

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2019

COMPUTER NETWORKS

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. List any four networking topologies.
2. List the four types of delays in a network.
3. Define socket address.
4. Write any four Generic domains.
5. Name two transport layer protocols.

(5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Distinguish between point to point and multipoint connections.
2. Classify the following destination addresses into unicast, multicast and broadcast.
  - (a) 4A:30:10:21:10:1A
  - (b) FF:FF:FF:FF:FF:FF
  - (c) 47:20:1B:2E:08:EE
3. Explain Distance Vector Routing Algorithm.
4. Describe any two closed loop congestion control policies.
5. Briefly explain the TCP services.
6. Explain the File Transfer Protocol.
7. Name and explain the components of URL.

(5×6 = 30)

## PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

## UNIT — I

- III (a) Explain TCP/IP protocol suite with a neat diagram. 9
- (b) Explain the architecture of Virtual LAN. 6

OR

- IV (a) Write down the frame format of Standard Ethernet. Briefly explain each field. 9
- (b) Briefly explain about any two LAN connecting devices. 6

## UNIT — II

- V (a) Write down the datagram format of IPv4. Write the function of each field. 9
- (b) Differentiate between unicasting and multicasting. 6

OR

- VI (a) Explain the Link State Routing Algorithm. 9
- (b) A classless address in IPv4 is given as 167.199.170.82/27. Find out the number of addresses in the network, the first address and the last address in the network. 6

## UNIT — III

- VII (a) Explain Go-Back-N Protocol. 8
- (b) Briefly explain the connection establishment in TCP. 7

OR

- VIII (a) Briefly explain the SCTP features. 8
- (b) Describe User Datagram format. 7

## UNIT — IV

- IX (a) Explain the architecture of WWW. 9
- (b) Write down and briefly explain the Request message format of HTTP. 6

OR

- X (a) Explain the DNS in Internet. 9
- (b) Summarize the features of TELNET. 6