NP – 317

III Semester B.C.A. Degree Examination, March/April 2023
(NEP Scheme)
(Freshers) (2022 – 23 and Onwards)
COMPUTER SCIENCE
Computer Networks

Time : 2½ Hours

Max. Marks : 60

Instruction : *Answer all Parts.*

PART – A

I. Answer **any 4** of the following.   (4×2=8)

    1) Define Computer Networks.

    2) List the protocols of Data Link Layer.

    3) What is CSMA and CSMA/CD ?

    4) Define Network Topology.

    5) Define Packet.

    6) Define Datagram and WWW.

PART – B

II. Answer **any 4** of the following.   (4×5=20)

    7) How many layers are there in TCP/IP model ? Mention the functions of each layer.

    8) With a neat diagram, explain pure and slotted ALOHA.

    9) Explain the following : TDMA and CDMA.

    10) Explain IPVA address formats with a neat diagram.

    11) Write a note on Packet Switching.

    12) Explain the various transmission modes.

PART – C

III. Answer **any 4** of the following.   (4×8=32)

13) Explain the OSI reference model in detail with a neat diagram.   8

14) Explain CRC method of error checking. Give an example.   8

15) With a neat diagram, explain the following topologies :   8
    a) Mesh topology
    b) Star topology
    c) Bus topology
    d) Hybrid topology

16) Explain the different types of routing algorithms.   8

17) a) Differentiate between user datagram protocol and transmission control
       protocol.   4
    b) Importance of Quality of Services (QoS).   4

18) Write short notes on the following :
    a) Congestion control.   4
    b) Flow control.   4