LESSON NOTES 8

Year/Level: 13   **Subjects: Computer Studies**

Strand:	CE 2 Computers and Application
Sub-strand:	CE13.2.1 Hardware, Software Installation and Basic Networking
Content Learning Outcome:	❖ System unit ❖ Hardware components

Lesson Notes

- ❖ **System unit** is also known as system cabinet, chassis.
- ❖ The typical components that you find inside a computer case include: System board, hard drive, Removable drives such as DVD and CD ROM, Power supply, Cooling fan, Adapter cards, Wires, cables and connectors.

Hardware Components
The common hardware components are:
Memory card [RAM]
✓ Memory (RAM) is temporary electronic storage, used to hold software and data when the software is running.
✓ It is also temporary (volatile) as data is lost when the computer is switched off.

SIMMs (Single Inline Memory Module)
✓ SIMMs combines several chips on a small circuit board plugged into a retaining socket.
✓ 30 pin and 72 pin with various capacities and specifications
✓ SIMMs has chips on one side of the circuit board.
DIMMs (Dual Inline Memory Module)
✓ DIMMs on the other hand have 72 pins and have chips on both sides.

Video card
✓ The video card which is also known as a graphics card is a component that plugs into the motherboard
✓ Its purpose is to make the picture signal to be displayed on the monitor
✓ The video card has a socket on it for the cable used to take the signal to the monitor

Optical drive
✓ Optical drive which is also known as DVD or CD drive can sometimes become damaged or unreliable, which would be a reason for upgrading this component

Hard drive
✓ Known as a fixed or hard disk
✓ Reason for installing a hard drive is to upgrade to a larger drive for increased capacity.
✓ Hard drive capacities are measured in gigabytes (GB) or terabytes (TB).
✓ Types of hard drive are:

ESDI (Enhanced Small Drive Interface)
Consist of a controller card connected to an expansion slot. The ribbon cables run between the expansion card and the hard drive.

IDE (Integrated Drive Electronics)
IDE hard drives have the disk controller circuitry integrated within the hard drive and does not need an additional controller card. The ribbon cables connect directly from the motherboard to the hard disk.

SCSI (Small Computer System Interface)
SCSI cards provide a high-speed parallel interface. They are usually in the form of **expansion boards/ adaptors**. These controller cards have the capability of connecting seven (7) hardware devices such as more hard disks, CD-ROMS, DVD-ROMS etc. SCSI cards save wastage of expansion slots.

Network device
- ✓ Network devices are any hardware used with a network, such as a switch or router.
- ✓ A network device such as a network card may need to be replaced to increase the speed of the computer.

Ports
A port is a socket where I/O device can be connected to the system, such as USB.

Serial Ports
- ✓ These ports allow data to travel in only one direction at a time – into the computer of out. E.g. mouse, modems, monitors.
- ✓ These ports are also referred to as **COM** ports.
- ✓ (9-pin male)
- ✓ Serial ports transmit one (1) bit at a time – a relatively slow process.

Parallel Port
- ✓ These ports only transmit data to output devices namely printers
- ✓ Also referred to as LPT ports
- ✓ (25-pin female)
- ✓ Parallel ports transmit 8 bits at a time.

USB ports (Universal Serial Bus)
- ✓ A new type of port that can accommodate new types of I/O devices.
- ✓ This port supports plug and play.

Questions

1) What is the reason for installing hard drive?

2) Differentiate between serial and parallel port?

3) Differentiate between SIMM and DIMM?

4) What is the purpose of video card?

5) Why prefer using USB rather than optical drive?