Networking Interview Questions

A list of top frequently asked **networking interview questions** and answers are given below.

1) What is network?

A network is a set of devices that are connected with a physical media link. In a network, two or more nodes are connected by a physical link or two or more networks are connected by one or more nodes.

2) What do you mean by network topology?

Network topology specifies the layout of a computer network. It shows how devices and cables are connected to each other.

3) What are the advantages of Distributed Processing?

A list of advantages of distributed processing:

- Secure
- Support Encapsulation
- Distributed database
- Faster Problem solving
- Security through redundancy
- Collaborative Processing

4) What is the criteria to check the network reliability?

The reliability of a network can be measured on following factors:

- **Downtime**: The downtime is defined as the required time to recover.
- **Failure Frequency**: It is the frequency when it fails to work the way it is intended.

5) Which are the different factors that affect the security of a network?

There are mainly two security affecting factors:

- Unauthorized Access
- Viruses

6) Which are the different factors that affect the reliability of a network?

The following factors affect the reliability of a network:

- Frequency of failure
- Recovery time of a network after a failure

7) Which are the different factors that affect the performance of a network?

The following factors affect the performance of a network:

- Large number of users
- Transmission medium types
- Hardware
- Software

8) What makes a network effective and efficient?

There are mainly two criteria which makes a network effective and efficient:

- **Performance:** performance can be measured in many ways like transmit time and response time.
- **Reliability:** reliability is measured by frequency of failure.
- **Robustness:** robustness specifies the quality or condition of being strong and in good condition.
- **Security:** It specifies how to protect data from unauthorized access and viruses.

9) What is bandwidth?

Every signal has a limit of upper range frequency and lower range frequency. The range of limit of network between its upper and lower frequency is called bandwidth.

10) What is a node and link?

A network is a connection setup of two or more computers directly connected by some physical mediums like optical fiber or coaxial cable. This physical medium of connection is known as link and the computers that it is connected are known as nodes.

11) What is a gateway? Is there any difference between gateway and router?

A node that is connected to two or more networks is commonly known as gateway. It is also known as router. It is used to forward messages from one network to another.

12) What is DNS?

DNS is an acronym stands for Domain Name System. It is a naming system for all the resources over internet which includes physical nodes and applications. It is used to locate to a resource easily over a network.

13) What is DNS forwarder?

A forwarder is used with DNS server when it receives DNS queries that cannot be resolved quickly. So it forwards those requests to external DNS servers for resolution.

14) What is NIC?

NIC stands for Network Interface Card. It is a peripheral card attached to the PC to connect to a network. Every NIC has its own MAC address that identifies the PC on the network.

15) What is the meaning of 10Base-T?

It is used to specify data transfer rate. In 10Base-T, 10 specify the data transfer rate i.e. 10Mbps. The word Base specifies the base band as oppose to broad band. T specifies the type of the cable which is twisted pair.

16) What is NOS in computer networking?

NOS stands for Network Operating System. It is specialized software which is used to provide network connectivity to a computer to make communication possible with other computers and connected devices.

17) What are the different types of networks?

Networks can be divided on the basis of area of distribution. For example:

- **PAN (Personal Area Network)**: Its range limit is up to 10 meters. It is created for personal use. Generally personal devices are connected with this network. For example: computers, telephones, fax, printers etc.
- **LAN (Local Area Network)**: It is used for a small geographical location like office, hospital, school etc.
- **HAN (House Area Network)**: It is actually a LAN that is used within a house and used to connect homely devices like personal computers, phones, printers etc.
- **CAN (Campus area Network)**: It is a connection of devices within a campus area which links to other departments of the organization within the same campus.

- **MAN (Metropolitan Area Network)**: It is used to connect the devices which spans to large cities like metropolitan cities over a wide geographical area.
- **WAN (Wide Area Network)**: It is used over a wide geographical location that may range to connect cities and countries.
- **GAN (Global Area Network)**: It uses satellites to connect devices over global are.

18) What is POP3?

POP3 stands for Post Office Protocol version3. POP is responsible for accessing the mail service on a client machine. POP3 works on two models such as Delete mode and Keep mode.

19) What do you understand by MAC address?

MAC stands for Media Access Control. It is the address of the device at the Media Access Control Layer of Network Architecture. It is a unique address means no two devices can have same MAC addresses.

20) What is IP address?

IP address is a unique 32 bit software address of a computer in a network system.

21) What is private IP address?

There are three ranges of IP addresses that have been reserved for IP addresses. They are not valid for use on the internet. If you want to access internet on these private IPs, you must have to use proxy server or NAT server.

22) What is public IP address?

A public IP address is an address taken by the Internet Service Provider which facilitates you to communication on the internet.

23) What is APIPA?

APIPA is an acronym stands for Automatic Private IP Addressing. This feature is generally found in Microsoft operating system.

24) What is the full form of ADS?

ADS stands for Active Directory Structure.

25) What is RAID?

RAID is a method to provide Fault Tolerance by using multiple Hard Disc Drives.

26) What is anonymous FTP?

Anonymous FTP is used to grant users access to files in public servers. Users which are allowed access to data in these servers do not need to identify themselves, but instead log in as an anonymous guest.

27) What is protocol?

A protocol is a set of rules which is used to govern all the aspects of information communication.

28) What are the main elements of a protocol?

The main elements of a protocol are:

- **Syntax:** It specifies the structure or format of the data. It also specifies the order in which they are presented.
- **Semantics:** It specifies the meaning of each section of bits.
- **Timing:** Timing specifies two characteristics: When data should be sent and how fast it can be sent.

29 What is Domain Name System?

There are two types of client/server programs. First is directly used by the users and the second supports application programs.

The Domain Name System is the second type supporting program that is used by other programs such as to find the IP address of an e-mail recipient.

30) What is link?

A link is connectivity between two devices which includes the cables and protocols used in order to make communication between devices.

31) How many layers are in OSI reference model?

There are 7 layers in OSI reference model.

1. Physical Layer
2. DataLink Layer
3. Network Layer
4. Transport Layer
5. Session Layer

6. Presentation Layer
7. Application Layer

32) What is the usage of OSI physical layer?

The OSI physical layer is used to convert data bits into electrical signals and vice versa. On this layer, network devices and cable types are considered and setup.

33) Explain the functionality of OSI session layer?

OSI session layer provides the protocols and means for two devices on the network to communicate with each other by holding a session. This layer is responsible for setting up the session, managing information exchange during the session, and tear-down process upon termination of the session.

34) What is the maximum length allowed for a UTP cable?

The maximum length of UTP cable is 90 to 100 meters.

35) What is RIP?

RIP stands for Routing information Protocol. It is accessed by the routers to send data from one network to another.

36) What do you understand by TCP/IP?

TCP/IP is short for Transmission Control Protocol /Internet protocol. It is a set of protocol layers that is designed for exchanging data on different types of networks.

37) What is netstat?

The "netstat" is a command line utility program. It gives useful information about the current TCP/IP setting of a connection.

38) What do you understand by ping command?

The "ping" is a utility program that allows you to check the connectivity between the network devices. You can ping devices using its IP address or name.

39) What is Sneakernet?

Sneakernet is the earliest form of networking where the data is physically transported using removable media.

40) Explain the peer-peer process.

The processes on each machine that communicate at a given layer are called peer-peer process.

41) What is a congested switch?

A switch receives packets faster than the shared link. It can accommodate and stores in its memory, for an extended period of time, then the switch will eventually run out of buffer space, and some packets will have to be dropped. This state is called congested state.

42) What is multiplexing in networking?

In Networking, multiplexing is the set of techniques that is used to allow the simultaneous transmission of multiple signals across a single data link.

43) What are the advantages of address sharing?

Address sharing provides security benefit instead of routing. That's because host PCs on the Internet can only see the public IP address of the external interface on the computer that provides address translation and not the private IP addresses on the internal network.

44) What is RSA Algorithm?

RSA is short for Rivest-Shamir-Adleman algorithm. It is mostly used for public key encryption.

45) How many layers are in TCP/IP?

There are basic 4 layers in TCP/IP:

4- Application Layer

3- Transport Layer

2- Internet Layer

1- Network Layer

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