

APRIL-2015

Paper No. 09: Data Communication and Network (3598)

Duration: 2½ Hours

Total Marks: 70

- Q-1 Answer the following [14]
(a) Distinguish between LAN, MAN and WAN in detail.
(b) Draw and Explain OSI layer.

OR

- Q-1 Answer the following [14]
(a) What is the need of Layered architecture? Explain in detail.
(b) Give detailed note on Internet and its applications.

- Q-2 Answer the following [14]
(a) Define: Protocol. Abbreviate and list out function of HTTP and FTP.
(b) Define: Socket. What does a socket consist of? How socket activity can be monitored?

OR

- Q-2 Answer the following [14]
(a) What is the role of DNS in internet? Draw and explain its structure with types.
(b) Explain Simple Mail Transfer Protocol and Mail Retrieval Protocol

- Q-3 Answer the following [14]
(a) Write short note: Hub and Switch
(b) Distinguish between:
1. Reliable and Unreliable communication
2. Connection less and connection oriented communication.

OR

- Q-3 Answer the following [14]
(a) Explain three-way handshake for establishing a TCP connection.
(b) How congestion occurs in networks? List out steps for its avoidance.

- Q-4 Answer the following [14]
(a) Explain Ethernet and PPP in brief.
(b) How routing algorithms work in general. List various types of routing algorithm.

OR

- Q-4 Answer the following [14]
(a) Explain Original class full Addressing scheme with example.
(b) Explain the process of address resolution in the network.

- Q-5 Answer the following [14]
(a) Discuss various threats for the computer network?
(b) Explain the functions of firewall. Discuss its various types.

OR

- Q-5 Answer the following [14]
(a) What is the role of Digital Signature? Explain Symmetric key. Digital Signature implementation with any popular theory.
(b) What is the use of IPsec? Explain IPsec Authentication Header.