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2nd Sessional

4th SEM / Comp. Engg.

Subject: Computer Organisation

Section: A

Ans - 1

i) a) RAM chip - Random Access Memory

It is a volatile memory. It is based semiconductor ICs. It is used for storing ~~lost~~ programs and data. It doesn't work when computer is turned off i.e. it stores information only when computer is on. These are of two types -

- Static RAM
- Dynamic RAM

ii) b) ROM chip - Read Only Memory

It stores the programs that are permanent in the system. It is non-volatile. Its contents are safe even if the computer is turned off.

Types of ROM are -

- PROM (Programmable ROM)
- EPROM (Erasable Programmable ROM)
- EEPROM (Electrically EPROM)

iii) Auxiliary Memory -

It is a secondary memory. Secondary memory is very important part of a computer system. It makes the general purpose computer fast and makes it capable to do even hard jobs. It stores the programs and results after program gets completed.

Auxiliary memories used are -
- Magnetic Tapes
- Magnetic Disks
- etc.

iv) Associative Memory -

It is known as the memory unit that is accessed by content rather than address is known as Associative memory. We can significantly reduce the time required to find an item from memory by accessing the contents rather than by address.

In this, whenever a word is to be read from associative memory then it is searched with the contents of that word. The memory locates all words

which matches the word are specified.

v) Cache Memory -

It is a fast and temporary memory. It is placed between processor memory and the main memory.

It stores some contents of main memory which are currently used by the CPU.

It is very costly memory and it's size is limited.

It is used to increase the speed of computer as it makes the contents available used in current program that is processing.

vi) Virtual Memory -

Virtual memory is like a concept used for fully using the secondary memory so that big programs that take space more than available main memory space can also be executed.

Virtual memory divides the data that is to be used by big programs during execution.

and that data is stored into secondary memory.
Then only a part of data is available at a time in the main memory which is currently and will be used after this. The data that is to be used after this is queued first in secondary.
And the data that is used is sent back to secondary memory from the main memory.

Section - B

Ans-2 **BIOS :**

BIOS stands for Basic Input - Output System.
It can be initiated / started after switching on the computer before the windows screen comes (loading screen). You can start this by pressing f8. By pressing f8, you enter into BIOS settings.
It is a built-in software in any computer. It usually tells what a computer can do without using information from

disks or without the need of disks.

In computers, the BIOS contains codes for controlling keyboard, display screen, mouse, etc.

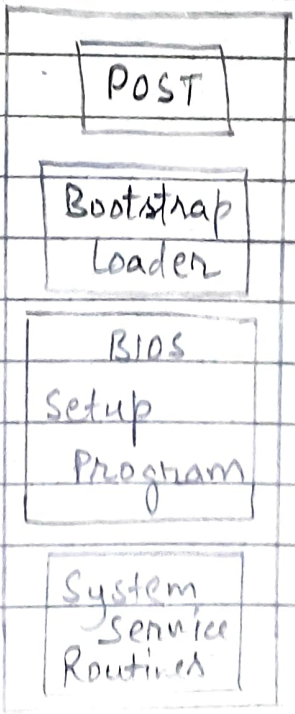
These information are stored in chips installed on computer motherboard.

It basically provides a interface between the CPU and other peripheral devices.

* BIOS functioning -

The following are the main functions of BIOS :-

a) BIOS (POST) Power on self Test
b) BIOS setup utility program
c) Bootstrap loader
d) System Service Routines, et



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BIOS Configuration -

BIOS consists of the program codes that are written in it at the time of manufacturing. BIOS codes are stored in an EEPROM (Electrically Erasable Programmable ROM) chip.

The BIOS roms are present in the upper memory. These are known as adaptor BIOS.

BIOS program code is a mixture of software and hardware that is why it is known as firmware.

BIOS roms can be six or more in one computer.

Example -