



**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.

P.T.O.

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. <https://www.bubangalore.com> **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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