18/04/19

Chapter-1
Networking Concepts

Question / Answer -

Ques-1 What do you understand by Computer Networking? Name the types of computer networks.

Ans= When a number of computers are connected in order to communicate or share information, they form a network, which is called computer network. A computer network can be established between two or more computers linked together in a room, town, building or across the globe. There are four types of network -

i-) PAN - Personal Area Network.
ii-) LAN - Local Area Network.
iii-) MAN - Metropolitan Area Network.
iv-) WAN - Wide Area Network.

Ques-2 Differentiate between PAN and MAN.

Ans= PAN - It stands for Personal Area Network. This type of network allows communication among devices in the personal range of an individual. This type of network covers only few meters of area. It is widely

used to transfer small files between PC, laptop, digital camera, tablet etc. It can be created using USB cable, bluetooth, Wi-fi etc.

MAN - Metropolitan Area Network connects computing devices which are geographically located at seperate areas but within the same city. MAN can cover 60 km - 100 km area for data communication. It allows a high speed network sharing of resources for a group of organization that function within the same city.

Ques-3 Discuss the advantages of computer networking.

Ans= There are many advantages of networking. Some of them are -

i-) Communication tool - It is a convenient mode of communication for any organization which has branches at different locations.

ii-) Cost effective - Besides software, hardware devices like printer, scanner, modem can be shared by all the computers in a network. Thus, it saves a good amount of money by eliminating the need of buying any hardware.

iii-) Accelerate efficiency - Networking allows the upgradation of software and data from a single point with efficiency.

Ques-4 Describe the client - Server architecture.

Ans= Client - Server architecture - This is a type of network architecture in which one computer is designated as a server and all other computers are designated as its clients. So, the server contains all the application and network management software and controls the hardware resources and storage of the network. The clients access the server for various needs like software, data access and hardware access. The server in general has a higher processing power than the clients.

Ques-5 Describe Peer-to-Peer architecture.

Ans= Peer-to-Peer architecture - This type of architecture does not have a server. Each computer on the network has equal status, capabilities and responsibilities. They can communicate with all others and have a role in managing the whole network. These small networks are easy to set up

but they do not have powerful features available in client - server architecture.

Ques-6 Differentiate between network architecture and network topology

Ans- Network architecture refers to the entire design, process and functionality of a computer network.
Network topology is the physical arrangement/layout of the various elements like nodes, links etc of a computer network. Network topology determines how the data flows within a network.

Ques-7 Explain the utility of Network Security.

Ans: Usually, networks can be accessed only by the authorized users but there is always a threat of theft of data without permission by unauthorized person. So, it is advisable to protect your data and secure your network. There are various methods to keep the network secure which are as under-

i-) Login or password.
ii-) Control mechanism for access levels.
iii-) Firewall.
iv-) Application Security.

Ques-8 Discuss various types of topologies.

Ans= There are five types of topologies available-

i-) Bus topology- In a bus topology, all the nodes are connected to a central cable called bus cable. This cable is the common communication medium for all the attached nodes.

ii-) Star topology- In star topology, all the nodes are connected to a central system called hub/switch. It forwards data towards the its final destination. The hub or switch controls the communication on the network.

iii-) Ring topology- In this topology, the nodes are connected in a closed loop so that each device is connected to two other devices, one on either side. Data travels in one direction.

iv-) Tree topology- Tree topology forms the shape of a tree in which devices are connected to their parent node at different level label. It connects star network to another star network. Here the request of child node is fulfilled by its parent node for data communication.

v) Mesh topology - In this, each node has a direct link between each other. In the network every node not only sends its own signals but also relays data from other nodes. It can manage high data traffic.

26/4/19
Very Fair Work
Good
Maintain it

A1