PART A (10 × 2 = 20 marks)

1. What are the functions of application layer?
2. Define bit stuffing.
3. Mention some of the physical properties of Ethernet.
4. What is the role of VCI?
5. List the differences between circuit switching and packet switching.
6. What are all the different kinds of multicast routing?
7. What is the difference between congestion control and flow control?
8. Give the approaches to improve QoS.
9. List the function of POP3.
10. What are all the applications of TELNET?

PART B (5 × 16 = 80 marks)

11 a) Explain in detail about the following:
   (i) PPP
   (ii) HDLC
   (iii) SONET

   [OR]

b) With a neat diagram explain the network architecture. (16)

12 a) i) Explain how bridges run the distributed spanning tree algorithm. (8)
    ii) Explain the following:
        a) Segmentation
        b) Reassembly

    [OR]

b) Explain CSMA in detail. (16)
13 a) What is internetworking? Explain its service model, global address and datagram in detail.

[OR]

b) i) What is the significance of subnetting? Discuss in detail.
    ii) Discuss the interoperability issues between IPv4 and IPv6.

14 a) Explain in detail about the simple demultiplexing and reliable byte stream.

[OR]

b) Write detailed notes on:
    (i) RPC
    (ii) RTP

15 a) i) Explain in detail about message format and message transfer in E-mail.
    ii) Discuss about WWW in detail

[OR]

b) Explain in detail about Name Services.