

LESSON NOTES 10

Year/Level: 12      Subjects: Computer Studies

<b>Strand:</b>	Computer and Applications
<b>Sub-strand:</b>	CE 12.1.5 Communications and Networks
<b>Content Learning Outcome:</b>	❖ Computer networks

Lesson Notes

Computer Networks

- ❖ A computer network is formed when two or more computers are connected to each other either to exchange data or share information and resources.
- ❖ Network connections between computers are typically created using cables (wires).
- ❖ However, connections can be created using radio signals (wireless/Wi-Fi), telephone lines (and modems) or even, through a satellite links for very long distances.

**Using a computer connected to a network allows us to:**

- ❖ Easily share files and data
- ❖ Share resources such as printers and Internet connections
- ❖ Communicate with other network users (email, instant messaging, video-conferencing, etc.)
- ❖ Store data centrally (using a file server) for ease of access and back-up (Keep all of our settings centrally so we can use any workstation)

**In particular, if we use a computer connected to the internet, we can:**

- ❖ Make use of on-line services such as shopping (e-commerce) or banking
- ❖ Get access to a huge range of information for research
- ❖ Access different forms of entertainment (games, video, etc.)
- ❖ Join on-line communities (e.g. MySpace, Facebook, etc.)

**Network Interface Card (NIC)**

- ❖ These are expansion cards located within the system unit that connect the computer to a network.

**Network Operating System (NOS)**

- ❖ Control and coordinate the activities of all computers and other devices on a network.

**Client**

- ❖ A node that requests and uses resources available from other nodes.

**Server**

- ❖ A node that shares resources with other nodes.

**Host**

- ❖ Any computer system that can be accessed over a network.

**Switch**

- ❖ A central node that coordinates the flow of data by sending messages directly between sender and receiver nodes.

**Router**

- ❖ Is a network device that connects together two or more networks
- ❖ A common use of a router is to join a home or business network (LAN) to the Internet (WAN)

**Bridge**

- ❖ Is a network device that typically links together two different parts of a LAN
- ❖ A bridge links independent parts of a LAN so that they act as a single LAN

**Questions**

- 1) State the long form of NIC, NOS?
- 2) Differentiate between modem and router?
- 3) Name the device that connects two different parts of LAN?
- 4) If switch is not able to coordinate the flow between sender and receiver, what might be the issue?