1. networking is physical or logical interconnectedness among two or more computing devices such as between computers, servers, printers and any computing devices for the purpose of effective and efficient data transmission.

2. networking is very important in modern computing environments because it allows us to transfer data among multiple devices on fast and reliable manner, it allows centralized management for mutual security and data management, to share multiple software and hardwares.

3.B

4. network refers to any connection betweeen two or more devices to transfer data or share multiple resources. it might be small or big, but the internet is a network of networks which consists many networks together with various geographical units.

5.internet is a collection of networks across the globe. in internet there is routing instead of switching. there are various networks from different geographical places .

6. internet used for communication purpose such as mail voip and video conferencing, internet is used as a way to transfer files, it allows us to gain a remote access to a device on remote geographical area.

7.bus topology- is a network topology with all devices are connected through a backbone or one central cable. there is no any central servers all devices can send their data for a member of the network. if the backbone has gained errors then the network will fail completely. if two devices send data once a collision will be occured

ring topology- is also a peer to peer network in which data will revolve among a nodes each connected in a pattern of a circle. every device is connected with other teo devices. in order to make the data transmission efficient we use repeaters.each device receives data from its predecessor and passes it to the next until it reaches the destinsation.

Star Topology- a network which all devices are connected through one central device called hub/switch. this hub/switch receives the data from the sender device and transmit to the receiver. in the case of hub it is a dell device so it broadcasts to all devices in the network and the receiver will receive, in this case there is a huge traffic. to avoid this we often use switches to send only to the receiver.

8.b

9. advantages of mesh topology are one of the devices fail there will not be an error in other devices data transmission, it allows to determine the best path in which the data will be transferred with out any collision and traffic challange., easy to add new nodes. when we come to the disadvantages it's very expensive to install. it's difficult for configuration and management, finally, it required high power and space.

10. the main distinction of these networks is the network size and geographical coverage . when we come to Lan it's for very small size of devices and distance among devices, while MAN as the name indicates it is larger than LAN and smaller than WAN interms of devices volume and geographical data coverage.it is mainly citywide network and WAN is the largest interms of area and devices size.

11. we use LAN for offices and schools because it have a little geographical coverage and a small amount of devices are there

12. WAN

13. Router- used to connect multiple networks through their ip addresses

accesspoint- to convert a wired network into wireless

switch- to select the best path and send the data to intended user within the same network

nic- provides a physicall connection among the network.

14.this hub/switch receives the data from the sender device and transmit to the receiver. in the case of hub it is a dell device so it broadcasts to all devices in the network and the receiver will receive, in this case there is a huge traffic. to avoid this we often use switches to send only to the receiver.

15.True