Networking Interview Question and Answers

1. What is a network?

It is a set of devices connected by communication links. A node can be a computer or any other device capable of sending and/or receiving data generated by other nodes on the network.

2. What is a protocol?

It is a set of rules that governs data communication.

3. What is multiplexing?

Multiplexing is the process of dividing a link, the physical medium, into logical channels for better efficiency. Here medium is not changed but it has several channels instead of one.

4. Define bandwidth?

The range of frequencies that a medium can pass is called bandwidth. It is the difference between the highest and lowest frequencies that the medium can satisfactorily pass.

5. What do you mean by switching?

It is a method in which communication devices are connected to one another efficiently. A switch is intermediary hardware or software that links devices together temporarily.

6. What are the important topologies for networks?

BUS topology

STAR topology

RING topology

MESS topology

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7. What are the duties of data link layer?

Data link layer is responsible for carrying packets from one hop (computer or router) to the next. The duties of data link layer include packetizing, addressing, error control, flow control, medium access control.

8. What is virtual channel?

Virtual channel is normally a connection from one source to one destination, although multicast connections are also permitted. The other name for virtual channel is virtual circuit.

9. What is multicast routing?

Sending a message to a group is called multicasting, and its routing algorithm is called multicast routing.

10. What is TELNET?

TELNET is a client - server application that allows a user to log on to a remote machine, giving the user access to the remote system. TELNET is an abbreviation of terminal network.

11. What do you mean by data communication?

It is the exchange of data between two devices via some form of transmission medium such as wire cable. The communicating system must be part of a communication system made up of a combination of hardware and software. The effectiveness of a data communication system depends on three fundamental characteristics: delivery, accuracy and timeliness.

12. What is distributed processing?

It is a strategy in which services provided by the network reside at multiple sites.

13. What is point to point connection?

It provides a dedicated link between two devices. The entire capacity of the link is reserved for transmission between the two devices.

14. What is Redundancy?

The concept of including extra information in the transmission solely for the purpose of comparison. This technique is called redundancy.

15. What is subnet?

A generic term for section of a large networks usually separated by a bridge or router.

16. What is multipoint connection?

In multipoint connection more than two specific devices share a single link. Here the capacity of the channel is shared either separately or temporally.

17. What is simplex?

It is the mode of communication between two devices in which flow of data is unidirectional.

18. What is half-duplex?

It is the mode of communication between two devices in which flow of data is bidirectional but not at the same time. i.e. each station can transmit and receive but not at the same time.

19. What is full duplex?

It is the mode of communication between two devices in which flow of data is bidirectional and it occurs simultaneously. Here signals going in either direction share the capacity of the link.

20. What is a topology?

Topology of a network is defined as the geometric representation of the relationship of all the links and linking devices (node) to one another.

21. What is Bandwidth?

Every line has an upper limit and a lower limit on the frequency of signals it cancarry. This limited range is called the bandwidth.

22. What is point-to-point protocol?

A communications protocol used to connect computers to remote networking services including Internet service providers.

23. What is switching?

Switching in data communication is of three types
Circuit switching

Packet switching

Message switching

24. Compare analog and digital signals?

Analog signals can have an infinite number of values in a range but digital signal can have only a limited number of values.

25. What is the difference between ARP and RARP?

ARP - Address resolution protocol is used to associate the 32-bit IP address with the 48-bit physical address, used by a host or a router to find the physical address of another host on its network by sending a ARP query packet that includes the IP address of the receiver.

RARP - Reverse address resolution protocol allows a host to discover its Internet address when it knows only its physical address.

26. What is ICMP?

ICMP is Internet Control Message Protocol, a network layer protocol of the TCP/IP suite used by hosts and gateways to send notification of datagram problems back to the sender.

27. What is logical link control?

One of two sublayers of the data link layer of OSI reference model, as defined by the IEEE 802 standard. This sublayer is responsible for maintaining the link between computers when they are sending data across the physical network connection.

28. What is difference between baseband and broadband transmission?

In a baseband transmission, the entire bandwidth of the cable is consumed by a single signal. In broadband transmission, signals are sent on multiple frequencies, allowing multiple signals to be sent simultaneously.

29. What is mesh network?

A network in which there are multiple network links between computers to provide multiple paths for data to travel.

30. Define bit rate and bit interval?

Digital signals are aperiodic.so instead of using period and frequency we use bit interval and bit rate respectively. Bit interval is the time required to send one single bit. Bit rate is the number of bit intervals per second.

31. What is sampling?

It is the process of obtaining amplitude of a signal at regular intervals.

32. Define pulse amplitude modulation?

It is an analog to digital conversion method which takes analog signals, samples it and generates a series of pulse based on the results of the sampling. It is not used indata communication because the series of pulses generated still of any amplitude. Tomodify it we use pulse code modulation.

33. What is Nyquist Theorem?

According to this theorem, the sampling rate must be at least 2 times the highest frequency of the original signal.

34. What is Asynchronous mode of data transmission?

It is a serial mode of transmission. In this mode of transmission, each byte is framed with a start bit and a stop bit. There may be a variable length gap between each byte.

35. What are the different types of multiplexing?

Multiplexing is of three types. Frequency division multiplexing and wave division multiplexing is for analog signals and time division multiplexing is for digital signals.

36. What MAU?

In token Ring, hub is called Multi station Access Unit (MAU).

37. What do you mean by switching?

It is a method in which communication devices are connected to one another efficiently. A switch is intermediary hardware or software that links devices together temporarily.

38. What do you mean by flow control?

It is the regulation of sender's data rate so that the receiver buffer doesn't become overwhelmed. i.e. flow control refers to a set of procedures used to restrict the amount of data that the sender can send before waiting for acknowledgement.

39. What do you mean by Bluetooth?

It is a wireless LAN technology designed to connect devices of different functions such as telephones, notebooks, computers, cameras, printers and so

on. Bluetooth LAN Is an adhoc network that is the network is formed spontaneously? It is the implementation of protocol defined by the IEEE 802.15 standard.

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42. What is Mail Gateway?

It is a system that performs a protocol translation between different electronic mail delivery protocols.

43. What is IP address?

The internet address (IP address) is 32bits that uniquely and universally defines a host or router on the internet.
The portion of the IP address that identifies the network is called net id. The portion of the IP address that identifies the host or router on the network is called host id.

44. What do you mean by subnetting?

Subnetting divides one large network into several smaller ones. It adds an intermediate level of hierarchy in IP addressing.

45. What is Firewall?

It is an electronic down bridge which is used to enhance the security of a network. It's configuration has two components.

Two routers

Application gateway

46. What is Repeaters?

A receiver receives a signal before it becomes too weak or corrupted, regenerates the original bit pattern, sand puts the refreshed copy back onto the link. It operates on physical layer of OSI model.

47. What is Bridge?

They divide large network into smaller components. They can relay frames between two originally separated LANs. They provide security through partitioning traffic. They operate on physical and data link layer of OSI model.

48. What is Gateway?

It is a protocol converter. A gateway can accept a packet formatted for one protocol and convert it to a packet formatted for another protocol. It operates on all the seven layers of OSI model.

49. What do you mean by peer?

Entities comprising the corresponding layers on different machines are called peers.

50. What do you mean by broadcasting?

Broadcast system allow addressing a packet to all destination by using a special code in address field. when packet is transmitted it is received and processed by every machine on the network.

51. What is source route?

It is a sequence of IP addresses identifying the route a datagram must follow. A source route may optionally be included in an IP datagram header.

52. What are major types of networks?

Server-based network

Peer-to-peer network

53. What are the protocols in application layer?

The protocols defined in application layer are

TELNET

FTP

SMTP

54. What do you mean by point-to-point network?

Point to point network consist of many connections between individual pair of machines. Large networks are point to point. Routing algorithm plays an important in point-to-point network. It uses stored as forward technique. It is a packet switching network.

55. Define Retransmission?

Retransmission is a technique in which the receiver detects the occurrence of an error and asks the sender to resend the message. Resending is repeated until a message arrives that the receiver believes is error-freed.

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59. What are the protocols in transport layer?

The protocols defined in transport layer are:

TCP

UDP

60. Define TCP?

It is connection-oriented protocol. It consists byte streams originating on one machine to be delivered without error on any other machine in the network. While transmitting it fragments the stream to discrete messages and passes to internet layer. At the destination it reassembles the messages into output stream.

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61. What is URL?

It is a standard for specifying any kind of information on the World Wide Web.

62. Define UDP?

It is unreliable connectionless protocol. It is used for one-shot, client-server type, request reply queries and applications in which prompt delivery is required than accuracy.

63. What is World Wide Web?

World Wide Web is a repository of information spread all over the world and linked together. It is a unique combination of flexibility, portability, and user-friendly features. The World Wide Web today is a distributed client-server service, in which a client using a browser can access a service using a server. The service provided is distributed over many locations called web sites.

64. What is Hypertext Transfer Protocol (HTTP)?

It is the main protocol used to access data on the World Wide Web. The protocol transfers data in the form of plain text, hypertext, audio, video, and so on. It is so called because its efficiency allows its use in a hypertext environment where there are rapid jumps from one document to another.

65. What do you mean by Simple Mail Transfer Protocol?

The TCP/IP protocol that supports electronic mail on the internet is called Simple Mail Transfer Protocol. SMTP provides for mail exchange between users on the same or different computer and supports Sending a single message to one or more recipient Sending message that include text, voice, video, or graphics. Sending message to users on network outside the internet.

66. What do you mean by local login and remote login?

When a user logs into a local time-sharing system, it is called local login. When a user wants to access an application program or utility located on a remote machine, he or she performs remote login.

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