

(3 Hours)

[Total Marks: 80]

- N.B.: (1) Question No.1 is compulsory.
(2) Attempt any three questions from the remaining five questions.
(3) Make suitable assumptions wherever necessary but justify your assumptions

- 1. a) Compare Ring and Star topology 5
b) Use RLE method of compression to compress the following data:
Data: AAAACCBBBDDDDDEFF 5
c) Explain the TCP connection establishment with relevant diagram 5
d) Compare LAN MAN and WAN 5

- 2. a) What is the OSI Model? Give functions and services of each layer. 10
b) Discuss the different networking devices used for internetworking. 10

- 3. a) What is Domain Name system? How does it work? Explain the resolution process 10
b) Explain the different transmission media in networking. 10

- 4. a) What is congestion and what are its causes? Explain Token bucket algorithm for congestion control 10
b) Explain the TCP header format 10

- 5. a) Compare Static and Dynamic Routing and explain any one with an example. 10
b) Explain stop and wait protocol. What are its drawbacks? How can they be overcome? 10

- 6. Write a note on (any two) 20
 - a. RPC
 - b. CSMA/CD
 - c. IP Addressing
