

1) What is Networking ?

Ans Networking is a concept of connecting two or more computing devices together so that we can share resources.

2) Basic elements of Networking ?

Ans There are three basic elements of networking

1) Server - Server provides services.

2) Client - Client consumes services.

3) Network - Network connects them together.

3) What is Server ?

Ans Server is not a machine, Server is the process that provides some kind of services for example

- FTP Server provides file transfer services.
- Mail Server provides mail services.
- Web Server provides web content etc.

4) What is client?

Ans

Client is the process that consume services provided by a Server.

For example :-

FTP client is used to download or upload files, mail client is used to send and receive email.

5) What is IP address?

Ans

IP address is an Internet Protocol address is a unique numerical 32 bit long label assigned to each device participating in a computer network that uses the Internet Protocol for communication.

6) What is the classification of IP Address?

Ans it categorized into 5 categories

1) class A 1 - 126

4) class D 224 - 239

2) class B 128 - 191

5) class E 240 - 254

3) class C 192 - 223

7) What is the Range of Port-No. ?

Ans The Range of Port No. is from 0 to 65535
in which 0 to 1023 is reserved port No.
i.e only used for well known ports.

8) What is IP/TCP stack ?

Ans TCP/IP stack uses four layer that maps to the OSI model. OSI stands for Open System Interconnection Model.

1) Data link layer

2) Network layer

3) Transport layer

3.1 TCP (Transmission Control Protocol)

3.2 UDP (User Datagram Protocol)

4) Application layer.

a) Definition of TCP ?

Ans

TCP provides a Point to Point reliable, Ordered and error-checked delivery of data stream.

10) UDP Define ?

Ans

UDP is a Protocol that Sends independent packets of data , called datagram , from one Computer to another with no guarantee about arrival .

11) What is Application layer ?

Ans

Application layer is an abstraction layer Served for communication Protocols and Methods designed for process-to process Communication across the network .

12) Transport layer

Ans

This layer is responsible for making packets of application data , Create the Session b/w devices and receive or send the data packet .

13) Network layer - The IP protocol is responsible for the delivery of data packets from the source host to the destination host.

14) Data Link layer - The IP protocol is responsible as it combines the physical and data layers and routes the data between devices on the same network.

15) TCP / UDP ?

1) - TCP is Connection - Oriented protocol

- UDP is Connection less Protocol

2) - TCP is Reliable, has a packet delivery acknowledgement system.

- UDP is Unreliable, no acknowledgement.

3) - TCP has Ordered, data packet are delivered in Order.

- UDP has Un-Ordered, datagram Orders is not decided.

4) - TCP is heavy weight

UDP is light weight

5) TCP Used by HTTP, HTTPS, SMTP, TELNET
FTP.

UDP Used by DNS, DHCP, TFTP, SNMP,
RIP, VOIP.

16) Why TCP Called Reliable Protocol ?

Ans it has a Packet delivery acknowledgement system in Order to make Reliable Communication. That's why TCP called Reliable Protocol.

17) What is Socket ? How it Communicates?

Ans Socket is a Combination of IP address and Port No.

A socket of Client Communicate to the Server Using IP address and Port No.

18) What is Socket Programming ?

Ans It allows you to send and write primitive data or Object over the network as a byte Stream, it exist in Java.net package.

19) What is the Socket class of two Major network protocol TCP / UDP ?

Ans TCP - 1) ServerSocket class

2) Socket class

UDP - 1) DatagramSocket

2) DatagramPacket

20) How to Create a TCP server and Client ?

Ans ServerSocket Class Used to make TCP server and Socket class Used to make TCP client

21) Key methods of ServerSocket class ?

1) accept() 2) close() 3) getInetAddress()

4) `getLocalPort()`

22) Key Method of Socket class?

1) `close()`

2) `getInetAddress()`

3) `getOutputStream()`

4) `getInputStream()`

5) `getLocalPort()`

6) `getPort()`

23) Key Methods of DatagramSocket class?

1) `Connect()`

2) `getLocalAddress()`

3) `getLocalPort()`

4) `getPort()`

5) `Sent(DatagramPacket)`

24 Key Method of DatagramPacket

Ans 1) SetAddress (InetAddress)

2) getAddress ()

3) setData (byte [])

4) getData ()

5) setPort (int)

6) getPort ()

7) getLength ()

25) Why do you use InetAddress class ?
What is the function of InetAddress class ?

Ans InetAddress class represent an IP address.
This class provides method to get the IP
of any host name .

Method of InetAddress

1) GetByName ()

3) getHostName ()

2) GetLocalHost ()

4) getHostAddress

5) GetLoopBackAddress () .

26) What is Datagram, DatagramPacket and DatagramSocket ?

Ans Datagram :- It is an independent, self contained message sent over the network, whose arrival time and content are not guaranteed.

DatagramPacket :- It is just like a letter or post card .

DatagramSocket :- It is just like a Post office that sends and receives letters.

27) Which classes will you use to make TCP client and Server ?

Ans ServerSocket and Socket classes are used to make TCP client and Server.

28) Which classes will you use to make UDP client & Server

Ans DatagramSocket class is used to make UDP client and server .

29) Which kind of application can be built on UDP Protocol?

Ans Mail Server, chat server

30) Which kind of app can be built on TCP Protocol?

Ans HTTP Server.

31) How can you read Data from a URL?

Ans URL class is used to handle and read data from URL.

32) Why URLConnection class is used? OR How can you write parameter to a URL?

Ans URLConnection class is used to handle communication link between the URL. This class is used to read and write data to a URL. It is present in Java.net package.

33) What is LoopBackAddress?

Ans - It is a type of IP address that is used to test application when client and server both are present in same machine.

- The Size of loopBackAddress is 32-bit and
- the Range of loopBackAddress is 0-255.
- and LoopBackAddress is Belongs to 'Class-A'.
- IP address of LoopBackAddress is 127 or 127.0.0.1.

34) What is Internet Protocols ?

Ans The Internet Protocol family Contains a Set of Related and Most Widely Used network protocols .

35) What is Protocol Stack ?

Ans A group of Network protocols that Work together at higher and lower levels are Called as Protocol Stack .

36) What is Well Known Port no. ?

Ans The port No. ranging from 0-1023 are Restricted , they are reserved to be used by Well Known Services Such as HTTP and FTP and other System Services . This Port are Called as Well Known ports

Service	Port No.
1) HTTP Server	80
2) FTP Server	21
3) SMTP Server	25
4) POP3 Server	110
5) IMAP Server	143
6) TELNET Server	23

37) What is Protocol ?

Ans A protocol is a set of rules and guidelines for communicating data over the network.

Rules are defined for each step and process during communication between two or more computers.

38) Protocols Used for Communication ?

Ans Client and Server processes communicate over the network using TRANSMISSION CONTROL PROTOCOL (TCP) or USER DATAGRAM PROTOCOL (UDP).

39) Broadcast (MultiCast) Server

Ans Java.net.MulticastSocket class is used to make the client who receive broadcast message. A message will be broadcasted to a group, all clients belonging to this group will get the broadcasted message.

class Datagram is used to make a Server that Broadcasts a Message to the group instead of single client. Client are made by MulticastSocket class.

40) What is URL?

Ans URL stands for Uniform Resource Locator and is a Reference (an address) to a resource on the Internet. It has two part protocol identifier and resource name. The protocol identifier and resource name are separated by a colon and two forward slashes.

Or

- It stands for Uniform Resource Locator
- It is locate a resource on server

41) What is localhost ?

Ans

localhost is an hostName of the server that maps with Unique IP address.

IP address - 127.0.0.1

It belongs to class A

42) What is URI ?

Ans - URI stands for Uniform Resource Identifier.

It is a location of page to be accessed.

43) What is HTTP ?

Ans It stands for HyperText Transfer Protocol. HTTP is an application communication protocol between client and server.

44) What is 8080 ?

It is the port of server where the request is received. Default port No. is 80 - 80