

Networking Advanced updated on Jan 2025

1. How many numbers of addresses are usable for addressing in a Class C network?

- a. 256
- b. 255
- c. 254
- d. 258

Answer: c. 254

The number of addresses usable for addressing specific hosts in each network is always $2^N - 2$ (where N is the number of rest field bits, and the subtraction of 2 adjusts for the use of the all-bits-zero host portion for network address and the all-bits-one host portion as a broadcast address. Thus, for a Class C address with 8 bits available in the host field, the number of hosts is 254

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

2. How are the data units at Application layer is called?

- a. Message
- b. Datagram
- c. User Datagram
- d. Signals

Answer:a.Message

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

3. What protocol is used by DNS name servers? Justify.

- a. TCP
- b. SNMP
- c. UDP
- d. It can use any routing protocol

Answer: c. UDP

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

4. Which of the following is used to direct a packet inside an internal networks?

- a. Routers
- b. Modem
- c. Gateway
- d None of the above

Answer: a. Routers

Routers are machines that direct a packet through the maze of networks that stand between its source and destination. Normally a router is used for internal networks while a gateway acts a door for the packet to reach the outside of the internal network