N.B. These pastpapers may rely on the knowledge gained from the **previous chapters.**

1 Five generations are recognised in the development of computers.

1. State one type of computer component for each generation.
2. State a different backing storage device for each generation.

Generation 1 Computer component	*Generation1 backing storage device*
Generation 2 Computer component	*Generation 2 Backing storage device*
Generation 3 Computer component	*Generation 3 Backing storage device*
Generation 4 Computer component	*Generation 4 Backing storage device*
Generation 5 Computer component	*Generation 5 Backing storage device*

2 Give one example of an analog device and one example of a digital device and explain each of the terms

Analog device definition:

_____

Analog device example:

_____

Digital device definition:

_____

Digital device example:-

_____

3 Explain briefly any two differences among a supercomputer, mainframe, minicomputer, microcomputer and an embedded computer excluding cost and size.

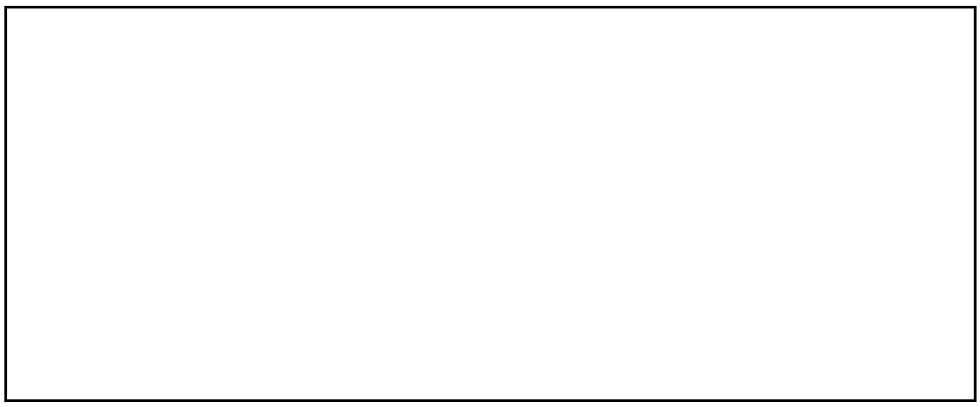
	Difference 1	**Difference 2**
Supercomputer		
Mainframe		
Minicomputer		
Microcomputer		
Embedded computer		

4 Draw a block diagram using the following labels to show how the main hardware units of a computer system are connected.

Input device **Output device** **Backing storage** **Main memory**

I/O subsystem **ALU** **CU** **CPU**

In your diagram include arrows to show clearly the flow of data between the input, output, backing storage and the CPU:



Describe the work of each component.

INPUT DEVICE: _____

OUTPUT DEVICE: _____

BACKING STORAGE:_____

CPU: _____

ALU:_____

CU:_____

Main memory: _____

I/O subsystem: _____

5 Using the term analog and digital complete the following sentences:

The milometer of a car displays its result in _____ form

The speedometer of a car displays its result in _____ form.

6 A byte is made of 8 bits. Any character typed on a computer's keyboard is represented as a byte (in ASCII format) and is transferred to and stored in the computer's internal memory. How many bytes would be needed to store the following phrase inside the computer's memory, excluding the quote marks?

"A COMPLETE COMPUTER COURSE"

_____

To transfer the phrase typed on the screen to the computer's memory, the ENTER (or RETURN) key has to be pressed. Explain why this is necessary.

_____

_____

_____

_____

7 Give one example of an application more suitable for a supercomputer than a microcomputer and justify your choice.

_____

_____

_____

_____

8 Explain the following terms and give an example.

A bit:

_____

Example:

_____

A byte:

_____

Example:

_____

Word:

_____

Example:

_____

9 SEC'98-PAPER 2B-Q4A

a. The main components of a computer system are:

- *Central Processing Unit (CPU);*
- *Input / Output Subsystem;*
- *Main Memory*
- *Backing Storage;*

[4x2]

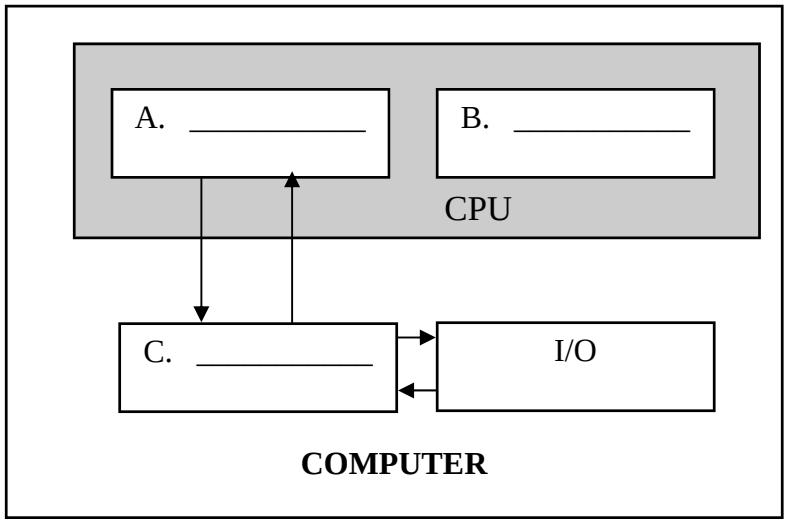
Describe the purpose of each of the above components.

10 SEC'99-PAPER 2A-Q6C

c. Mention, and briefly describe, ***one*** example of a ***dedicated computer system***, and identify its input and output devices. **[6]**

11 SEC '06-PAPER 1 Q11

Below is a simple block diagram of a computer.



(a) Name in full the three component units A, B and C in the diagram. **[3]**

(b) For each identified unit, explain its use.

*A:*_____ **[1]**

_____

*B:*_____ **[1]**

_____

*C:*_____ **[1]**

_____