

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE , APRIL – 2023**

COMPUTER NETWORKS

(Maximum Marks : 100)

(Time : 3 hours)

PART – A
(Maximum Marks : 10)

Marks

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

1. Which are the common Standard Ethernet implementations?
2. Write down the address space of IPv4.
3. What is meant by piggybacking?
4. Give examples for any four Generic domains.
5. List any two application layer protocols.

(5x2=10)

PART – B
(Maximum Marks : 30)

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

1. Explain briefly on any two network topologies.
2. List any two LAN connecting devices. Describe them briefly.
3. Discuss about the classful addressing of IPv4.
4. Describe the operation of DHCP for dynamic IP allocation.
5. Explain the encapsulation and decapsulation of packets in the transport layer with a neat diagram.
6. Summarize the applications of UDP.
7. Explain briefly about Domain Name System.

(5x6=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. (8)
(b) Draw the architecture of virtual LAN and explain. (7)

OR

- IV.** (a) Describe briefly on the protocol IEEE 802.11 and its architecture. (8)
(b) Draw the frame format of Standard Ethernet and explain. (7)

UNIT – II

- V.** (a) Explain distance-vector routing algorithm. (8)
(b) Describe the fragmentation in the network layer. (7)

OR

- VI.** (a) Describe Path Vector routing algorithm. (8)
(b) How can we measure the performance of a network? Discuss any two important factors. (7)

UNIT –III

- VII.** (a) Explain selective repeat protocol. (8)
(b) How a connection is terminated in TCP using three way handshaking? Explain. (7)

OR

- VIII.** (a) Explain the TCP segment format. (8)
(b) Summarize SCTP features. (7)

UNIT – IV

- IX.** (a) Describe the architecture of World Wide Web. (8)
(b) Briefly explain File transfer Protocol. (7)

OR

- X.** (a) Explain Simple Mail Transfer Protocol. (8)
(b) Describe briefly on TELNET. (7)
