1. Networking is a way to connect devices so that they could share data and resources the connection can be created through cables or radio signal(wireless)

2. We are now in the fifth generation of computing, where data is considered the new fuel driving innovation, decision-making, and automation. In this era, the efficient and secure sharing, configuration, and management of data across systems and devices is more important than ever.

3.B

4.A network is a group of interconnected devices,The internet is a global network of networks

5.it is a collection of networks an international can consist a different kind of network such as lan, wan, man etc.. and connect them so that data can be shared globally,internet acts as a bridge that connects various networks, regardless of their size or type

6.comminucation ,accessing cloud service , connecting different types of network

7.bus topology-there is backbone cable and devices are connected to it

Star topology -there is a switch where all devices are connected to it if the switch fails connection fails but if the device fails the network still work

Mesh topology-where devices are connected to each other ,if one cable or site fails the data will be trasmited because there are other paths to deliver it.

8.B

9.advantage rededundacy so failure is not an issue but cost and in more vast space it can get complicated.

10.local area network-network used at home to connect devices in small area

Metropolitan area network-to connect city

Wide area network-larger area coverage

11.lan

12.D

13.switch-Connects multiple devices within the same network and forwards data only to the intended device

Router-Connects different networks together and directs data packets between them.

Access point-Extends a wired network by providing wireless connectivity (Wi-Fi) to devices

Firewall-monitor, filter, and control incoming and outgoing network traffic based on predefined security rules.

14.hub is dumb transfers data to every connected device switch is smart and learns IP or Mac address depending on which layer of switch it is and send data to specific site

15. True.