Model Viva Questions for "**Name of the Lab: Networking Lab**"

Common to: **IT 3rd sem**

Title of the Practical: **Demonstrate and explain type of architecture used in a computer network.**

Q1 What is the OSI model ?
A1 OSI stands for **O**pen **S**ystems **I**nterconnection and was created by ISO, the **I**nternational **S**tandards **O**rganization. The OSI "reference model" divides particular networked processes into seven different layers:
Application (Layer 7) Presentation (Layer 6) Session (Layer 5) Transport (Layer 4) Network (Layer 3) Data-Link (Layer 2) and Physical (Layer 1)

Q2 What is the Network Time Protocol
A2 The Network Time Protocol (NTP) is a protocol for synchronizing the clocks of computer systems

over packet-switched, variable-latency data networks. NTP uses UDP as its transport layer. It is designed particularly to resist the effects of variable latency.

Q3 What is virtual network ?
A3 An internet architecture in which routers connect multiple physical networks.

Q4 Is internet a virtual network ?
A4 yes An internet is a single virtual network that interconnects all hosts and through which communication is possible ;its under lying architecture is both hidden and irrelevant.

Q5 What are the functions of data link layer in OSI model?
A5 Framing: it divides the stream of bits received from the network layer, physical addressing , flow control ,error control and access control.

Q6 What do you mean by dialog control in session layer ?
A6 Session layer allows two system to enter into a dialog. it allows the communication between two processes to take place in either half duplex or full duplex.

Q7 What is encryption?
A7 In encryption the sender transforms the original information to another form and sends the resulting message out over the network.

Q8 How many levels of addresses are used in tcp/ip protocols ?
A8 Four levels of addresses are used: physical address ,logical address ,port address and specific addresses

Q9 Why TCP/IP is called a hierarchical protocol?
A9 tcp/ip is a hierarchical protocol made up of interactive modules, the term hierarchical means that each upper level protocol is supported by one or more lower level protocols.

Q10 What is the function of ARP & RARP?
A10 ARP converts logical address into its corresponding physical address.
RARP converts physical address into its corresponding logical address.

Title of the Practical: Demonstrate the topology used in computer network.

Q1 What is physical topology?
A1 Two or more devices connect to a link; two or morelinks form a topology. The topology of a network is a representation of the relationship of all the links and linking devices (nodes) to one another.

Q2 Define point to point connection.
A2 A point to point connection provides a dedicate link between two devices. The entire capacity of the link is reserved for transmission between those two devices.

Q3.Define multipoint connection.
A3 In multipoint connection more than two specific devices share a single link.

Q4 What is mean by Mesh topology ?
A4 Mesh networking is a type of networking wherein each node in the network may act as an independent router, regardless of whether it is connected to another network or not.

Q5 What are the characteristics of the bus topology?
A5 In a bus topology, all the communicating equipment is connected through the same cable, or set of cables.

Q6 What is star topology
A6 Star Topology is the most common type of network topology that is used in homes and offices. In the Star Topology there is a central connection point called the hub which is a computer hub or sometimes just a switch.

Q7 What are the Advantages of star topology
A7 • A Star Network Topology is very easy to manage because of its simplicity in functionality.
• The problems can be easily located logically in a Star Topology and therefore is easy to troubleshoot also.
• The Star Topology is very simple in format so it is very easy to expand on the Star Topology.

Q8 What are the Disadvantages Star Topology ?

A8 • The Star Topology is fully dependant on the hub and the entire working of the network depends on the hub or switch there are many nodes and the cable is long then the network may slow down.

Q9 What are Advantages and Disadvantages of Network Topologies?

A9 Linear Bus Network Topology Advantages:Saving cable Easy to develop Does not require central control Layout simple cable The addition and reduction of the terminal can be done without disturbing the current operation. Linear Bus Network Topology Advantages Disadvantages:Fault detection and isolation of very small High traffic density Lack of data security guaranteed The speed will decrease when the number of users (users) increases It takes a repeater for long distance

Q10 What is a Network topology?
A10 A topology – is the characteristic of a communication network that is concern both with the physical configuration of the cabling that is used to inter connect communicating system and the logical way in which system view the structure of the network. Topology is the therefore physical or logical arrangement of computers

Title of the Practical: Demonstrate the transmission media and network connectivity devices used to establish computer network.

Q1 What is the most common type connector used with coaxial cable on a ThinNet Enternet network ?
A1 BCN connector .

Q2 What are 10Base2, 10Base5 and 10BaseT Ethernet LANs
A2 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.

Q3 Explain the difference between an unspecified passive open and a fully specified passive open
A3 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.

Q4 What protocol is used by DNS name servers
A4 DNS uses UDP for communication between servers. It is a better choice than TCP because of the improved speed a connectionless protocol offers. Of course, transmission reliability suffers with UDP.

Q5 Explain the difference between interior and exterior neighbor gateways
A5 Interior gateways connect LANs of one organization, whereas exterior gateways connect the organization to the outside world.

Q6 Explain RIP (Routing Information Protocol)
A6 It is a simple protocol used to exchange information between the routers

Q7 Explain SLIP (Serial Line Interface Protocol)
A7 It is a very simple protocol used for transmission of IP datagrams across a serial line.

Q8 Explain NVT (Network Virtual Terminal)
A8 It is a set of rules defining a very simple virtual terminal interaction. The NVT is used in the start of a Telnet session.

Q9 Explain Gateway-to-Gateway protocol
A9 It is a protocol formerly used to exchange routing information between Internet core routers.

Q10 Explain multicast routing
A10 Sending a message to a group is called multicasting, and its routing algorithm is called multicast routing.

Title of the Practical: Demonstrate the particular protocol used for network adapter installed in the computer system.

Q1 Define Ethernet.
A1 Ethernet - Provides for transport of information between physical locations on ethernet cable. Data is passed in ethernet packets

Q2 What is BOOTP ?
A2 BOOTP - Bootstrap protocol is used to assign an IP address to diskless computers and tell it what server and file to load which will provide it with an operating system.

Q3 What is DHCP?
A3 DHCP - Dynamic host configuration protocol (DHCP) is a method of assigning and controlling the IP addresses of computers on a given network. It is a server based service that automatically assigns IP numbers when a computer boots. This way the IP address of a computer does not need to be assigned manually. This makes changing networks easier to manage. DHCP can perform all the functions of BOOTP.

Q4 What do you mean by Snmp?
A4 SNMP - Simple Network Management Protocol (SNMP). Used to manage all types of network elements based on various data sent and received.

Q5 Define RIP
A5 RIP - Routing Information Protocol (RIP), used to dynamically update router tables on WANs or the internet.

Q6 Define PPP
A6 PPP - Point to point protocol (PPP). A form of serial line data encapsulation that is an improvement over SLIP.

Q7 What is the function of ping?
A7 Ping - A program that uses ICMP to send diagnostic messages to other computers to tell if they are reachable over the network.

Q8 What is bgp?
A8 BGP - Border Gateway Protocol (BGP). A dynamic router protocol to communicate between routers on different systems.

Q9 Definr UDP
A9 UDP - An unreliable connection less protocol used to control the management of application level services between computers.

Q10 Define NFS.
A10 NFS - Network File System (NFS). A protocol that allows UNIX and Linux systems remotely mount each other's file systems.

Title of the Practical: Demonstrate the installation of Network OS.

Q1.What is an Object server?
A1: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.

Q2. What is a Transaction server?

A2: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.

Q3. What are the most typical functional units of the Client/Server applications?

A3:User interface Business Logic and Shared data.

4. What are Triggers and Rules?

A4: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.

5. What is a Web server?

A5:This new model of Client/Server consists of thin, protable, "universal" clients that talk to superfat servers. In the simplet 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.

Q6. What are Super servers?

A6:These are fully-loaded machines which includes multiprocessors, high-speed disk arrays for intervive I/O and fault tolerant features.

Q7. What are the building blocks of Client/Server?

A7:The client The server and Middleware.

Q8. Explain the building blocks of Client/Server?

A8:The client side building block runs the client side of the application.

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

Q9. What are General Middleware?
A9: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

Q10. What are the characteristics of Client/Server?

A10:Service Shared resources Asymmentrical 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.