

http://www.globalguideline.com/interview_questions/Questions.php?sc=Basic_Networking_Concepts_Interview_Questions_and_Answers

Basic Networking Questions and Answers:



1 :: What is an Object server?

With an object server, the Client/Server application is written as a set of communicating objects. Client object communicate with server objects using an Object Request Broker (ORB). The client invokes a method on a remote object. The ORB locates an instance of that object server class, invokes the requested method and returns the results to the client object. Server objects must provide support for concurrency and sharing. The ORB brings it all together.

2 :: What is a Transaction server?

With a transaction server, the client invokes remote procedures that reside on the server with an SQL database engine. These remote procedures on the server execute a group of SQL statements. The network exchange consists of a single request/reply message. The SQL statements either all succeed or fail as a unit.

3 :: What is a Database Server?

With a database server, the client passes SQL requests as messages to the database server. The results of each SQL command are returned over the network. The server uses its own processing power to find the request data instead of passing all the records back to the client and then getting it find its own data. The result is a much more efficient use of distributed processing power. It is also known as SQL engine.

4 :: What are the most typical functional units of the Client/Server applications?

User		interface
Business	Logic	and
Shared data.		

5 :: What are all the Extended services provided by the OS?

Ubiquitous
 Network
 Binary
 Global
 Authentication
 System
 Network
 Database
 Internet
 Object- oriented services

large
 directories
 and
 and
 and

OS
 objects
 Network
 Authorization
 transaction

communications
 extension
 (BLOBs)
 pages
 services
 management
 time
 services
 services

6 :: What are Triggers and Rules?

Triggers are special user defined actions usually in the form of stored procedures, that are automatically invoked by the server based on data related events. It can perform complex actions and can use the full power of procedural languages.

A rule is a special type of trigger that is used to perform simple checks on data.

7 :: What is meant by Transparency?

Transparency really means hiding the network and its servers from the users and even the application programmers.

8 :: What are TP-Lite and TP-Heavy Monitors?

TP-Lite is simply the integration of TP Monitor functions in the database engines.

TP-Heavy are TP Monitors which supports the Client/Server architecture and allow PC to initiate some very complex multiserver transaction from the desktop.

9 :: What are the two types of OLTP?

TP lite, based on stored procedures. TP heavy, based on the TP monitors.

10 :: What is a Web server?

This new model of Client/Server consists of thin, portable, "universal" clients that talk to super fat servers. In the simplest form, a web server returns documents when clients ask for them by name. The clients and server communicate using an RPC-like protocol called HTTP.

11 :: What are Super servers?

These are fully-loaded machines which includes multiprocessors, high-speed disk arrays for interview I/O and fault tolerant features.

12 :: What is a TP Monitor?

There is no commonly accepted definition for a TP monitor. According to Jeri Edwards' a TP Monitor is "an OS for transaction processing".

13 :: TP Monitor does mainly two things extremely well. They are Process management and Transaction management?

They were originally introduced to run classes of applications that could service hundreds and sometimes thousands of clients. TP Monitors provide an OS - on top of existing OS - that connects in real time these thousands of humans with a pool of shared server processes.

14 :: What is meant by Asymmetrical protocols?

There is a many-to-one relationship between clients and server. Clients always initiate the dialog by requesting a service. Servers are passively awaiting for requests from clients.

15 :: What are the types of Transparencies?

The types of transparencies the NOS middle ware is expected to provide are:-

Location		transparency
Namespace		transparency
Logon		transparency
Replication		transparency
Local/Remote	access	transparency
Distributed	time	transparency
Failure	transparency	and
Administration transparency.		

16 :: What is the difference between trigger and rule?

The triggers are called implicitly by database generated events, while stored procedures are called explicitly by client applications.

17 :: What are called Transactions?

The grouped SQL statements are called Transactions (or) A transaction is a collection of actions embused with ACID properties.

18 :: What are the building blocks of Client/Server?

The client
The server and
Middleware.

19 :: Explain the building blocks of Client/Server?

The client side building block runs the client side of the application.

The server side building block runs the server side of the application.

20 :: The middleware building block runs on both the client and server sides of an application. It is broken into three categories?

Transport stack

Network OS

Service-specific middleware.

21 :: What are all the Base services provided by the OS?

Task preemption

Task priority

Semaphores

Interprocess communications (IPC)

Local/Remote Interprocess communication

Threads

Intertask protection

Multuser

High performance file system

Efficient memory management and

Dynamically linked Run-time extensions.

22 :: What are the roles of SQL?

SQL is an interactive query language for ad hoc database queries.

SQL is a database programming language.

SQL is a data definition and data administration language.

SQL is the language of networked database servers

SQL helps protect the data in a multi-user networked environment.

Because of these multifacted roles it plays, physicists might call SQL as "The grand unified theory of database".

23 :: What is Structured Query Language (SQL)?

SQL is a powerful set-oriented language which was developed by IBM research for the databases that adhere to the relational model. It consists of a short list of powerful, yet highly flexible, commands that can be used to manipulate information collected in tables. Through SQL, we can manipulate and control sets of records at a time.

24 :: What are the characteristics of Client/Server?

Service

Shared resources

Asymmetrical protocols

Transparency of location
 Mix-and-match
 Message based exchanges
 Encapsulation of services
 Scalability
 Integrity

Client/Server computing is the ultimate "Open platform". It gives the freedom to mix-and-match components of almost any level. Clients and servers are loosely coupled systems that interact through a message-passing mechanism.

25 :: What is Remote Procedure Call (RPC)?

RPC hides the intricacies of the network by using the ordinary procedure call mechanism familiar to every programmer. A client process calls a function on a remote server and suspends itself until it gets back the results. Parameters are passed like in any ordinary procedure. The RPC, like an ordinary procedure, is synchronous. The process that issues the call waits until it gets the results.

Under the covers, the RPC run-time software collects values for the parameters, forms a message, and sends it to the remote server. The server receives the request, unpack the parameters, calls the procedures, and sends the reply back to the client. It is a telephone-like metaphor.

26 :: What are the main components of Transaction-based Systems?

Resource Manager
 Transaction Manager and
 Application Program.

27 :: What are the three types of SQL database server architecture?

Process-per-client Architecture. (Example: Oracle 6, Informix)
 Multithreaded Architecture. (Example: Sybase, SQL server)
 Hybrid Architecture (Example: Oracle 7)

28 :: What are the Classification of clients?

Non-GUI clients - Two types are:-
 Non-GUI clients that do not need multi-tasking
 (Example: Automatic Teller Machines (ATM), Cell phone)
 Non-GUI clients that need multi-tasking
 (Example: ROBOTS)

GUI clients
 OOUI clients

29 :: What are called Non-GUI clients, GUI Clients and OOUI Clients?

Non-GUI Client: These are applications, generate server requests with a minimal amount of human interaction.

GUI Clients: These are applications, where occasional requests to the server result from a human interacting with a GUI (Example: Windows 3.x, NT 3.5)

OOUI clients : These are applications, which are highly-iconic, object-oriented user interface that provides seamless access to information in very visual formats. (Example: MAC OS, Windows 95, NT 4.0)

30 :: What is Message Oriented Middleware (MOM)?

MOM allows general purpose messages to be exchanged in a Client/Server system using message queues. Applications communicate over networks by simply putting messages in the queues and getting messages from queues. It typically provides a very simple high level APIs to its services. MOM's messaging and queuing allow clients and servers to communicate across a network without being linked by a private, dedicated, logical connection. The clients and server can run at different times. It is a post-office like metaphor.

31 :: What is meant by Middleware?

Middleware is a distributed software needed to support interaction between clients and servers. In short, it is the software that is in the middle of the Client/Server systems and it acts as a bridge between the clients and servers. It starts with the API set on the client side that is used to invoke a service and it covers the transmission of the request over the network and the resulting response.

It neither includes the software that provides the actual service - that is in the servers domain nor the user interface or the application login - that's in clients domain.

32 :: What are the functions of the typical server program?

It waits for client-initiated requests. Executes many requests at the same time. Takes care of VIP clients first. Initiates and runs background task activity. Keeps running. Grown bigger and faster.

33 :: What is meant by Symmetric Multiprocessing (SMP)?

It treats all processors as equal. Any processor can do the work of any other processor. Applications are divided into threads that can run concurrently on any available processor. Any processor in the pool can run the OS kernel and execute user-written threads.

34 :: What are Service-specific middleware?

It is needed to accomplish a particular Client/Server type of services which includes:-

- Database specific middleware
- OLTP specific middleware
- Groupware specific middleware
- Object specific middleware
- Internet specific middleware and
- System management specific middleware.

35 :: What are General Middleware?

It includes the communication stacks, distributed directories, authentication services, network time, RPC, Queuing services along with the network OS extensions such as the distributed file and print services.

36 :: What is meant by Asymmetric Multiprocessing (AMP)?

It imposes hierarchy and a division of labor among processors. Only one designated processor, the master, controls (in a tightly coupled arrangement) slave processors dedicated to specific functions.

37 :: What is OLTP?

In the transaction server, the client component usually includes GUI and the server components usually consists of SQL transactions against a database. These applications are called OLTP (Online Transaction Processing) OLTP Applications typically, Receive a fixed set of inputs from remote clients. Perform multiple pre-compiled SQL comments against a local database. Commit the work and Return a fixed set of results.

38 :: What is meant by 3-Tier architecture?

In 3-tier Client/Server systems, the application logic (or process) lives in the middle tier and it is separated from the data and the user interface. In theory, the 3-tier Client/Server systems are more scalable, robust and flexible.

Example: TP monitor, Web.

39 :: What is meant by 2-Tier architecture?

In 2-tier Client/Server systems, the application logic is either buried inside the user interface on the client or within the database on the server.

Example: File servers and Database servers with stored procedures.

40 :: What is Load balancing?

If the number of incoming clients requests exceeds the number of processes in a server class, the TP Monitor may dynamically start new ones and this is called Load balancing.

41 :: What are called Fat clients and Fat servers?

If the bulk of the application runs on the Client side, then it is Fat clients. It is used for decision support and personal software. If the bulk of the application runs on the Server side, then it is Fat servers. It tries to minimize network interchanges by creating more abstract levels of services.

42 :: What is meant by Horizontal scaling and Vertical scaling?

Horizontal scaling means adding or removing client workstations with only a slight performance impact. Vertical scaling means migrating to a larger and faster server machine or multiservers.

43 :: What is Groupware server?

Groupware addresses the management of semi-structured information such as text, image, mail, bulletin boards and the flow of work. These Client/Server systems have people in direct contact with other people.

44 :: What are the two broad classes of middleware?

General middleware
Service-specific middleware.

45 :: What are the types of Servers?

File servers
Database servers Transaction servers Groupware servers Object servers
Web servers.

- [StumbleUpon](#)
- [Digg](#)
- [Delicious](#)
- [Twitter](#)
- [FaceBook](#)
- [LinkedIn](#)
- [Google](#)
- [Yahoo](#)
- [MySpace](#)
- [Tell Your Friend](#)

46 :: What is a File server?

File servers are useful for sharing files across a network. With a file server, the client passes requests for file records over network to file server.

47 :: What are the five major technologies that can be used to create Client/Server applications?

Database	Servers
TP	Monitors
Groupware	
Distributed	Objects
Intranets.	

48 :: What is Client/Server?

Clients and Servers are separate logical entities that work together over a network to accomplish a task. Many systems with very different architectures that are connected together are also called Client/Server.

49 :: List out the benefits obtained by using the Client/Server oriented TP Monitors?

Client/Server	applications	development	framework.
Firewalls		of	protection.
High			availability.
Load			balancing.
MOM			integration.
Scalability		of	functions.
Reduced system cost.			

50 :: What are the services provided by the Operating System?

Extended services - These are add-on modular software components that are layered on top of base service.

Basic Networking Questions and Answers:



51 :: What is ACID property?

ACID is a term coined by Andrew Router in 1983, which stands for Atomicity, Consistence, Isolation and Durability.

52 :: What are Stored procedures?

A stored procedure is a named collection of SQL statements and procedural logic that is compiled, verified and stored in a server database. It is typically treated like any other database object. Stored procedures accept input parameters so that a single procedure can be used over the network by multiple clients using different input data. A single remote message triggers the execution of a collection of stored SQL statements. The results is a reduction of network traffic and better performance.

53 :: What is wide-mouth frog?

Wide-mouth frog is the simplest known key distribution center (KDC) authentication protocol.

54 :: What is passive topology?

When the computers on the network simply listen and receive the signal, they are referred to as passive because they don't amplify the signal in any way.

Example for passive topology - linear bus

55 :: What is routing region?

When hierarchical routing is used, the routers are divided into what we call regions, with each router knowing all the details about how to route packets to destinations within its own region, but knowing nothing about the internal structure of other regions.

56 :: 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.

57 :: Difference between the communication and transmission?

Transmission is a physical movement of information and concern issues like bit polarity, synchronization, clock etc. Communication means the meaning full exchange of information between two communication media.

58 :: What is the difference between TFTP and FTP application layer protocols?

The Trivial File Transfer Protocol (TFTP) allows a local host to obtain files from a remote host but does not provide reliability or security. It uses the fundamental packet delivery services offered by UDP. The File Transfer Protocol (FTP) is the standard mechanism provided by TCP / IP for copying a file from one host to another. It uses the services offered by TCP and so is reliable and secure. It establishes two connections (virtual circuits) between the hosts, one for data transfer and another for control information.

59 :: What are the advantages and disadvantages of the three types of routing tables?

The three types of routing tables are fixed, dynamic, and fixed central. The fixed table must be manually modified every time there is a change. A dynamic table changes its information based on network traffic, reducing the amount of manual maintenance. A fixed central table lets a manager modify only one table, which is then read by other devices. The fixed

central table reduces the need to update each machine's table, as with the fixed table. Usually a dynamic table causes the fewest problems for a network administrator, although the table's contents can change without the administrator being aware of the change.

60 :: What is Beaconing?

The process that allows a network to self-repair networks problems. The stations on the network notify the other stations on the ring when they are not receiving the transmissions. Beaconing is used in Token ring and FDDI networks.

61 :: What does the Mount protocol do?

The Mount protocol returns a file handle and the name of the file system in which a requested file resides. The message is sent to the client from the server after reception of a client's request.

62 :: What are Diagrams and Trigrams?

The most common two letter combinations are called as diagrams. e.g. th, in, er, re and an. The most common three letter combinations are called as trigrams. e.g. the, ing, and, and ion.

63 :: What is the HELLO protocol used for?

The HELLO protocol uses time instead of distance to determine optimal routing. It is an alternative to the Routing Information Protocol.

64 :: What is the minimum and maximum length of the header in the TCP segment and IP datagram?

The header should have a minimum length of 20 bytes and can have a maximum length of 60 bytes.

65 :: What do you meant by "triple X" in Networks?

The function of PAD (Packet Assembler Disassembler) is described in a document known as X.3. The standard protocol has been defined between the terminal and the PAD, called X.28; another standard protocol exists between the PAD and the network, called X.29. Together, these three recommendations

66 :: What is attenuation?

The degeneration of a signal over distance on a network cable is called attenuation.

67 :: What is Protocol Data Unit?

The data unit in the LLC level is called the protocol data unit (PDU). The PDU contains of four fields a destination service access point (DSAP), a source service access point (SSAP), a control field and an information field. DSAP, SSAP are addresses used by the LLC to identify the protocol stacks on the receiving and sending machines that are generating and using the data. The control field specifies whether the PDU frame is a information frame (I - frame) or a supervisory frame (S - frame) or a unnumbered frame (U - frame).

68 :: What are the data units at different layers of the TCP / IP protocol suite?

The data unit created at the application layer is called a message, at the transport layer the data unit created is called either a segment or an user datagram, at the network layer the data unit created is called the datagram, at the data link layer the datagram is encapsulated in to a frame and finally transmitted as signals along the transmission media.

69 :: What is difference between ARP and RARP?

The address resolution protocol (ARP) 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.

The reverse address resolution protocol (RARP) allows a host to discover its Internet address when it knows only its physical address.

70 :: What is MAC address in Networking?

The address for a device as it is identified at the Media Access Control (MAC) layer in the network architecture. MAC address is usually stored in ROM on the network adapter card and is unique.

71 :: What is terminal emulation, in which layer it comes?

Telnet is also called as terminal emulation. It belongs to application layer.

72 :: What are the types of Transmission media?

Signals are usually transmitted over some transmission media that are broadly classified in to two categories:-
 Guided Media:
 These are those that provide a conduit from one device to another that include twisted-pair, coaxial cable and fiber-optic cable. A signal traveling along any of these media is directed and is contained by the physical limits of the medium. Twisted-pair and coaxial cable use metallic that

accept and transport signals in the form of electrical current. Optical fiber is a glass or plastic cable that accepts and transports signals in the form of light.

Unguided

Media:

This is the wireless media that transport electromagnetic waves without using a physical conductor. Signals are broadcast either through air. This is done through radio communication, satellite communication and cellular telephony.

73 :: What are major types of networks and explain?

Server-based

network.

Peer-to-peer

network.

Peer-to-peer network, computers can act as both servers sharing resources and as clients using the resources. Server-based networks provide centralized control of network resources and rely on server computers to provide security and network administration.

74 :: What is SAP?

Series of interface points that allow other computers to communicate with the other layers of network protocol stack is called SAP.

75 :: What is multicast routing?

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

76 :: What is the difference between routable and non - routable protocols?

Routable protocols can work with a router and can be used to build large networks. Non-Routable protocols are designed to work on small, local networks and cannot be used with a router.

77 :: What is REX?

Request to Exit (REX) - A signal that informs the controller that someone has requested to exit from a secure area.

78 :: What are the different type of networking / internetworking devices?

Repeater:

Also called a regenerator, it is an electronic device that operates only at physical layer. It receives the signal in the network before it becomes weak, regenerates the original bit pattern and puts the refreshed copy back in to the link.

Bridges:

These operate both in the physical and data link layers of LANs of same type. They divide a larger network in to smaller segments. They contain logic that allow them to keep the traffic for each segment separate and thus are repeaters that relay a frame only the side of the segment containing the intended recipient and control congestion.

Routers:

They relay packets among multiple interconnected networks (i.e. LANs of different type). They operate in the physical, data link and network layers. They contain software that enable them to determine which of the several possible paths is the best for a particular transmission. Gateways: They relay packets among networks that have different protocols (e.g. between a LAN and a WAN). They accept a packet formatted for one protocol and convert it to a packet formatted for another protocol before forwarding it. They operate in all seven layers of the OSI model.

79 :: What is redirector in Networking?

Redirector is software that intercepts file or prints I/O requests and translates them into network requests. This comes under presentation layer.

80 :: What is packet filter in Networking?

Packet filter is a standard router equipped with some extra functionality. The extra functionality allows every incoming or outgoing packet to be inspected. Packets meeting some criterion are forwarded normally. Those that fail the test are dropped.

81 :: 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.

82 :: What is traffic shaping?

One of the main causes of congestion is that traffic is often busy. If hosts could be made to transmit at a uniform rate, congestion would be less common. Another open loop method to help manage congestion is forcing the packet to be transmitted at a more predictable rate. This is called traffic shaping.

83 :: What is NETBIOS and NETBEUI in Networking?

NETBIOS is a programming interface that allows I/O requests to be sent to and received from a remote computer and it hides the networking hardware from applications.

NETBEUI is NetBIOS extended user interface. A transport protocol designed by Microsoft and IBM for the use on small subnets.

84 :: Why should you care about the OSI Reference Model?

It provides a framework for discussing network operations and design.

85 :: What is Proxy ARP?

is using a router to answer ARP requests. This will be done when the originating host believes that a destination is local, when in fact it lies beyond router.

Basic Networking Questions and Answers:

• 

86 :: What is EGP (Exterior Gateway Protocol)?

It is the protocol the routers in neighboring autonomous systems use to identify the set of networks that can be reached within or via each autonomous system

87 :: What is IGP (Interior Gateway Protocol)?

It is any routing protocol used within an autonomous system.

88 :: What is OSPF?

It is an Internet routing protocol that scales well, can route traffic along multiple paths, and uses knowledge of an Internet's topology to make accurate routing decisions.

89 :: What is Kerberos in Networking?

It is an authentication service developed at the Massachusetts Institute of Technology. Kerberos uses encryption to prevent intruders from discovering passwords and gaining unauthorized access to files.

90 :: What is SLIP (Serial Line Interface Protocol)?

It is a very simple protocol used for transmission of IP datagrams across a serial line.

91 :: What is Mail Gateway?

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

92 :: What is RIP (Routing Information Protocol)?

It is a simple protocol used to exchange information between the routers.

93 :: What is NVT (Network Virtual Terminal)?

It is a set of rules defining a very simple virtual terminal interaction. The NVT is used in the start of a Telnet session.

94 :: 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.

95 :: What is BGP (Border Gateway Protocol)?

It is a protocol used to advertise the set of networks that can be reached with in an autonomous system. BGP enables this information to be shared with the autonomous system. This is newer than EGP (Exterior Gateway Protocol).

96 :: What is Gateway-to-Gateway protocol?

It is a protocol formerly used to exchange routing information between Internet core routers.

97 :: What is Project 802?

It is a project started by IEEE to set standards that enable intercommunication between equipment from a variety of manufacturers. It is a way for specifying functions of the physical layer, the data link layer and to some extent the network layer to allow for inter connectivity of major LAN protocols. It consists of the following: 802.1 is an inter networking standard for compatibility of different LANs and MANs across protocols. 802.2 Logical link control (LLC) is the upper sublayer of the data link layer which is non-architecture-specific, that is remains the same for all IEEE-defined LANs. Media access control (MAC) is the lower sublayer of the data link layer that contains some distinct modules each carrying proprietary information specific to the LAN product being used. The modules are Ethernet LAN (802.3), Token ring LAN (802.4), Token bus LAN (802.5). 802.6 is distributed queue dual bus (DQDB) designed to be used in MANs.

98 :: What is silly window syndrome?

It is a problem that can ruin TCP performance. This problem occurs when data are passed to the sending TCP entity in large blocks, but an interactive application on the receiving side reads 1 byte at a time.

99 :: What is a Multi-homed Host?

It is a host that has a multiple network interfaces and that requires multiple IP addresses is called as a Multi-homed Host.

100 :: What is autonomous system?

It is a collection of routers under the control of a single administrative authority and that uses a common Interior Gateway Protocol.

101 :: What is the difference between interior and exterior neighbor gateways?

Interior gateways connect LANs of one organization, whereas exterior gateways connect the organization to the outside world.

102 :: What is MAU?

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

103 :: Explain 5-4-3 rule?

In a Ethernet network, between any two points on the network, there can be no more than five network segments or four repeaters, and of those five segments only three of segments can be populated.

104 :: 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.

105 :: 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. It uses the echo test / reply to test whether a destination is reachable and responding. It also handles both control and error messages.

106 :: What is Brouter?

Hybrid devices that combine the features of both bridges and routers.

107 :: What is frame relay, in which layer it comes?

Frame relay is a packet switching technology. It will operate in the data link layer.

108 :: What is External Data Representation?

External Data Representation is a method of encoding data within an RPC message, used to ensure that the data is not system-dependent.

109 :: What is Bandwidth?

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

110 :: What protocol is used by DNS name servers?

DNS uses UDP for communication between servers. It is a better choice than TCP because

111 :: What is the range of IP addresses in the classes of internet addresses?

range of IP addresses in the classes of internet addresses are as under...

Class	A	0.0.0.0	-	127.255.255.255
Class	B	128.0.0.0	-	191.255.255.255
Class	C	192.0.0.0	-	223.255.255.255
Class	D	224.0.0.0	-	239.255.255.255
Class E 240.0.0.0 - 247.255.255.255				

112 :: What are the important topologies for networks?

BUS topology:
In this each computer is directly connected to primary network cable in a single line.

Advantages:

Inexpensive, easy to install, simple to understand, easy to extend.

STAR topology:

In this all computers are connected using a central hub.

Advantages:

Can be inexpensive, easy to install and reconfigure and easy to trouble shoot physical problems.

RING topology:

In this all computers are connected in loop.

Advantages:

All computers have equal access to network media, installation can be simple, and signal does not degrade as much as in other topologies because each computer regenerates it.

113 :: Difference between bit rate and baud rate?

Bit rate is the number of bits transmitted during one second whereas baud rate refers to the number of signal units per second that are required to represent those bits.

$$\text{baud rate} = \frac{\text{bit rate}}{N}$$

where N is no-of-bits represented by each signal shift.

114 :: What is anonymous FTP and why would you use it?

Anonymous FTP enables users to connect to a host without using a valid login and password. Usually, anonymous FTP uses a login called anonymous or guest, with the password usually requesting the user's ID for tracking purposes only. Anonymous FTP is used to enable a large

number of users to access files on the host without having to go to the trouble of setting up logins for them all. Anonymous FTP systems usually have strict controls over the areas an anonymous user can access.

115 :: What is the difference between an unspecified passive open and a fully specified passive open?

An unspecified passive open has the server waiting for a connection request from a client. A fully specified passive open has the server waiting for a connection from a specific client.

116 :: What is virtual path?

Along any transmission path from a given source to a given destination, a group of virtual circuits can be grouped together into what is called path.

117 :: Explain the function of Transmission Control Block?

A TCB is a complex data structure that contains a considerable amount of information about each connection.

118 :: What is a DNS resource record?

A resource record is an entry in a name server's database. There are several types of resource records used, including name-to-address resolution information. Resource records are maintained as ASCII files.

119 :: What is a pseudo tty?

A pseudo tty or false terminal enables external machines to connect through Telnet or rlogin. Without a pseudo tty, no connection can take place.

120 :: What is the Network Time Protocol?

A protocol that assures accurate local timekeeping with reference to radio and atomic clocks located on the Internet. This protocol is capable of synchronizing distributed clocks within milliseconds over long time periods. It is defined in STD 12, RFC 1119.

121 :: What is mesh network?

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

122 :: What is RAID?

A method for providing fault tolerance by using multiple hard disk drives to get backups of data.

123 :: What is a Management Information Base (MIB)?

A Management Information Base is part of every SNMP-managed device. Each SNMP agent has the MIB database that contains information about

the device's status, its performance, connections, and configuration. The MIB is queried by SNMP.

124 :: What is cladding in Networking?

A layer of a glass surrounding the center fiber of glass inside a fiber-optic cable.

125 :: What is subnet?

A generic term for section of a large networks usually

126 :: What is subnet in Networking?

A gateway operates at the upper levels of the OSI model and translates information between two completely different network architectures or data formats.

127 :: What is point-to-point protocol?

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

128 :: What are 10Base2, 10Base5 and 10BaseT Ethernet LANs?

10Base2—An Ethernet term meaning a maximum transfer rate of 10 Megabits per second that uses baseband signaling, with a contiguous cable segment length of 100 meters and a maximum of 2 segments

10Base5—An Ethernet term meaning a maximum transfer rate of 10 Megabits per second that uses baseband signaling, with 5 continuous segments not exceeding 100 meters per segment.

10BaseT—An Ethernet term meaning a maximum transfer rate of 10 Megabits per second that uses baseband signaling and twisted pair cabling.

129 :: What are the possible ways of data exchange?

- (i) Simplex
- (ii) Half-duplex
- (iii) Full-duplex.

130 :: What are the two types of transmission technology available?

Two types of transmission technology available are:

- (i) Broadcast

131 :: How do we convert a numeric IP address like 192.18.97.39 into a hostname like globalguideline.com?

Below line will convert