**Module – 1,2 Hardware and Its Components**

1. What is input device?

* Ans: Input Device is that which we use for input our data that called Input Device. eg: keyboard, scanner.

1. What are output device?

* Ans: which we use for get our data that is called Output Device. eg: monitor,speaker.

1. What is CPU?

* Ans: Full form is central processing unit. It is main part of computer. Data given by user after that CPU processing data and give back reply to user.

1. What are the type CPU?

* Ans: are two types of CPU.1: ALU (ARITHMATIC LOGICAL UNIT), 2: LU (LOGICAL UNIT),3:MU(MEMORY UNIT).

1. What do we need to keep CPU healthy?

* Ans: To keep CPU healthy by performing this tasks – keep all driver of hardware and software up to date. Use latest version of apps, use cooling system in pc .

Do a practical to remove processor and apply thermal paste in it and install it again,

* Ans: Done in lab .

1. Do a practical to Identify CPU and its Sockets.

* Ans: Done in lab

1. What is memory?

* Ans: computer memory is that storage device we use for store our data. There are three types of memory 1- primary memory(RAM,ROM), 2- secondary memory(SRAM,DRAM), 3- tertiary memory(CASHE MEMORY).

1. What are the types of memory?

* Ans: There are three types of memory 1- primary memory, 2- secondary memory, 3- tertiary memory.

1. Do a practical to identify memory types

* Ans: Done in lab .

1. Do a practical to install memories in system.

* Ans: Done in lab .

1. Do a practical to identify main memory frequencies.

* Ans: Done in lab .

12 What is BIOS?

* Ans: BIOS is main component that help to start and run our system.

1. Describe working of BIOS.

* Ans: BIOS is stand for basic input output system. when we start the system firstly bios is the main who identify the all components of hardware is ready for work or not. If some any problem occurs then we can see beep sound from BIOS. All components are ok then system will start and we see window in screen.

1. Do a practical to reset bios when system is on.

* Ans: Done in lab

1. Do practical of hard resetting the BIOS.

* Ans: Done in lab.

1. Do practical of identifying BIOS chip from motherboard.

* Ans: Done in lab.

1. What is CMOS?

* Ans: CMOS is stand for supplementary metal oxide semiconductor. It is responsible for system date and time.

1. What is motherboard?

* Ans: In a computer system motherboard is main essential part of system. Motherboard is hardware which connect all hardware components to software.

1. Describe types of motherboard.

* Ans: types of motherboard – STANDARD motherboard , ATX motherboard , MINI motherboards, PICO motherboard.

1. Do a practical by identifying parts of motherboard.

* Ans: Done in lab .

1. Do a practical by removing all removable parts of the motherboard.

* Ans: Done in lab .

1. What is system bus?

* Ans: system bus is used to connect main components of the computer. There mainly 70 to 100 parallel line in system bus.

1. What is chipset and types of chipset?

Chipset is hardware components which control data overflow. Where data travel any path it have to must move through this chipset. There are two types of Chipset 1 northbridge and 2 southbridge.

1. Describe how does the Northbridge chipset work, what is SMPS? And purpose Do practical to install SMPS.

* Ans: northbridge – connect cpu ,ram and graphic card.data enter by user first data will enter through peripherall ports or from sata drive- after that data will go through northbridge in cpu for proceesing. Then process data output with processor to northbridge and user see output. SMPS (switch mode power supply )smps power supply to all pats of motherboard without monitor. pc require DC voltage power supply and our home office power is in AC form. For that we require smps for power supplying to motherboard. practical Done in lab .

1. How check SMPS?

* Ans: we can check SMPS is ok or not by connecting wire in black and green port in power cable . if while connecting fan will start then SMPS is ok .

1. List out the types of storage device.

* Ans: there are many storage device is available like HDD, SSD ,PENDRIVE, DVD, FLOPY DRIVE SD CARD, ETC, now a days there floppy and DVD are not in use.

1. Describe the working process of storage device.

* Ans: Storage devices work by storing data in a way that can be accessed and retrieved when needed.when data enter from sata port to storage device data is in electronic form and in storage device(hdd,ssd) there is actuator which convert data into wave form. Then data travel to sector and then magnet and then save.

1. Do a practical to remove storage device and reinstall it and make a gpt disk

* Ans: Done in lab .

1. What is SATA?

* Ans: stands for Serial Advance Technology Attachment.it is a type of storage device, cable or a port which we can store our data.

1. Describe the working of SATA

* Ans: Serial SATA (Serial Advanced Technology Attachment) is a command and transport protocol that defines how data is transferred between mass storage devices and a computer motherboard. SATA is based on serial signaling technology where you can transfer data as a sequence of individual bits. SATA cables connect optical drives and hard drives to computers.  There are two sides to the SATA cable: the signal and power cable.

The signal cable comes with seven conductors in a flat cable. Two conductors are for sending information, while two are for receiving. When the computer reads from the disk or writes data to the storage device, the signals sent by the computer go through the SATA signal cables. The power cables are quite similar in construction but have 15 conductors. Their goal is to supply power to the optical or hard drive.

1. Do a practical to install SATA

* Ans: Done in lab .

1. What is SCSI storage and types of SCSI?

* Ans: it is stands for Serial Advance Technology Attachment. Types of SCSI – fast SCSI, wide SCSI, ultra wide SCSI, ultra 3 SCSI, ultra 640 SCSI. SCSI

1. What is I/O ports?

* Ans: Input Output Ports. We can connect all peripheral devices through I/O ports.

1. List out the I/O ports available do a practical to identify the I/O ports

## Ans: A connection point that acts as interface between the computer and external devices is called port. Ports are of two types – INTERNEL PORT , EXTERNEL PORTS. Serial Port, Parallel Port, USB Port, PS-2 Port, Infrared Port, Bluetooth Port, FIREWIRE PORT.( PRACTICAL DONE IN LAB).

1. What is boot process?

* Ans: when we press the shutdown button for pc to on from this to our pc will on and we see window screen on our monitor this all process is boot. process.

First bios check all hardware where it is ok or not then ,POST (power on self test) -OS will load on ram and after that pc will start .

1. Describe the boot process in linux.

* Ans: The booing process of Linux is devices into six steps.BIOS,MBR,GRUB,KARNEL, SystemD

### BIOS-(boot) it is first program that executed , check all hardware components ok in form or not .

### MBR

MBR stands for Master Boot Record.

It is located in the 1st sector of the bootable disk. Typically /dev/hda, or /dev/sda

MBR is less than 512 bytes in size. This has three components 1) primary boot loader info in 1st 446 bytes 2) partition table info in 64 bytes 3) MBR validation check in last 2 bytes.

It contains information about GRUB (or LILO in old systems).

GRUB – GRUB stands for "GRand Unified Bootloader, version 2" and it is now the primary bootloader for most current Linux distributions. GRUB2 is the program which makes the computer just smart enough to find the operating system kernel and load it into memory.

KARNEL – karnel is core program that system communicate with hardware and software.

SystemD – It is init system. The init system is most important process running on server (PID 1). It manages all services run in background.

1. List out the types of display

* Ans: These are Display types – CRT, PLAZMA, LCD, LED,OLED,AMOLED,QLED

Now a days CRT and PLAZMA were not in use.

1. What is printer? And type of printer

* Ans: printer is a device that we can get data in hardware form. We can convert soft copy into hard copy with printer. Dot metrix printers , colour printers, laser printers and 3d printers.

1. Do a practical to troubleshoot the improper printing.

* Ans: Done in lab .

1. What are the parts of laptop?

* Ans: These are parts of Laptop - display screen, key board , base panel ,top panel cooling fan , RAM HDD,SSD, Palm rest assembly, Touchpad, Battery , Hinges, Speaker, Optical drive, Antenna.

1. Do a practical to disassemble the laptop.

* Ans: Done in lab.