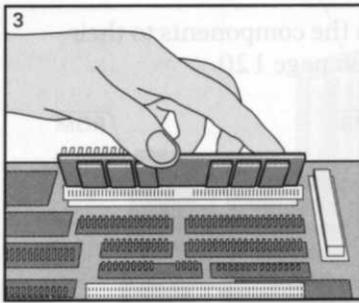
Key : 1. SIMMS 2. CPU 3. Cache memory 4. Expansion slots 5. ROM

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.	SIMMS
2. This is the 'brain' of the computer.	CPU
3. It's part of the memory store. It has extremely fast access. It's faster than normal RAM. It can speed up the computer.	Cache memory
4. These let you add features such as sound or a modem to your computer.	Expansion slots
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.	ROM

Task 5: Study these instructions for replacing the motherboard in a PC. Match the instructions to each picture. The pictures are in the correct order.

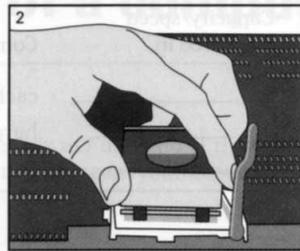
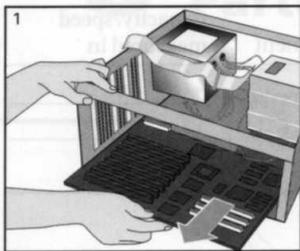


- a Add the processor.
- b Fit the new motherboard.
- c Remove the old motherboard.
- d Put it back together.
- e Add the memory. Don't touch the contacts.



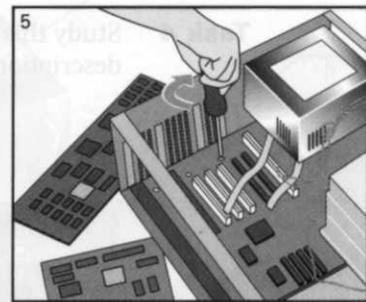
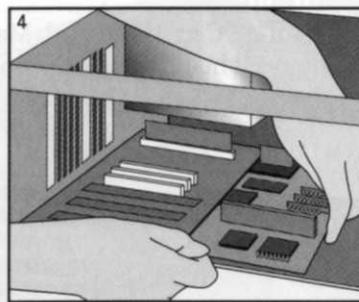
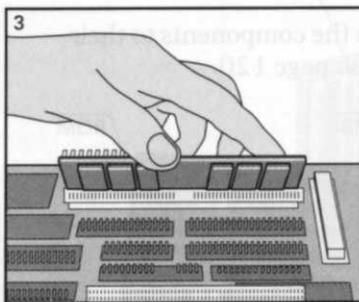
Key:

Picture	1	2	3	4	5
Instruction	c	a	e	b	d



- a Add the processor.
- b Fit the new motherboard.
- c Remove the old motherboard.
- d Put it back together.
- e Add the memory. Don't touch the contacts.

c. Remove the old motherboard **a.** Add the processor



e. Add the memory. Don't touch the contacts. **b.** Fit the new motherboard **d.** Put it back together

D- Language work

Making instructions

1- Note how we make simple instructions in English:

Add the memory. Don't touch the contacts.

2- Making instructions in English involves the use of the *imperative* or *command* form of verbs. The imperative has the same form of the verbs as the infinitive (without *to*) and has no subject.

2- *Negative imperatives* are made by adding *do not/don't* in front of the verb.

4- We can show the order of instructions by numbering them (1, 2, 3, etc.) or by using sequence words/markers like these:

First,...
Then...
Next,...
After that,...
Finally,...

Let's practise

Task 6: Study these instructions for virus-checking a disk. Fill in the gaps with verbs from this list. Use Don't where appropriate.

click exit put select start

1. _____ the disk into the drive.
2. _____ the virus checking program.
3. _____ the drive to be checked.
4. _____ the 'Find' button.
5. _____ the program until the check is complete.
6. _____ 'Yes' or 'No' for checking another disk.

Key :

1. **Put** the disk into the drive.
2. **Start** the virus checking program.
3. **Select** the drive to be checked.
4. **Click** the 'Find' button.
5. **Don't exit** the program until the check is complete.
6. **Select/Click** 'Yes' or 'No' for checking another disk.

More examples with don't:

- **Don't use** a disk without virus checking it.
- **Don't bring** food and drink into the computer lab
- **Don't tell** anyone your password

Task 7: Study these instructions for formatting a disk in Microsoft Windows. Write the instructions in the correct order (1 -6). using sequence words. You will have to use one of the words more than once.

Order	Instructions
<input type="checkbox"/>	a Select 'OK' to start formatting the disk.
<input type="checkbox"/>	b Choose 'Format' from the drop-down menu.
<input type="checkbox"/>	c Click the 'Start' button.
<input type="checkbox"/>	d Put the disk into the drive.
<input type="checkbox"/>	e Choose the formatting options you require.
<input type="checkbox"/>	f Click the 'OK' button when formatting is complete.

Key:

Order	Instructions
5	a Select 'OK' to start formatting the disk.
2	b Choose 'Format' from the drop-down menu.
4	c Click the 'Start' button.
1	d Put the disk into the drive.
3	e Choose the formatting options you require.
6	f Click the 'OK' button when formatting is complete.

E- Problem-solving

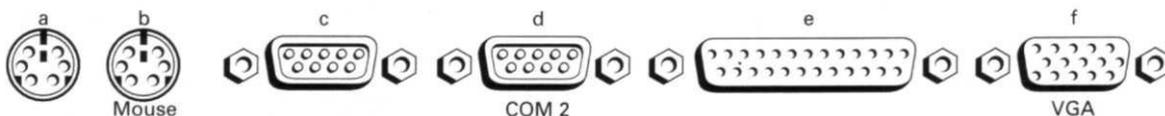
Task 8: The following diagram shows the ports at the back of a desktop PC. With the help of the text below, match these labels to the correct ports.

Remark: Just scan the text for the specific information that you need to complete the task. It doesn't matter if you don't understand every word

Labels:

1. keyboard 2. COM 1 3. parallel port 4. video port 5. serial ports

Back ports:



Text:

Desktop PC ports and connectors

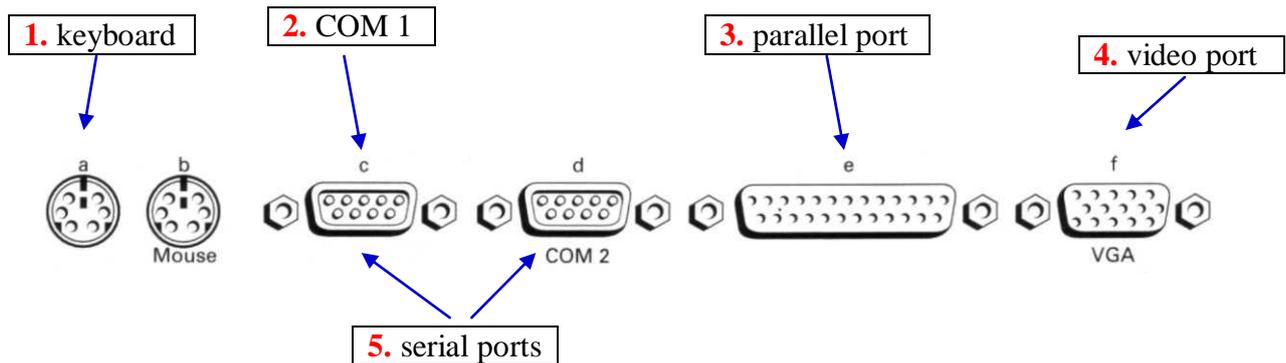
External devices connect to ports at the back of the computer. Different types of port are used for each device. Most computers have: 1 keyboard port, 1 video port, 2 serial ports, 1 parallel port. Some also have a mouse port.

The mouse port and the keyboard port look exactly the same but they have labels to avoid confusion. If there is no mouse port, a serial mouse must be used. This connects with one of the serial ports. You can use the other one for a modem. The serial ports often have the labels COM1 and COM2.

The monitor connects to the video (VGA) port. The printer uses the larger parallel port.

Key:

Label	1	2	3	4	5
Port	a	c	e	f	c, d



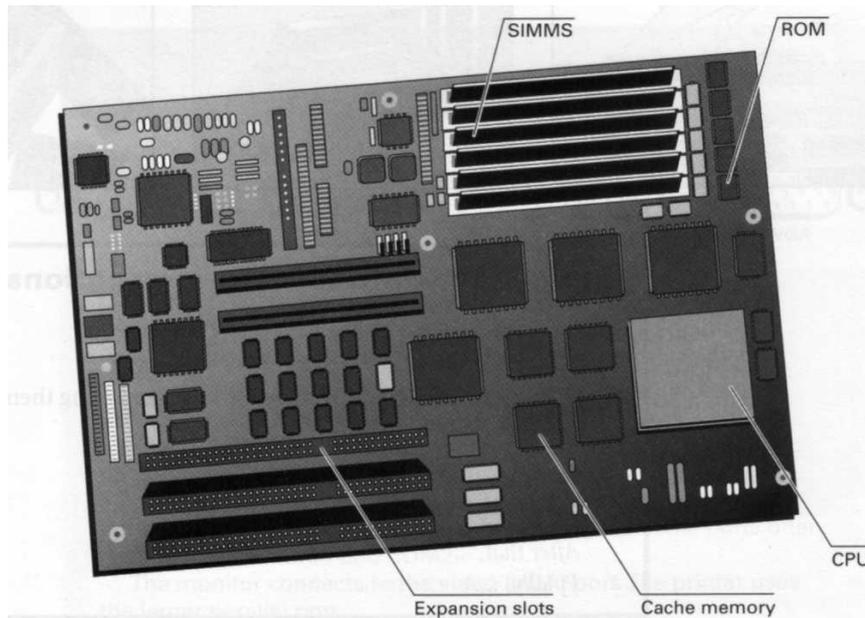
F- Writing

Task 9 : Complete the following description of the motherboard by adding the definitions from the Reading text in the correct places.

► Use the relative pronoun **'which'** and the indicatives **'this'** and **'these'** to avoid repetition and make the text easier to read.

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.

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.	SIMMS
2. This is the 'brain' of the computer.	CPU
3. It's part of the memory store. It has extremely fast access. It's faster than normal RAM. It can speed up the computer.	Cache memory
4. These let you add features such as sound or a modem to your computer.	Expansion slots
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.	ROM



Key:

The most important electronic part of a computer is the motherboard which is the 'brain' of the computer. The largest chip in the centre is the processor. The board also contains plug-in chips. 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. One type contains ROM. 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. A number of chips are mounted on memory boards. A third type of memory is cache memory which is part of the memory store and which has extremely fast access. It's faster than normal RAM. It can speed up the computer. The board also has expansion slots. These let you add features such as sound or a modem to your computer.

G- Further reading

1. Read the text then answer the questions

Parts of a computer

Most computers consist of electronic central processing units (CPU) to which are attached different input devices, output devices and storage devices. The CPU and storage devices are normally built inside a system unit which consists of a metal chassis enclosed in a flat desktop or a tower shaped case. A system unit contains an electronic board called the motherboard that holds and connects together the main electronic components. These are shown in the table below.

Processor (microprocessor)	controls the system and processes the Data
ROM (Read Only Memory)	stores the program instructions the computer needs to start up
RAM (Random Access Memory)	stores the data being processed
Cache memory	speeds up the processing

The motherboard usually has empty electronic connectors, called expansion slots, into which additional electronic boards (sometimes called expansion cards) can be plugged. This allows extra electronic components to be added. For example, more memory can be added by plugging memory boards (e.g. SIMMS) into the memory slots. Sound facilities can be added by plugging a sound card into an expansion slot. This is one way of upgrading a computer. Another way is to replace the motherboard with a newer and better one.

The system unit usually also contains a small speaker (or loudspeaker), the power supply, and some storage devices. These often include: a hard disk drive with a fixed disk that can store a very large amount of data; a floppy disk drive that uses removable floppy disks (diskettes); a CD-ROM or DVD drive that is used for reading CD-ROM or DVD drive disks (particularly in multimedia computers). Some other devices may be included in the system unit but most input and output devices are plugged into the back of the system unit using connectors known as ports.

Power is a function of both speed and capacity. The power of a computer depends on the combination of all the components. When buying a computer, you can often choose between different components. In particular you can choose between different processor speeds, amounts of memory, and hard disk sizes. Units of measurement commonly used in computing are shown below.

Unit	Symbol	Meaning	Measurement
Hertz	HZ	Cycles per second	frequency
Byte (pronounced like bite)	B	space for one character, i.e. one letter, number, punctuation, mark, symbol or even a space	capacity

Hertz are measured using the decimal system but bytes are measured using the binary system. The values of the unit prefixes vary in these two systems as shown in the table below.

Unit	Symbol	Decimal System	Binary System
Kilo	K	$10^3 = 1000$	$2^{10} = 1024$
Mega	M	$10^6 = 1000000$	$2^{20} = 1048576$
Giga	G	$10^9 = 1000000000$	$2^{30} = 1073741824$

Questions:

- 1- Where are the main parts of a desktop computer enclosed into?
- 2- What does the motherboard hold and connect?
- 3- What are the main electronic components? What do they do?
- 4- In what way can you upgrade a computer?
- 5- What does the system unit usually contain?
- 6- What does the power of a computer depend on?
- 7- What components can you often choose between when buying a computer?

2. Match each word from column A (1-22) with its partner from column B (a-v) to make a computing Term definition.

1) expansion card	a) the main electronic circuit board inside a computer that holds and connects together all the main electronic components
2) gigabyte	b) a unit of frequency equal to 1 million cycles per second
3) motherboard	c) acronym for random access memory – memory that can be read and written to by the processor
4) expansion slot	d) the memory used to store graphics data on a graphics card
5) port	e) an electronic circuit board used for adding facilities to a computer
6) kilobyte	f) designed so that components can be added to improve the features or performance of the system
7) cache memory	g) the small connector at the back of the system unit of a PC that is used to connect the monitor to the graphics card
8) megahertz	h) a connector at the back of a system unit of a PC that is used for connecting external devices to the CPU
9) byte	i) a long connector at the back of a system unit of a PC that is often used to connect a printer to the CPU
10) RAM	j) the main electronic chip in a computer. It can be thought of as the “brain” of the computer because it does the main processing and controls the other parts of the computer. It is sometimes called the CPU.
11) serial port	k) a capacity of 2^{30} bytes, i.e. 1024 megabytes
12) power supply	l) a capacity of 2^{10} bytes, i.e. 1024 bytes
13) chip	m) high speed memory used to speed up a computer
14) memory slot	n) a unit of capacity. It is made up of eight bits and stores one character, i.e. a letter, a number, a space or a punctuation mark
15) graphics card	o) common name for a microchip
16) loudspeaker	p) the type of mouse that is connected to the serial port at the back of the system unit of a PC
17) microprocessor	q) a connector on the motherboard of a computer that enables extra memory chips attached to a small memory board to be added.
18) parallel port	r) the small connector at the back of the system unit of a PC that is used to connect a serial device such as a serial mouse or a modem. Two serial ports labeled COM1 and COM2 are usually provided on a PC
19) serial mouse	s) an expansion board containing electronics for controlling the computer output to a monitor
20) video (VGA) port	t) a sound output device
21) video memory	u) the electrical component that provides filtered mains electricity at the correct voltage for a computer
22) upgradable	v) a long thin connector that is used for adding additional electronics in the form of expansion cards