1.Comptia A+ Assignment

Module-1,2 (Hardware and its components)

Q1 – What is input device ?

- Which can we use for input our data that it known as Input Device.
- Examp. Keyboard,Mouse,Webcom,Scaner,Microphone,etc.

Q2- What are output device?

- Which can we use for get our data that know as Output Device.
- Examp. Moniter,Printer,Speaker,Projecter,etc.

Q3- What is CPU ?

-The CPU is like the brain of a computer it thinks makes decisions, and does all the work to run your apps, games, and websites.

Q4- What are the types of CPU ?

- 1 Desktop CPU
- 2 Laptop CPU
- 3 Server CPU
- 4 Mobile CPU
- 5 Embedded CPU

Q5- What do we need to keep the CPU Healthy?

- To keep the CPU healthy think of it like keeping your brain cool, clean, and not too busy Proper cooling, keep it clean, avoid overheating,use original Software,Power Protection,Regular Software updates.

Q6- Do a Practical to remove processor and apply thermal paste in and install it again ?

- 1 CPU Fan or Heatsync hatana.
- 2 Old thermal Paste ko clean karna.
- 3 New thermal paste lagana.

- 4 Heatsync our fan ko dobara lagana.
- 5 System check karna.

Q7- Do a Practical to identify CPU and its Socket.

- 1 Open the Computer
- 2 CPU fan and Heatsync ko nikale.
- 3 CPU ko nikalna he our identify karna hai.
- 4 Socket ko identify karna he.
- 5 CPU ko dobara lagana hai.

Q8- What is Memory ?

- Memory is the cognitive process of encoding, storing and retrieving in formation.

Q9- What are the types of memory ?

- 1 Sensory Memory
- 2 Short tern Memory
- 3 Long – term Memory

Q10- Do a practical to identify memory types.

Step-1 Check Ram (Main Memory)

2 Check Cache Memory (inside CPU)

3 Check Storage (Hard Drive or SSD)

Q11- Do a Practical to install memories in system.

Step- 1 Power off and Unplug

2 Open the Cabinet

3 Find the RAM Slots

4 Insert the RAM

5 Close the Cabinet

6 Plug in and Power on

7 Check if RAM is Detected

Q12- Do a Practical to identify main memory frequencies

->METHOD 1: Using Task Manager

->METHOD 2: Using a Free Tool

Q13-What is bios.

-BIOS stands for Basic Input Output System.

-it's like the starter or ignition key of your computer.

Q14- Describe working process of BIOS.

->STEP 1: Power on

2: Post

3: Check devices

4: Load bootloader

5: System Starts

Q15-Do a practical to reset bios when system is on.

->METHOD 1: Reset BIOS from BIOS menu

->METHOD 2: Reset from Windows

Q16- Do a practical of Hard resetting the BIOS.

->STEP 1: Turn Everything off

2: Open the cabinet

3: Find the CMOS Battery

4: Remove the CMOS Battery

5: put the Battery back

6: Close and Start

Q17-Do a Practical of identifying BIOS chip from the motherboard

->STEP 1: Turn off the computer

2: Look for the BIOS chip

3: Identify the Chip by Labels

4: Location Hints.

Q18- What is CMOS?

->CMOS-Complementary Metal-oxide Semiconductor.

->Alternatively referred to as a Real-Time Clock (RTC), Non-Volatile RAM (NVRAM) or CMOS RAM, CMOS.

->CMOS is an on- board, battery powered semiconductor chip inside computers that stores information.

Q19-What is motherboard?

->A motherboard is one of the most essential parts of a computer system.

->The spine of the computer is the motherboard, otherwise known as the system board and mainboard.

->A motherboard is the main printed circuit board (PCB) in a computer.

Q20-Describe types of motherboard.

->AT Motherboard.

->ATX Motherboard.

->Micro ATX Motherboard.

->ITX Motherboard.

Q21-Do a practical by identifying parts of motherboard.

->STEP 1: Open the computer case.

->STEP 2: Identify the Main Parts.

->CPU Socket.

->RAM Slots.

->SATA Ports.

->PCIe Slots.

->CMOS Battery.

->Chipsets.

->Back panel Connectors.

Q21-Do a practical by removing all removable parts from the motherboard.

->1 Turn off and Unplug the Pc.

->2 Open the PC Case.

->3 Ground Yourself.

->4 Remove the GPU .

->5 Remove ram sticks.

->6 Remove Storage Drives.

->7 Unplug Power Cables.

->8 Remove the CPU Cooler

->9 Remove the CPU

->10 Remove Add in Cards (Wi fi,Sound,etc)

->11 Unplug Front Panel and Other Connectors

Q22- What is systembus ?

->The system bus is like a main road inside your computer. It lets important parts like the CPU, Ram, and other devices talk to each other and share information.

->1 Data Bus

->2 Address Bus

->3 Control Bus

Q23- What is chipset and types of chipset ?

->A chipset is like the manager on your computer's motherboard. It helps the CPU talk to other parts like memory ,storage,graphics,cards,USB ports, and more.

->Types of Chipsets

->1 Northbridge

->2 Southbridge

->3 Modern Chipset

Q24-Describe how does the Northbridge chipset work what is SMPS ? And its purpose Do a practical to install SMPS.

->1 When you open a game your cpu needs to send info to the RAM and GPU.

->2 The Northbridge is like a traffic officer that helps guide that data quickly between them.

->3 It made sure the CPU got data from memory fast enough for the system to run smoothly.

->SMPS and Its Purpose

-> It’s like your computer’s power station.

->Purpose of SMPS

->CPU

->Motherboard

->Hard drives/ SSDs

->Graphics card

->Fans, etc

->Practical How to Install an SMPS

->1 Turn off the PC and unplug everything.

->2 Open the side panel of your pc case

->3 Find the power supply spot

->4 Slide the SMPS into place.

->5 Use screws to secure the SMPS to the case.

->6 Connect the cables

->7 Double- check all connections.

->8 Close the case, plug the system back into power, and turn it on.

Q25 How to check Smps ?

->1 Basic Visual Check

->2 Paper Clip Test

->3 Use a SMPS Tester

->4 Check With a Multimeter

Q26 List out the types of storage devices.

->1 Hard Disk Drive

->2 Solid State Drive

->3 Optical Drive

->4 USB Flash Drive

->5 Memory Card

->6 External Hard Drive/SSD

->7 Cloud Storage

Q27 Describe the working process of storage devices.

->1 You give a command

->2 The CPU tells the storage device

->3 Data gets converted to digital signals

->4 Storage device saves it

->5 Later, when you want the file

->6 Storage sends the file to RAM and CPU

Q28 Do a practical to Remove storage devices and reinstall it and make a gpt disk.

->1 Remove a storage device

->2 Reinstall the storage device

->3 Make a GPT disk [disk in windows]

->SATA stands for serial ATA {Advanced Technology Attachment}. In simple words, SATA is the cable and port that connects storage device like:
1.Hard Drives
2.Solid State Drives
3.DVD drives

Q29 Describe the working of SATA.

->1 You open a file or run a program

->2 The motherboard sends a request

->3 SATA data cable carries the info

-> SATA power cable gives electricity

->data moves quickly back and forth

->You see the file or program open on your screen.

Q30 Do a practical to install SATA

->1 Turn off the PC and unplug it.

->2 Open the side panel of your CPU case.

->3Find an empty drive slot

->4 Slide the HDD or SSD into the slot.

->5 Connect the SATA data cable.

->6 Connect the SATA power cable.

->7 Double- check all connections.

->8 Close the case and turn the PC back on.

Q31 What is SCSI storage and type of scsi?

->SCSI stands for Small Computer system interface.
->it's a type of connection used to link storage devices(like a hard drives and CD drives) to a computer.

TYPES OF SCSI:

1.Parallel SCSI(Oldest)

2.SCSI-1’ SCSI-2’SCSI-3

3.Ultra SCSI/ Ultra Wide SCSI

4.Serial Attached SCSI (SAS)

5.iSCSI (Internet SCSI)

Q32 What is I/O ports?

->Input = sending data into the computer

. Example: Keyboard, mouse ,microphone.

->Output = getting data out of the computer

. Example: Monitor ,printer, speaker.

Q33 List out the I/O ports available Do a practical to identify the I/O ports.

->USB Port

->HDMI Port

->VGA Port

->Ethernet Port

->Audio Jack

->PS/2 Port

->Serial & Parallel Ports

Q34 What is boot Process?

->STEP 1: Power On

2: Post(Power-on self Test)

3: BIOS/UEFI Starts

4: Boot Loader Loads OS

5: Operating System Starts

Q35 Describe the boot process in Linux?

->1 Power On

->2 BIOS/UEFI Runs

->3 Bootloader Starts (GRUB)

->4 Linux Kernel Loads

->5 Init System Starts (like systemd)

->6 Login Screen Appears

Q36 List out the types of display?

->1 CRT (Cathode Ray Tube)

->2 LCD (Liquid Crystal Display)

->3 LED (Light Emitting Diode)

->4 OLED (Organic LED)

->5 Plasma Display

->6 Touchscreen Display

->7 Projector Display

->8 7-Segment Display

Q37 What is Printer? And type of printer.

->A printer is a device that takes what’ s on your computer screen and prints it on paper.

->1 Inkjet Printer

->2 Laser Printer

->3 Dot Matrix Printer

->4 Thermal Printer

->5 3D Printer

Q38 Do a Practical to install the printer.

->STEP 1: Unbox the printer

->STEP 2: Plug in the Power

->STEP 3: Add Ink or Toner(if needed)

->STEP 4: Load Paper

Q39 Do a Practical to Troubleshoot the improper printing.

->1 Check Power and Connection

->2 Check for Paper Jam

->3 Check Ink or Toner

->4 Clean Print Head(for Inkjet Printers)

->5 Print a Test page

->6 Check printer Queue

->7 Reinstall or Update the Driver

Q40 What are the parts of laptop.

->Screen, Keyboard, Touchpad, Battery, Charger port, Webcam, Speakers, Microphone, USB Ports, HDMI Port, Audio Jack, Wi-Fi Card, Motherboard, CPU(Processor), RAM (Memory), Storage (HDD/SSD), Cooling Fan, Optical Drive(optional).

Q41 Do a practical to disassemble the laptop.

->STEP 1: Turn off and Unplug

->STEP 2: Remove the Battery

->STEP 3: Remove the Back Panel

->STEP 4: Identify Main Parts Inside

->STEP 5:Remove RAM(optional)

->STEP 6:Remove Storage Drive (HDD or SSD)

->STEP 7:Disconnect the Battery (if internal)

->STEP 8:Remove Keyboard and Screen (Advanced).