Reg. No. ☐☐☐☐☐☐☐☐

BCACAC 332

**Choice Based Credit System Fifth Semester B.C.A. Degree
Examination, February/March 2023
(2021-22 Batch Onwards)
COMPUTER AND COMMUNICATION NETWORKS (Group – I)**

Time : 3 Hours   Max. Marks : 80

Note : *Answer **any ten** questions from Part – **A** and **one full**
question from **each** Unit in Part – **B**.*

PART – A

1. a) Define throughput and bandwidth.   (10×2=20)

   b) Differentiate Bit rate and Baud rate.

   c) What is segmentation and multiplexing ?

   d) What is the difference between MAC and IP address ?

   e) Write the different types of CSMA.

   f) What is subnet masks and subnetting ?

   g) Write any 2 characteristics of UDP.

   h) What is home RF and bluetooth ?

   i) Expand

      i) EGP

      ii) OSPF.

   j) Name any two session layer tasks.

   k) What is HTTP and SMTP ?

   l) What is adware and spyware ?

PART – B

Unit – I

2. a) Explain in brief :

   i) Mesh topology.

   ii) Ring topology.

   b) Explain differences between LAN and WAN.

   c) What is network operating system ? Explain in brief Peer-to-peer and Client-server network.   (5+5+5)

3. a) Explain different types of layers in TCP/IP model.

   b) Write a note on :

   i) Co-axial cables

   ii) Fibre-optic cable.

   c) What are switched networks ? Explain circuit switched networks.   (5+5+5)

Unit – II

4. a) With diagram, explain frames in

   i) Pure ALOHA and

   ii) Slotted ALOHA.

   b) Explain IPv4 datagram header format.

   c) What is CSMA/CD ? How does it work ?   (5+5+5)

5. a) Explain the working of token ring.

   b) Explain the features of IPv6.

   c) With an example, explain how ARP resolves MAC addresses for remote traffic.   (5+5+5)

Unit – III

6. a) Briefly explain mobile IP registration steps.

   b) Write a short note on :

      i) IGP

      ii) RIP.

   c) Briefly explain TCP connection establishment-three-way handshake.   **(5+5+5)**

7. a) Explain 802.11 MAC frame format.

   b) Explain the various BGP message types.

   c) Briefly explain steps involved in establishing a call between two mobile users in cellular network.   **(5+5+5)**

Unit – IV

8. a) What are the major sessions layer protocols ? Explain.

   b) Briefly explain how does DHCP work.

   c) Write a note on :

      i) Spoofing attack.

      ii) Phishing attack.   **(5+5+5)**

9. a) Briefly explain various network security components.

   b) How does SMTP work ? Explain.

   c) Write a note on :

      i) DoS

      ii) DDoS.   **(5+5+5)**