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

(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

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