

## FORM 3

### LESSON 3

#### INTRODUCTION TO COMMUNICATION TECHNOLOGIES

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#### HOW NETWORKING DEVICES WORK

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- a. **Hub** is a basic networking device that connects multiple devices. It works by broadcasting data to all connected devices without filtering or directing the traffic.
  - b. A **switch** is a device that connects multiple devices and forwards data frames based on **MAC addresses**.
  - c. A **Repeater** is a networking device which receives weak signals, amplifies and regenerate them
  - d. A **bridge** is a networking device that divides a busy network into segments and transmit data by broadcasting
  - e. A **modem** is a device that is used to convert a digital signal to analogue signal for transmission and from analogue to digital at the receiving end.
  - f. A **Network Interface Card (NIC)** is a hardware component that enables a device, such as a computer, to connect to a network
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#### EXERCISE 3

Here are some of the questions for you to practice. No need for you to send responses, its for your own practices.

1. Explain how the following networking devices work

- a. Hub

\_\_\_\_\_  
\_\_\_\_\_  
(2 marks)

- b. Switch

\_\_\_\_\_  
\_\_\_\_\_  
(2 marks)

- c. A modem

\_\_\_\_\_  
\_\_\_\_\_  
(2 marks)

- d. A bridge

e. \_\_\_\_\_  
\_\_\_\_\_ (2 marks)

**END OF THE LESSON 3**