

CDSM Department

CD - 201

Computer Application - II

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MM: 15

Time: 1 hrs.

Q.1: Explain any two :-

1) Router → A router is a networking device that forwards data packets between computer networks. Routers perform the traffic directing functions on the internet. A router sorts incoming data and distributes it to the correct destination. A router ensures that requests from within the network for information over the internet are distributed to the correct computer within the network. Routers can be used for wired connections, wireless connections or both. While routers are used to connect different networks, they only work if the network protocols are the same. Router is mainly a network layer device.

2) Repeater → A repeater operates at the physical layer. Its job is to regenerate the signal over the same network before the signal becomes too weak or corrupted so as to extend the length to which the signal can be transmitted over the same network. An important point to be noted about repeaters is that they do not amplify the signal. When the signal becomes weak, they copy the signal bit by bit and regenerate it at the original strength.

(2)

- 3). Bridge → A bridge operates at data link layer. A bridge is a repeater, with add on functionality of filtering content by reading the MAC addresses of source and destination. It is also used for interconnecting two LANs working on the same protocol. Bridge connect two different networks together and providing communication between them.

Q.2. Explain the following function with example.

Ans.2. 1). SUM → SUM function in Excel performs the addition of numbers. SUM function can accept numbers both as individual arguments and also as a complete range of cells.

$$= \text{SUM}(\text{num}_1, \text{num}_2, \dots, \text{num}_n)$$

OR

$$= \text{SUM}(\text{Cell Range 1}, \text{Cell Range 2}, \dots, \text{Cell Range n})$$

$$\text{Ex. 1)} = \text{SUM}(10, 11, 19)$$

$$= 40$$

$$\begin{aligned} \text{2). } &= \text{SUM}(10.2, 9.6, 2.4) \\ &= 25.8 \end{aligned}$$

2). PRODUCT → The product function multiplies all the numbers given as arguments and returns the product.

$$= \text{PRODUCT}(A1, A2)$$

$$= \text{PRODUCT}(5, 15, 30)$$

$$= 2250$$

(3)

A
1 S
2 15
3 30
4 2

= PRODUCT (A1:A4)

= 4500

- 3). UPPER → upper function allows to convert text to uppercase. It is categorized as a string / Text function.

UPPER (text)

eg: =UPPER (excel)

= EXCEL

= UPPER(A1)

- 4). AVERAGE → Average function returns the average (arithmetic mean). It is categorized as a statistical function.

⇒ =AVERAGE (number1, number2... . . . numbern)

eg: =Average (10.5, 7.2)

= 8.85

= Average (B2, B3)

= 8.85

B
2 10.5
3 7.2

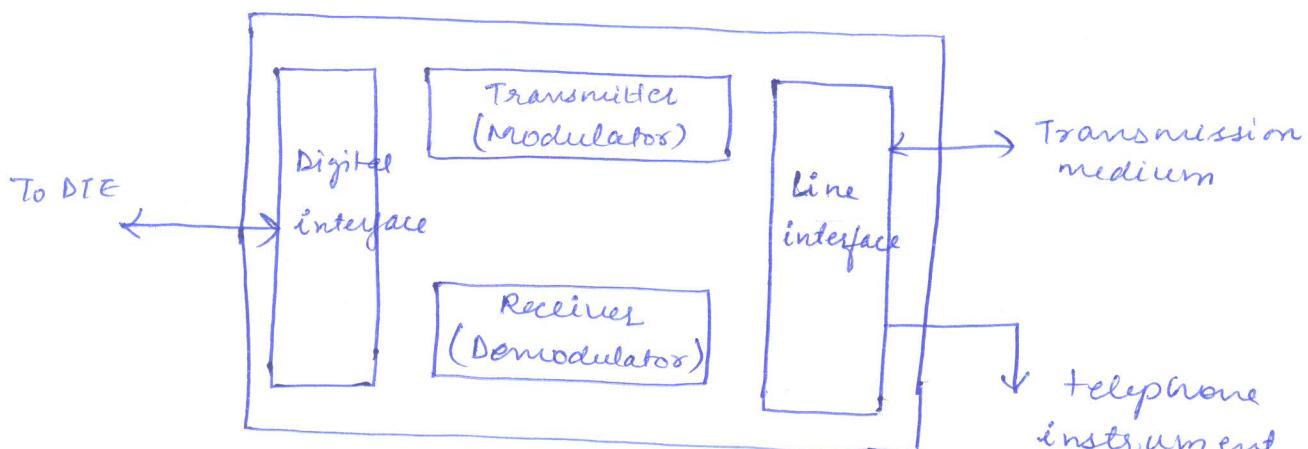
Q.3. Explain Modem.

Ans. modem means modulator and demodulator.

A modem connects our computer to a standard phone line or to our cable, which allow us

④

to send data or receive data. A modem is a conversion device that converts signals from one device into signals another device can read. Modem convert the digital data of a computer into an analog signals, and the demodulator parts converts analog signals to digital signals. The sending modem modulates the data into a signal that is compatible with the phone line, and the receiving modem demodulates the signal back into digital data. wireless modems convert digital data into radio signals and back. Modem came into existence in the 1960s as a way to allow terminals to connect to computers over the phone lines.



Block diagram of modem

Types of modem:-

1). Half duplex and full duplex modems

Half duplex

→ A half duplex modem permits transmission in one direction at a time.

Full duplex

→ A full duplex modem allows simultaneous transmission in both directions.

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## 27. internal modem and external modem.

### internal modem

→ An internal modem is a network device that is contained on an expansion board that plugs into the motherboard.

internal modems come into two types :-

- dial-up
- wireless

### external modem

A modem that resides in a self-contained box outside the computer system.

OR

## Q.4. Explain search engine.

Ans. Search Engine is a software that is designed to search for information on the world wide web. It uses the keywords to search for documents that relate to these key words and then puts the result in order of relevance to the topic that was searched for.

### Working of search engine →

A search engine is a website, but generally speaking, a search engine wouldn't normally provide answers straight away. Search engines travel through websites using computers to make an electronic copy of website. When we enter a search term and it brings up a number of pages from its database which it thinks are applicable to your term.

terms.

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## Types of search Engine

- 1). Crawler-Based Search Engine
- 2). Directories
- 3). Hybrid search engines
- 4). Meta search engines