

mid term

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Submitted

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Programme : Bsc (Telecom)

Subject : Intro. to telecommunication
Systems.

Module :

Q₁ :-

PART a):- Name different network topologies?

And Cite an advantage of each type:

Ans:-

Network topology refers to the arrangement of Computers Connected in a network through some physical medium such as Cable, optical etc. Types of network topologies are as follows.

1. Hierarchical Topology:

The hierarchical topology is also known as tree topology, which is divided into different levels connected with the help of twisted Pair, Coaxial Cable or fiber optics.

⇒ Advantages of hierarchical topology are:

- The hierarchical topology is generally supported by most hardware and software.
- In the hierarchical topology, data is received by all the nodes efficiently because of point-to-point link.

2. Linear Bus Topology:

In the linear bus topology, all the nodes are connected to the single backbone or bus with some medium such as twisted pair, coaxial cable etc.

⇒ Advantages of linear bus topology are:

- The linear bus topology usually requires less cabling.
- The linear bus topology is relatively simple to configure and install.
- In the linear bus topology, the failure of one computer does not affect the other computers in the network.

3. Star Topology :

In the star topology, all the nodes are connected to a common device known as hub. Nodes are connected with the help of twisted pair, coaxial cable or optical fiber.

⇒ Advantages of star topology are:

- This topology allows easy error detection and correction.
- In the star topology, the failure of one computer does not affect the other computers in the network.
- Star topology is easy to install.

4. Ring Topology :-

In the ring topology, the nodes are connected in the form of a ring with the help of twisted pair cable.

⇒ Advantages of ring topology are:

- Each node has an equal access to other nodes in the network.
- Ring topology is easy to configure and install.
- Addition of new nodes not degrade the performance of the network.

5. Mesh Topology :

In mesh topology, each Computer is connected to every other Computer in point-to-point mode.

⇒ Advantages of mesh topology are:

- Each Connection Can Carry its own data load.
- It is robust.
- A fault is diagnosed easily.
- Provides security and privacy.

Q # 1

PART (b): What is the difference between a Physical address, Logical address and a Port Address ?

Ans :- Difference Between a Physical address and logical address:

⇒ "The Physical address is the local address of a node; it is used by the data link layer to deliver data from one node to another within the same network."

⇒ "The logical address defines the sender and receiver at the network layer and is used to deliver messages across multiple networks."

The port address (service-point) identifies the application process on the station."

Q# 1:-

PART (C) → How OSI and ISO are related to each other ?

Ans:- OSI and ISO

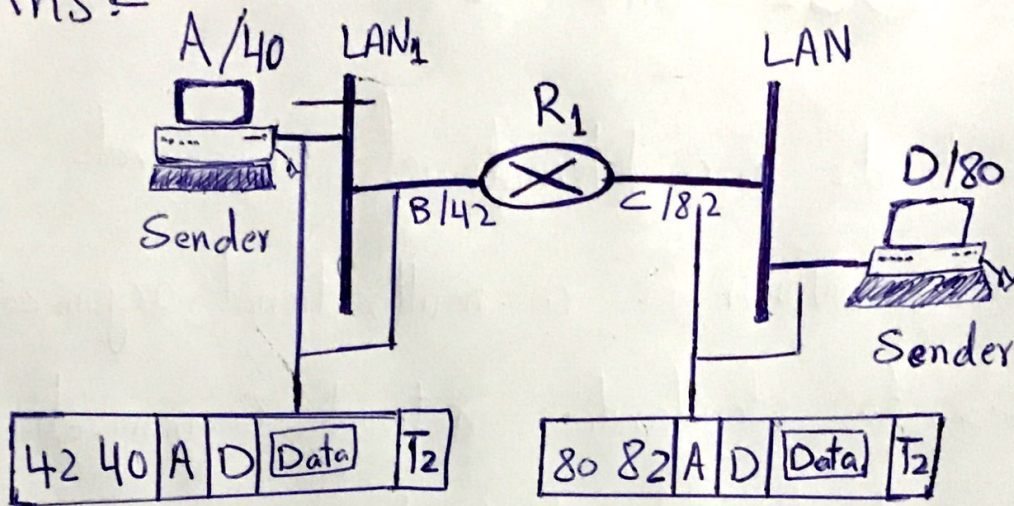
ISO stands for International standards organization which is a multinational organization that tries to standardize network communication protocols at the international level.

OSI (Open System Interconnection) is a model that ISO put together as a networking communication standard.

Q# 2:

PART a):- For figure below, Computer A sends a messages to Computer D via LAN 1,?

⇒ Ans:-



⇒ Assume that the running Computer A Port i
running Computer D port address j

