**TERM-1 Comptia A+ N+ Assignment**

**Module 1 [Hardware and its components]**

**Topic: The Visible Computer**

 Assignment Level Basic

1. What is hardware?

Ans: Hardware refers to the computer's tangible components or delivery systems that store and run the written instructions provided by the software.

2. What is the purpose of Hardware?

Ans : Hardware refers to the external and internal devices and equipment that enable you to perform major functions such as input, output, storage,communication,processing, and more.

* **Assignment Level Intermediate**

1. list out two types of hardware.

Ans : The five types of hardware are mentioned below.

1. Monitor

2. Motherboard

3. Keyboard

4. Mouse

5. CPU

* **Assignment Level Advance**

1. What is core hardware

Ans : A core hardware is a small CPU processor built into a big CPU or CPU socket.It can independently perform or process all computational tasks.

2. Do a practical of identifying hardware

Ans : Press the "Windows Key +R" and type in "msinfo32".

**Topic: Category of components**

* **Assignment Level Basic**

1. What are the category of components in hardware?

Ans: There are five main hardware components in a computer system Input, Processing, Storage, Output, and Communication devise.

2. Why category is needed?

Ans: We use categories to organise or the world and our thoughts.

* **Assignment Level Intermediate**

1. Do a practical to identify the components in which category they come.

Ans: The components of a computer are classified into two catogaries,namely, hardware and software. The physical parts of a computer are called hardware and software commpounts is a unit of composition contractually specified interfaces and explicit context dependencies only.

**Topic: Input Device**

* **Assignment Level Basic**

1. What is input device?

Ans: In computing, an input device is a piece of equipment used to provide data and control signals to an information processing system, such as a computer or information appliance.

Example: keyboard, mouse, scanner.

2. Why input device needed?

Ans: An input device allows data such as text, image, video or sound to be entered into computer system. And input device sends information to a computer system for processing.

* **Assignment Level Intermediate**

1. List out the input device.?

Ans: Input device is keyboard, mouse,scanners,camera somethings.

And output device is printer, monitor, speakers and ,projectors headphone.

2. Do a practical to identify the input device and describe how it works?

Ans: An input device, such as a keyboard or mouse, sends information to a computer system. The computer will then display or reproduce that information via one or more output devices. It's therefore essential for computer users to differentiate between input and output devices.

**Topic: Output Device**

* **Assignment Level Basic**

1. What are output device?

Ans: An output device is any piece of computer hardware that converts information into a human-perceptible form or, historically, into a physical machine-readable form for use with other non-computerized equipment. It can be text, graphics, tactile, audio, or video. Examples include monitors, printers, speakers, headphones, projectors, GPS devices, optical mark readers, and braille readers.

2. how does output device work?

Ans: An output device allows data to be transmitted by the computer in a human-friendly form, for example, sound being played through a speaker. Monitor - The main output device of a computer. It forms images by converting electrical energy into light in the form of tiny dots on the screen called pixels.

* **Assignment Level Intermediate**

1. List out the output device?

Ans : Examples include monitors, printers, speakers, headphones, projectors, GPS devices, optical mark readers, and braille readers.

2. Do a practical to identify the output device and describe its working process.

Ans: that converts information into a human-perceptible form or, historically, into a physical machine-readable form for use with other non-computerized equipment. It can be text, graphics, tactile, audio, or video. Examples include monitors, printers, speakers, headphones, projectors, GPS devices, optical mark readers, and braille readers.

**Topic: Motherboard**

* **Assignment Level Basic**

1. What is motherboard?

Ans: The motherboard is the backbone that ties the computer's components together at one spot and allows them to talk to each other.

2. Why it is called motherboard?

Ans: It's called a motherboard because it's the main circuit board. Much like the term “mothership," the word motherboard signifies its essential nature. Additional circuit boards can be plugged into a motherboard, and these are known as “daughterboards.”

* **Assignment Level Intermediate**

1. What it is called if we remove all components from the motherboard?

Ans : it's called components like mouse,keyboards,usb,parallel,port,cpu chip, RAM slot ,Floppy controller,IDE controller slots, ISA slots CMOS battery slot ,power supply plug in this type of components to use in motherboard.

2. Describe types of motherboards?

Ans: Motherboard come in different size, known as form factors. The most common motherboard form factor is ATX. There are some different type of ATS are known as micro-ATX mini-ATX,Flex -ATX, EATX,WATX, nano-ATX,pico-ATX,and mobile-ATX.

* **Assignments level Advance:**

1. Do a practical by identifying parts of motherboard?

Ans : First, open Run using Windows + R. When the Run window opens, type msinfo32 and press Enter.

2. Do a practical by describing the data flow in motherboard?

Ans : When you turn your computer on, power is sent from the power supply on to the motherboard. Data is transferred via data buses and goes through the northbridge and southbridge part of the chipset.

3. Do a practical by removing all removable parts from the motherboard?

Ans : Before you begin, make sure you have proper knowledge and experience with computer hardware, and ensure you take necessary precautions like disconnecting the power source and using anti-static precautions to avoid damaging the components.

1. **Safety Precautions**:
   * Turn off the computer and unplug it from the power source.
   * Wear an anti-static wrist strap or discharge any static electricity by touching a grounded metal surface before handling the components.
2. **Prepare Your Workspace**:
   * Choose a clean, well-lit, and static-free workspace.
   * Gather the necessary tools, including screwdrivers, pliers, and any other tools you may need for the specific components you're removing.
3. **Identify and Locate Components**:
   * Identify the components you want to remove from the motherboard, such as RAM, GPU, CPU, or expansion cards.
   * Locate and remove any screws, clips, or connectors holding these components in place.
4. **Remove RAM Modules**:
   * If you're removing RAM modules, press down on the tabs or levers at the sides of the RAM slots to release the modules. Gently pull the RAM modules out.
5. **Remove GPU (Graphics Card)**:
   * If you're removing a graphics card, typically, you'll need to release a latch or screw securing it to the case. Then, gently pull the GPU out of the PCIe slot.
6. **Remove CPU**:
   * Removing a CPU requires careful handling. Release the CPU socket lever, lift the retention arm, and then carefully lift the CPU out of the socket.
7. **Remove Expansion Cards**:
   * Expansion cards (e.g., sound cards, Wi-Fi cards) are usually secured with screws or clips. Remove any screws or clips holding the expansion cards in place, and then gently pull them out of their respective slots.
8. **Disconnect Cables**:
   * If any cables are connected to the components you're removing (e.g., power cables, data cables), disconnect them carefully.
9. **Store Removed Components Safely**:
   * Place the removed components in anti-static bags or on anti-static surfaces to prevent damage. Store them in a safe place.
10. **Reassemble**:
    * If you're planning to reassemble the components or replace them with new ones, follow the reverse of the removal process.

Remember that this process can vary depending on the specific motherboard and components you have, so refer to your motherboard and component manuals for detailed instructions. If you're not confident in your abilities, it's always a good idea to seek assistance from a professional or someone with experience in computer hardware. Additionally, be aware that removing some components, like the CPU, may require reapplying thermal paste when reassembling the computer.

Top of Form

**Topic: CPU**

* **Assignment Level Basic**

1. What is CPU?

Ans: The component of a computer system that controls the interpretation and execution of instructions.

2. Write the full form of CPU?

Ans: Central processing unit.

* **Assignment Level Intermediate**

1. What are the types of CPU?

Ans: There are 6 types of central processing units Single Core CPU, Dual Core CPU,Quad Core CPU,Hexa Core CPU, Octa Core CPU,Deca Core CPU.

2. What do we need to keep the CPU Healthy?

Ans: If you have a desktop or laptop, you can follow these 10 simple ideas to keep your computer healthy.

* Restart your computer at least once a week
* Hygiene your Programs
* Defrag your hard drive.
* Investigate Startup programs.
* Install Antivirus Software.
* Use an Anti-Surge Protection Extension.
* Back-Up Your Files.
* **Assignment Level Advance**

1. Is it practical to remove the processor, apply thermal paste, and install it again?

Ans: Slowly squeeze out a pea-sized amount of thermal paste directly onto the center of your CPU.

Carefully place the heatsink back on the CPU. Make sure to place it as flat as possible; this will allow the paste to spread evenly.

Affix the CPU cooler. Hold it firmly and don't move it.

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2. Do a practical to Identify CPU and its Sockets?

Ans: The socket type is printed on the computer's motherboard. Knowing the CPU socket type for a computer motherboard is essential for anyone planning to upgrade the device's central processor. CPU socket compatibility is typically listed with the computer product name and specifications in the owner's manual.

**Topic: Monitor**

* **Assignment Level Basic**

1. What is Monitor?

Ans: A computer monitor is an output device that displays information in pictorial or textual form.

* **Assignment Level Intermediate**

1. List out the types of monitors.

Ans: LCD monitor. LCD stands for Liquid crystal display and is the most widely used monitor in the world. ...

LED monitor. An LED (Light Emitting Diode) display is among the newest techs out there and can be flat or curved. ...

OLED monitor. ...

CRT monitor. ...

Plasma monitor.

2. Do a practical to identify monitor Technology?

Ans: To see which number corresponds to a display, select Start > Settings > System > Display > Rearrange your displays, then select Identify. A number appears on the screen of the display it's assigned to.

3. What are the Technologies used in monitor?

Ans: There are three type of step to have use it.

Cathode-ray tube.

Liquid-crystal display.

Organic light-emitting diode.

* **Assignment Level Advance**

1. Describe how does the crt monitor works.

Ans: A CRT works by electrically heating a tungsten coil which in turn heats a cathode in the rear of the CRT, causing it to emit electrons which are modulated and focused by electrodes.

Topic: system bus.

* **Assignment Level Basic**

1. What is system bus?

Ans : The system bus is a pathway composed of cables and connectors used to carry data between a computer microprocessor and the main memory. The bus provides a communication path for the data and control signals moving between the major components of the computer system.

* **Assignment Level Intermediate**

1. List out the types of system

Ans : There are several types of systems in various fields, each serving different purposes and functions. Here is a list of some common types of systems:

1. **Computer Systems**:
   * Personal Computers (PCs)
   * Mainframe Computers
   * Supercomputers
   * Server Systems
2. **Operating Systems**:
   * Windows
   * macOS
   * Linux
   * Unix
   * Android
   * iOS
3. **Information Systems**:
   * Management Information Systems (MIS)
   * Decision Support Systems (DSS)
   * Executive Information Systems (EIS)
   * Transaction Processing Systems (TPS)
4. **Communication Systems**:
   * Telephone Systems
   * Cellular Networks
   * Internet and Data Networks
   * Satellite Communication Systems
5. **Transportation Systems**:
   * Road Transportation Systems
   * Rail Transportation Systems
   * Air Transportation Systems
   * Maritime Transportation Systems
6. **Energy Systems**:
   * Electrical Power Systems
   * Renewable Energy Systems (e.g., solar, wind)
   * Nuclear Power Systems
   * Oil and Gas Distribution Systems
7. **Economic Systems**:
   * Capitalist Economic Systems
   * Socialist Economic Systems
   * Mixed Economic Systems
8. **Ecological Systems**:
   * Ecosystems
   * Food Chains and Webs
   * Biogeochemical Cycles (e.g., water cycle, carbon cycle)
9. **Healthcare Systems**:
   * Healthcare Delivery Systems
   * Health Information Systems
   * Public Health Systems
10. **Manufacturing Systems**:
    * Mass Production Systems
    * Just-in-Time (JIT) Systems
    * Flexible Manufacturing Systems (FMS)
11. **Environmental Systems**:
    * Environmental Management Systems
    * Climate Control Systems
    * Pollution Control Systems
12. **Social Systems**:
    * Family Systems
    * Educational Systems
    * Political Systems
    * Legal Systems
13. **Financial Systems**:
    * Banking Systems
    * Stock and Bond Markets
    * Insurance Systems
    * Payment Systems
14. **Security Systems**:
    * Home Security Systems
    * Cybersecurity Systems
    * National Defense Systems
15. **Space Systems**:
    * Space Exploration Systems
    * Satellite Systems
    * Space Station Systems
16. **Weather and Meteorological Systems**:
    * Weather Forecasting Systems
    * Climate Monitoring Systems
    * Weather Observation Systems

These are just a few examples, and there are many more specialized systems in various domains and industries. Each type of system is designed to fulfill specific objectives and functions within its respective field.

2. Describe the working of system bus?

Ans: System bus works by sharing data and other information between various aspects of the computer's hardware. For example, if you plug a universal serial bus (USB) device or connector into your computer, the system bus recognizes that data and takes it to the computer's central processing unit.

3. Do a practical to identify the system bus?

Ans: There are three type of step to follow by the identify the system bus.

1. Address lines (AL)

2. Data lines (DL)

3. Control lines (CL)

**Topic: Chipset**

* **Assignment Level Basic**

1. What is chipset?

Ans :An electronic chipset manages the flow of data between components on a motherboard. It's the traffic controller between the CPU, GPU, RAM, storage, and peripherals. Experts have referred to it as the “glue” of the motherboard.

* **Assignment Level Intermediate**

1. What are the types of chipset?

Ans : There are 7 type of chipset .

1. clock generator.

2. bus controllers.

3. system timer.

4. interrupt controller.

5. DMA controller.

6. CMOS/RAM clock.

7. keyboard controlle.

2. Which chipset does have direct contact with the cpu?

Ans :The northbridge chip is located at the top, or northern part of the motherboard and directly connected to the CPU.

3. Do a practical to identify the chipset?

Ans :Right-click the Windows icon on the toolbar, then click Device Manager.

Go down to System Devices, expand it, then look for one of the following. If there are multiple listings, look for the one that says Chipset: ALI. AMD. Intel. NVidia. VIA. SIS.

* **Assignment Level Advance**

1. Describe how does the Northbridge chipset work?

Ans : Northbridge is connected directly to a CPU via the front-side bus (FSB) to handle high-performance tasks, and is usually used in conjunction with a slower southbridge to manage communication between the CPU and other parts of the motherboard.

**Topic: Memory**

* + **Assignment Level Basic**

1. What is memory?

Ans: Memory is the process of taking in information from the world around us, processing it, storing it and later recalling that information, sometimes many years later.

2. What are the types of memory?

Ans :The four general types of memories are sensory memory, short-term memory, working memory, and long-term memory. Long-term memory can be further categorized as either implicit (unconscious) or explicit (conscious).

* + **Assignment Level Intermediate**

1. Describe memory in detail?

Ans :Memory is the electronic holding place for the instructions and data a computer needs to reach quickly. It's where information is stored for immediate use. Memory is one of the basic functions of a computer, because without it, a computer would not be able to function properly.

2. What are memory types?

Ans : There are four type of memory sensor memory,short=term memory,working memory,and long term memory.

* **Assignment Level Advance**

1. Do a practical to identify memory types?

Ans : There are two types of memories is first is primary and second is secondary.

2. Do a practical to install memories in system?

Ans : This types of process to follow and then install memory.

1. Gathering supplies.

2. Shut down your dektop.

3.Unplug the power cable.

4. Hold the power button for five seconds

5. Open the case.

6.Ground yourself.

7.Remove Exiting memory modules

8.Install memory

9.Close the computer case

10. Pulg the power cable in

so this type of process to follow and install in memories.

3. Do a practical to identify main memory frequencies?

Ans : Identifying the frequency (also referred to as clock speed) of your computer's main memory (RAM) is a straightforward process that can be accomplished through software utilities or by checking the hardware specifications. Here's how you can practically identify your RAM's frequency:

**Method 1: Using Software Utilities (Windows)**

1. **Task Manager**:
   * Press **Ctrl + Shift + Esc** or **Ctrl + Alt + Delete**, then select "Task Manager" from the menu.
   * In the Task Manager window, go to the "Performance" tab.
   * Under "Memory," you will see "Speed." This speed indicates your RAM's frequency.
2. **CPU-Z** (Third-Party Software):
   * Download and install a free utility like CPU-Z from the CPUID website
   * Run CPU-Z.
   * In the "Memory" tab, you will find information about your RAM, including its "DRAM Frequency." This frequency is your RAM's speed in MHz.

**Method 2: Using BIOS/UEFI (Universal Extensible Firmware Interface)**

1. **Restart Your Computer**:
   * Restart your computer and enter the BIOS/UEFI setup utility. The key to access BIOS/UEFI varies (common keys include F2, Del, F12, or Esc). Refer to your motherboard's manual for the specific key.
2. **Find RAM Frequency**:
   * Navigate through the BIOS/UEFI menus to find information about your RAM. The exact location and wording may differ based on your motherboard's manufacturer and BIOS/UEFI version.
   * Look for a section like "Memory Settings," "DRAM Configuration," or "System Information."
   * In this section, you should find details about your RAM, including its frequency (often displayed in MHz).
3. **Exit and Save Changes**:
   * After noting the RAM frequency, exit the BIOS/UEFI utility. Be careful not to make any unintended changes.

**Method 3: Check Manufacturer's Documentation**

If you have the documentation for your computer or motherboard, you can look up the RAM's specifications, including its frequency. This information is often provided in the user manual or on the manufacturer's website.

**Method 4: Physical Inspection**

In rare cases, the RAM module itself may have a sticker with information about its specifications, including the frequency. However, this method requires opening your computer case and should only be done by those comfortable with hardware maintenance.

Remember that the RAM frequency is typically measured in megahertz (MHz) and indicates how many cycles per second the RAM can perform. Higher frequencies generally indicate faster RAM, which can lead to better performance, especially in memory-intensive tasks. If you're considering upgrading your RAM, ensure that the new RAM is compatible with your motherboard and meets your system's requirements.

**Topic: System Unit**

* **Assignment Level Basic**

1. What is System Unit?

Ans : System unit is the part of a computer that houses the primary devices that perform operations and produce results for complex calculations. It includes the motherboard, CPU, RAM and other components, as well as the case in which these devices are housed.

* **Assignment Level Intermediate**

1. How does system unit work?

Ans : A system unit is the part of a computer that houses the primary devices that perform operations and produce results for complex calculations.

2. What are the components and system unity?

Ans: Components of System Unit. Some of the components in the system unit are; random access memory (RAM), compact disk read-only memory (CD-ROM), hard disk, motherboard, fan, processor or central processing unit (CPU), power supply, and floppy disk drive.

* **Assignment Level Advance**

1. Do a practical to identify system unit?

Ans : In the Settings menu, click on System. Scroll down and click on About. On this screen, you should see specs for your processor, Memory (RAM), and other system info, including Windows version. To check your PC hardware specs, from the desktop find the icon that is labelled “My Computer”.

2. Do a practical to assemble and disassemble system unit?

Ans : There are 8 step to follow that use is assemble or disassemble of system.

Step 1: Open The Case. ...

Step 2: Install The Power Supply. ...

Step 3: Attach The Components To Motherboard. ...

Step 4: Install motherboard.

Step 5: Install internal drives.

Step 6: Connect all internal cables.

Step 7: Install motherboard power connections.

Step 8: Connect external cables to the computer.

**Topic: BIOS**

* **Assignment Level Basic**

1. What is bios?

Ans :BIOS (Basic Input/Output System) is the program a computer's microprocessor uses to start the computer system after it is powered on. It also manages data flow between the computer's operating system (OS) and attached devices, such as the hard disk, video adapter, keyboard, mouse and printer.

* **Assignment Level Intermediate**

1. What is the full form of bios 2.Describe working process of BIOS?

Ans : bios full form is BASIC INPUT AND OUTPUT SYSTEM.

The working process is a computer's microprocessor uses to start the computer system after it is powered on .

* **Assignment Level Advance**

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

Ans : There are 6 steps to follow to reset your bios.

1. Turn on the computer.

2. Tap the F2 key several times until Entering Setup appears.

3. Reset the BIOS to factory defaults. ...

4. Press the Esc key and select Save and exit or Exit.

5. Press the Enter key to save all changes and exit the BIOS setup screen.

6. The computer restarts.

2. Do a practical of Hard resetting the BIOS?

Ans :You can reset the BIOS manually by removing the CMOS battery of the mainboard. The battery is often a coin cell, typically used in wristwatches. Once the battery is removed, press the power button for about 15 seconds.

3. Do a practical of identifying BIOS chip from the motherboard?

Ans: Identifying the BIOS chip on the motherboard is simple. The exact location can easily be found using the motherboard's manual or through physical inspection. However, you must identify its make and model to replace the BIOS chip. You must read the inscription on top of the BIOS chips.

**Topic: CMOS**

* + **Assignment Level Basic**

1.What is CMOS?

Ans: CMOS is the battery of powers the BIOS firmware in looptops.

* + **Assignment Level Intermediate**

1. What is the full form of CMOS?

Ans : CMOS Full form is COMPLEMENTARY METAL OXIDE SEMICONDUCTOR.

2. Describe the working process of CMOS.

Ans : The CMOS working is the battery of powers the BIOS .

* + **Assignment Level Advance**

1. Do a practical of identifying cmos?

Ans : The practical of identifing the CMOS process is press 'F1' (AMI), 'Del' (Award), or 'F2' (Phoenix).

2. Do a practical of installing cmos?

Ans :

3. How do we know that cmos is not working?

Ans : When is CMOS not working in computer first is your laptop has difficult booting up, if drivers disappear, and if your laptops date and time are incorrect.so this type of problem you have to faced meaning is your cmos is not work.

**Topic: Boot process**

* + **Assignment Level Basic**

1.What is Boot Process?

Ans : Booting is the process of starting a computer as initiated via hardware such as a button or by a software command.

 Assignment Level Intermediate

1. What is the first process of boot?

Ans : There are six types of booting process so is first is BIOS and SETUP PROGRAM.

2. What is the final stage in the boot process?

Ans : The final stage in the boot process is Users authentication.

3. Describe the boot process in Linux?

Ans : The machine's BIOS (Basic Input/Output System) or boot microcode hundreds and runs a boot loader.

* + **Assignment Level Advance**

1. Describe about working with the grub bootloader?

Ans : Its function is to take over from BIOS at boot time, load itself, load the Linux kernel into memory, and then turn over execution to the kernel.

2. Describe working process of boot loader?

Ans : The working process is executes when a new application needs to be reloaded into the rest of program memory.

**Topic: SMPS**

* + **Assignment Level Basic**

1. What is SMPS?

Ans : SMPS is an electronic power supply system that makes use of a switching regulator to transfer electrical power effectively.

2. What is the process of SMPS?

Ans : SAMPS is that makes use of a switiching regulator to trasfer electrical power effectively.

* + **Assignment Level Intermediate**

1. DO a practical to install SMPS?

Ans : SMPS to install that Find the main power cable on the power supply and insert 24 pin connector in a motherboard, then attach the secondary power cable to the motherboard.

2. How many sata connectors are there in normal smps?

Ans : There are sata connectors is all the SMPS comes with 24 pin detachable connector (20+4) that can be split into 2o pin and 4 pin cables.

* + **Assignment Level Advance**

1. Do a practical to troubleshoot a smps without plugging it to the system?

Ans : There are 6 types of step to follow then troubleshoot a smps in without plugging.

1. Open your computer's casing

2. Remove the connections from the SMPS to all the peripherals of your computer.

3. With your SMPS removed, take a paper clip and bent it in a shape of 'U' shape.

4. Find the 24-pin connector from your SMPS (obviously it is the bigger connector from SMPS).

5. Insert one end of the bent paper clip into the green terminal and the other end to the black terminal.

6.Turn on the SMPS with the wire inserted.

2. How many pins does atx power connector have?

Ans : There are 8 pin (or 4+4-pin) auxiliary connectors providing additional power to the CPU and a main 24-pin power supply connector.

**Topic: RAM**

* + **Assignment Level Basic**

1. What is RAM?

Ans : RAM is the main memory in a computer.

2. What is the full form of RAM?

Ans : RAM full form is RANDOM ACCESS MEMORY.

 Assignment Level Intermediate

1. What are the types of ram?

Ans : There are three types of RAM Static RAM (SRAM) Dynamic RAM (DRAM) Synchronous Dynamic RAM (SDRAM).

2. Do a practical to identify RAM.

Ans : The identifiy RAM of Press Ctrl + Shift + Esc to launch Task Manager. Or, right-click the Taskbar and select Task Manager.

Select the Performance tab to see current RAM usage displayed in the Memory box, and total RAM capacity listed under Physical Memory.

* + **Assignment Level Advance**

1. Do a Practical to identify ram and install it in a proper system?

Ans :There are three type of step to follow that is install in a proper system in RAM.

1.Purchase RAM that's compatible with your computer. RAM comes in a variety of models, sizes, and speeds. The type you'll need to buy depends on your ...

2.Shut down the computer. Once you have your RAM, unplug your PC's power plug and any peripherals connected to the computer, such monitors, keyboards, and mice.

3.Open your computer case. Lay your computer tower on its side, so that you can access the

**Topic: Device and cable**

* + **Assignment Level Basic**

1. What are the types of devices?

Ans : There are two types of devices that allows to interaction between the computer and an end user input devices and output devices .

2. What are the types of cable?

Ans : There are the five to six types of cable are Twisted pair cable, coaxial cable, multi-conductor cable and Fiber optic cable.

 Assignment Level Intermediate

1. What cables are used to connect printer?

Ans : The cable are used to connect printer is USB printer Cables.

2. What was the first cable founded by Apple for data transfer?

Ans : The first canle founded by Apple Lightning is a proprietary computer bus and power connector created and designed by Apple Inc.

 Assignment Level Advance

1. Do a practical to identify the sata cables?

Ans : The simplest way to identify the difference between the two types is that data is the smaller of the two (typically 7-pin) whereas power is larger (typically 15-pin).

2. Do a practical to identify and install the cables in the system?

Ans : The first phase of the work starts with the installation of a pilot rope that acts as a foothold over the entire span of the bridge, connecting the main towers and anchorages.

Topic: Expansion card and slots

 Assignment Level Basic

1. Why expansion card needed?

Ans : The primary purpose of an expansion card is to provided or expand on features not offered by the motherboard.

2. Why expansion slots needed?

Ans : The expansion slots is used to add an adapter to the motherboard.

 Assignment Level Intermediate

1. What are the types of expansion card?

Ans : The expansion card is PCI Express, PCI,and AGP.

* + **Assignment Level Advance**

1. Do a practical to identify the types of expansion slots?

Ans : Expansion slots used in PCs are usually some form of PCI (Peripheral Component Interconnect), AGP (Accelerated Graphics Port), or PCIe (PCI Express). Other types of expansion slots that have been included with older PCs are ISA (Industry Standard Architecture), EISA (Extended Industry Standard Architecture), MCA (Micro Channel Architecture), and VL-bus (sometimes called VESA [video electronics standards association] bus). A technician must be able to distinguish among adapters and expansion slots and be able to identify the adapters/devices that use an expansion slot. A technician must also realize the abilities and limitations of each type of expansion slot when installing upgrades, replacing parts, and making recommendations.

2. Do a practical to install the Graphics card?

Ans : This type of step to follow that and install in Graphics Card.

Unplug your PC and open it ready for the upgrade.

Unpack and unwrap your graphics card.

Seat the graphics card above the vacant slot and push straight into the slot until you feel it seated.

Tighten up bracket screws, and connect the power cables from the PSU if any are required.

3. Do a practical to install LAN card

Ans :There are some step to follow it and install land card.

1. Open the PC case. The power should be off when you do this.

2. Ensure that you have an antistatic wrist strap attached to your wrist and grounded to the PC when working with it.

3. Remove the strap before you switch on the power.

4. Now take the NIC card and install it into one of the PCI slots by aligning the guide notches with the PCI slot.

5. Press straight down with gentle pressure until the card snugly fits into the PCI slot.

6. Secure the card with a single screw used to attach the card to the PC.

7.Check the card whether it moves from its position. If it does, it could damage itself when the PC is turned on.

8. Close the PC case and turn on the power.

9. Check if the internet works or not. If not then check the connections and repeat the above steps.

**Topic: I/O Ports**

* + **Assignment Level Intermediate**

1. What is I/O ports?

Ans : I/O ports is Input/Output a socket on a computer that a cable is plugged into.

2. List out the I/O ports available?

Ans : There are some ports are important types of ports are as per follow:

Serial Port : Used for external modems and older computer mouse. ...

Parallel Port : Used for scanners and printers. ...

Universal Serial Bus (or USB) Port : ...

Firewire Port : ...

Ethernet Port :

3. Do a practical to identify the I/O ports?

Ans :The identify the I/O ports to Type “netstat -a” without the quotation marks and press the “Enter” key.

**Topic: BIOS & CMOS**

* **Assignment Level Basic**

1. What is BIOS?

Ans : the program a computer's microprocessor uses to start the computer system after it is powered on.

2. What is CMOS?

Ans :Complementary Metal Oxide Semiconductor.” The CMOS battery powers the BIOS firmware in your laptop [2].

 Assignment Level Intermediate

1. What is the role of BIOS in i/o?

Ans : BIOS (basic input/output system) is the program a computer's microprocessor uses to start the computer system after it is powered on.

2. What is the role of i/o in CMOS?

Ans : The CMOS is a physical part of the motherboard: it is a memory chip that houses setting configurations and is powered by the onboard battery.

 Assignment Level Advance

1. Do a practical to reset BIOS

Ans : This type of step to have to follow that and reset it BIOS.

Press and hold your power button for several seconds.

Hold down the power button on your computer for about 10-15 seconds to discharge any remaining power stored in the capacitors.

2. Do a practical to remove cmos?

Ans: So first step is power of you’re laptop and then open your hardware slots and when easily

use a metal object like a screwdriver to touch the two pins for a few seconds. Always turn off your computer and unplug the power cord out of the power outlet before clearing the CMOS values.

**Topic: Laptop & storage**

* + **Assignment Level Basic**

1. What is laptop?

Ans : The laptop is a small commuter that is easy to carry and that can use batteries for power.

2. Why laptop is used widely now a days?

Ans : Laptop have become popular among the new generation the number of laptops purchased has increased because of easy internet access,prtability and size.

* + **Assignment Level Intermediate**

1. Describe the working process of laptop?

Ans: Laptops combine all of the input and output capabilities and components of a desktop computer, including its display screen, keyboard, speakers, data storage, disc drives, and pointing devices (a touchpad or a trackpad), with a processor and operating system into a smaller device.

2. What is storage?

Ans : Storage is a process through which digital data is saved within a data storage device by means of computing technology.

3. List out the types of storage?

Ans : There are two types of storage primary storage and secondary storage.

** Assignment Level Advance**

1. Do a practical to identify types of storage?

Ans : There are some types of storage to have use them .

4 Types of Computer Data Storage.

Computer Data Storage #1: Cloud Storage.

Computer Data Storage #2: Cloud Backup.

Computer Data Storage #3: USB Flash Drive.

Computer Data Storage #4: Optical Media Storage.

2. Do a practical to disassemble and assemble the storage?

Ans : There are some step to follow that.

Step 1: Open The Case. ...

Step 2: Install The Power Supply. ...

Step 3: Attach The Components To Motherboard. ...

Step 4: Install motherboard.

Step 5: Install internal drives.

Step 6: Connect all internal cables.

Step 7: Install motherboard power connections.

Step 8: Connect external cables to the computer.

3. Do a practical to install the storage devices?

Ans : There are some step to follow by to install in storage devices.

1. Make sure that you're using a Windows computer. While it's technically possible to replace an iMac hard drive, doing so is incredibly difficult and could ...

2.Back up your computer's data. If you're removing an existing hard drive from your computer, back up its information so that you can restore the information ...

3.Make sure you are able to install a hard drive on your computer. Before you go purchasing a new.

**Topic: Printer**

* **Assignment Level Basic**

1. What is printer?

Ans : A printer is a device that accepts text and graphic output from a computer and transfers the information to paper,usually to standard-size,8.5"by 11" sheets of paper.

2. Why is printer needed?

Ans : Printer is needed because It's Easier to Edit and Modify Printed Documents. Regardless of what argument you put forth, it's an undeniable fact that editing and making corrections is much easier on a printed document than on a digital document.

* **Assignment Level Intermediate**

1. Describe the working process of printer?

Ans : The printer's laser projects your print onto a drum. A drum then uses static electricity to attract the dry toner to the drum's cylinder. The drum then rolls the toner onto the paper to create your print. The toner powder is melted and pressed onto the paper with heat from the fuser as it goes through a set of rollers.

2. What are the types of printer?

Ans : There are several type of pinter is available but is most usefull printer list is that.

1.Laser Printers.

2.Solid Ink Printers.

3.LED Printers.

4.Business Inkjet Printers.

5.Home Inkjet Printers.

6.Multifunction Printers.

7.Dot Matrix Printers.

8.3D Printers.

* **Assignment Level Advance**

3. Do a practical to install the printer?

Ans :This type of step to follow them.

Select Start > Settings > Bluetooth & devices > Printers & scanners . ...

Next to Add a printer or scanner, select Add device.

Wait for it to find nearby printers, then locate the one you want to use, and select Add device.

4. Do a practical to Troubleshoot the improper printing?

Ans : This type of step to follow them.

1.Unplug and restart your printer. ...

2.Check cables or wireless connection. ...

3.Uninstall and reinstall your printer. ...

4.Install the latest driver for your printer. ...

5.Clear and reset the print spooler. ...

6.Change a printer's status to "online" ...

7.Unplug and restart your printer.