**NETWORK TECHNOLOGY**

**Test**

**Q-1 What are the data formatting Commands of FTP?**

Sol-1 The commands are-

1. Type – Examples are ASCII, EBCDIC, Image, Telnet. It defines the file type and print format.
2. Stru – Examples are File, Record & Page. It defines the organization of data.
3. Mode – Examples are Stream, Block & Compressed. It defines the transmission mode.

**Q-2 What are the different transmission modes to transfer file across data connection in FTP?**

Sol-2 There are three modes-

1. Stream Mode – It is a default mode. Data is delivered from FTP to TCP as a

Continuous stream of bytes.

1. Block Mode – Data is delivered from FTP to TCP in block where each block is

Preceded by 3 byte header.

1. Compressed Mode – It uses run length encoding to compress.

**Q-3 What are the different modes of operation in Telnet?**

Sol-3 It has three modes –

1. Default Mode – It is half duplex & has become obsolete. Echoing is done by client.
2. Character Mode – Server echoes the character back to screen & it can be delayed if transmission time is low. It also creates overhead for network.
3. Line Mode – Line Editing, Line Erasing, Character erasing is done by client. It is full duplex mode.

**Q-4 What are the NVT set in TELNET?**

Sol-4 Data Character – It has 8 bit in which lowest bit is set as ASCII and highest order

 bit is 0.

 Control Character – It uses 8 bit character set in which highest order bit is set &

 Lowest order bit is 1.

**Q-5 What are the control characters used to control remote server in Telnet?**

Sol-5 The different character used are –

1. IP – Interrupt process which is used to interrupt the program.
2. AO – Abort output allows the process to continue without creating output.
3. AYT- Are You there. It determines if the remote server is running after a long silence from server.
4. EC – Erase character. It is used to delete last character.
5. EL – Erase Line. It is used to erase current line in remote host.

**Q-6 Why do we need POP3 or IMAP4 for email?**

Sol-6 POP3 or IPMAP4 are used to pull messages from the server.

**Q-7 What are the advantages of IMAP4 over POP3?**

Sol-7 POP3 does not allow user to organize mail on server. The user can not have different folders can server.

**Q-8 What are the different services provided by user agent in email?**

Sol -8 1. The user compose email messages to be sent out.

 2. It is used to read the incoming messages which contains no field, size of message, sender.

 3. It is used to reply to a message.

**Q-9 What are defecto and dejure standards?**

Sol-9 De-facto standards have not been approved by organized body but have been adopted as standards. They are established by manufacture. De-jure standards are those that have legalized by recognized body.

**Q- 10 What are the key elements of protocols?**

Sol-10 The key elements are –

 1. Syntax –It refers to structure of data.

 2. Semantic- It refers to each section of bits.

 3. Timing- It refers to two features that is when data should be sent and how fast it can be sent.

**Q-11 Define logical & physical address.**

Sol-11 Logical address is inter-network address and implemented in software. It is 32 bit long. Physical address is a local address. It is implemented in hardware. Example- MAC address Ethernet.

**Q-12 What is difference between static and dynamic mapping?**

Sol-12 Static Mapping means creating a table which links logical address with physical address. In dynamic mapping, each machine knows one of the two addresses can use a

protocol to find the other one. In static mapping table must be updated periodically and could affect network performance.

**Q-13 What are the TCP Timers?**

Sol-13 TCP Timers are –

1. Retransmission Timers
2. Persistence Timers.
3. Keep alive Timers
4. Time Wait Timers

**Q-14 What is value of RTO if retransmission occurs in TCP?**

Sol-14 The value of RTO is doubled for each retransmission. If the segment is transmitted twice the value is four times the RTO.

**Q-15 Define transmission control block in TCP?**

Sol-15 A connection may be open for a long time so as to control the connection. TCP uses a structure to hold information about each connection called TCB.

**Q-16 What are applications of time stamp option in TCP?**

Sol- 161. It measure round trip time

 2. It prevents wrap around sequence numbers

**Q-17 What are the limitations of RARP ?**

Sol-17 1. It provides only IP address.

 2. It uses a data link layer service

**Q-18 What is the length of hardware type in BOOT packet?**

Sol-19 8 bit

**Q-19 What is limitation of BOOT P over DHCP?**

Sol-19 DHCP provides static and dynamic address allocation that can be manual where is BOOT P is a static configuration protocol.

**Q-20 Can a machine with single DNS name have multiple IP address?**

Sol- No

**Q-21 Differentiate between echo request echo reply?**

Sol-21 0 number is used for echo reply and 8 number is used to define echo request.

**Q-22 What are the debugging tools in ICMP?**

Sol-22 1. Ping

 2. Trace roots

**Q23 Differentiate between public key and private key?**

Sol-23 Public key is announced to public. Private key is kept by the receiver.

**Q-24 What is the function of firewall?**

Sol-24 A firewall is a device installed between internal network of organization and internet. It is used to forward some packets and filter them.

**Q-25 Differentiate between packet filter and proxy firewall?**

Sol-25 Packet filter firewall filters at network or transport layer. Proxy firewall filter at application layer.

**Q-26 What are the various ICMP messages?**

Sol-26 1. Error reporting messages

 2. Query Messages

**Q-27 What is length of ICMP Header? Is the data section fixed or variable?**

Sol-27 ICMP Messages has 8 byte header and it has variable size data section.

**Q-28 How does a storing a file differ from retrieving a file?**

Sol-28 Storing a file means storing file from client to server. Retrieving a file means storing a file from server to client side.

**Q-29 What is the purpose of message security parameter in SNMP?**

Sol-29 It is used to create message digest.

**Q-30 What are the elements in SNMP message?**

Sol-30 It has four elements-

1. Version
2. Header
3. Security Parameter
4. Data