



- c) Ping summarizes the packet loss and round-trip delay between two IP end points
- d) The ping command activates the RARP protocol of the IP layer
- (ix) As the resources are reserved between two communicating end systems in circuit switching, select the performance achieved.
- a) Authentication
- b) Guaranteed constant rate
- c) Reliability
- d) Store and forward
- (x) Data in the Network layer is transferred in the form of
- a) layers
- b) packets
- c) bytes
- d) bits
- (xi) Which of the following protocols uses both TCP and UDP?-justify
- a) FTP
- b) SMTP
- c) TELNET
- d) DNS
- (xii) Select the protocol that allows a user at one site to establish a connection to another site and then pass keystrokes from local host to remote host?
- a) HTTP
- b) Telnet
- c) FTP
- d) None
- (xiii) Select the software that prevents external access to a system.
- a) Firewall
- b) Gateway
- c) Router
- d) Virus checker
- (xiv) The term HTTP indicates
- a) Hyper terminal tracing program
- b) Hypertext tracing protocol
- c) Hypertext transfer protocol
- d) Hypertext transfer program
- (xv) Select Which one of the following is an internet standard protocol for managing devices on IP network
- a) Dynamic host configuration protocol
- b) Simple network management protocol
- c) Internet message access protocol
- d) Media gateway protocol

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain the types of errors with examples? (3)
3. Explain in brief the functions of each layer of the OSI reference model. (3)
4. Explain the purpose of IP addresses in the context of network communication. (3)
5. Discuss about Firewall? (3)
6. Assess the advantages and disadvantages of simplex data flow. (3)

OR

Evaluate the effectiveness of various physical network topologies in different scenarios. (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Illustrate the responsibilities of data link layer? (5)
8. Explain the circumstances of Stop-and Wait ARQ. (5)
9. Critically analyze the effectiveness of different physical structures in network topologies, considering factors such as scalability and fault tolerance. (5)
10. Discuss the network layer design issues? Explain in detail. (5)
11. Discuss the role of Unicast Routing Protocols such as RIP, OSPF, and BGP in computer networks. Compare and contrast their key features and applications. (5)
12. Explain the approaches of packet switching techniques (5)

OR

Analyze the advantages and disadvantages of circuit switching compared to packet switching in modern telecommunications.

(5)

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