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**BCACACN 303**

**Third Semester B.C.A. Degree Examination, February/March 2023  
(NEP – 2020)  
(2022 – 23 Batch Onwards)  
COMPUTER COMMUNICATION AND NETWORKS (DSCC)**

Time : 2 Hours

Max. Marks : 60

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

**PART – A**

1. a) Define computer network. (6×2=12)
- b) What is unicasting and broadcasting ?
- c) What is meant by guided media ?
- d) What is digital modulation ?
- e) What is multicast routing ?
- f) What is meant by subnetting and subnets ?
- g) List the two main protocol in transport layer.
- h) Expand SMTP, MIME.

**PART – B**

**Unit – I**

2. a) Explain in brief different layers of OSI reference model.
- b) Differentiate connection oriented and connectionless service. (6+6)
3. a) Explain in brief different layers of TCP/IP reference model.
- b) Write a note on the following (i) Mobile users (ii) Social issues. (6+6)

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**Unit – II**

- 4. a) Write a note on (i) Coaxial cable (ii) Fiber optics.
- b) Explain the different types of switching techniques. (6+6)
- 5. a) With a neat diagram explain Time Division Multiplexing.
- b) Explain any two popular techniques for error detection. (6+6)

**Unit – III**

- 6. a) Explain store and forward packet switching.
- b) With a neat diagram explain the format of IP version 6 protocol. (6+6)
- 7. a) What is congestion ? List and explain the approaches to congestion control.
- b) With a neat diagram explain classful addressing.
- c) Explain the types of OSPF messages. (4+4+4)

**Unit – IV**

- 8. a) List and explain the built-in HTTP request methods.
  - b) Write a short note on Domain Name system.
  - c) Explain the process of TCP Sliding window. (4+4+4)
  - 9. a) With a neat diagram explain the architecture of Email system.
  - b) Explain the technique of Remote Procedure Call. (6+6)
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