

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
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