

1. All questions are compulsory.
2. All questions carry equal marks.
3. Draw neat, labelled diagrams wherever necessary

Q.1 Attempt the following (Any Four)

[20 Marks]

- a. Give the components of Data Communication.
- b. Write short note on TDM.
- c. What are transmission modes? Explain Serial transmission.
- d. Write a note on Circuit switched network.
- e. Give the characteristics of Layer 1 of OSI model
- f. Write a short note on Guided media. Explain any two.

Q.2 Attempt the following (Any Four)

[20 Marks]

- a. Explain the packet format of IPv4.
- b. What is controlled-access protocol? Explain any two in detail.
- c. Explain Character oriented protocol.
- d. What is simple parity check code? Explain with diagram.
- e. Give the frame format of MAC sublayer.
- f. Give and explain classification of IPv4 classful addressing.

Q.3 Attempt the following (Any Four)

[20 Marks]

- a. Give the services of TCP.
- b. Explain remote login in TELNET.
- c. Write short note on Distance Vector Routing.
- d. Explain three types of Multicasting Routing Protocol.
- e. Give the packet format of UDP.
- f. What is Path vector mechanism.

Q.4 Attempt the following (Any Five)

[15 Marks]

- a. Explain term Half-Duplex, Simplex and Full-Duplex.
- b. Convert the following data in signal :
 1. 10010011 (NRZ-I)
 2. 10101110 (RZ)
- c. Explain the terms Redundancy and Retransmission.
- d. Write short note on 10Base5.
- e. Give FTP commands and replies.
- f. Explain recursive queries in DNS.
