

"Do not write anything on question-paper except Roll Number, otherwise it shall be deemed as an act of indulging in unfair means and action shall be taken as per rules."

Roll No. :.....

B.C.A.- (Sem.-III)

Comp. Net.

10662 NEP

**BACHELOR OF COMPUTER
APPLICATION (SEMESTER-III),
Examination, 2025**

DCC-CSA6002T

COMPUTER NETWORKS

Time Allowed : **Three Hours**

Maximum Marks : **80**

Part-A

Note : 1. The question of Part-A are compulsory. The answers of these questions are limited upto **50** word each. Each question carries **2** marks.

Part-B

2. Attempt **FIVE** questions in all, selecting **ONE** question from each Unit. The answer of each question shall be limited upto **550** words. Each question carries **12** marks.

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(1)

P.T.O.

Part-A

1. (a) What is Data Communication?
- (b) What is Network?
- (c) What is the use of Data Link Layer?
- (d) What do you mean by switching? Why Switching is required?
- (e) What is a LAN? Can a LAN have routers? Explain.
- (f) Describe the ALOHA protocol and its shortcoming.
- (g) Write short note on ZigBee.
- (h) Explain Hamming code with example.
- (i) What are the different classes of IP addresses and give the range of each class?
- (j) Write short note on IPV6.

Part-B

Unit-I

1. (a) Write short note on following:
 - (i) Twisted Pair
 - (ii) Coaxial Cable
 - (iii) Optical Fiber

OR

(b) Write short note on following :

- (i) Bridge
- (ii) Switches
- (iii) Router
- (iv) Hub

Unit-II

2. (a) What is TCP/IP Network? Why this network was introduced after OSI Model? Explain the reasons and drawbacks of OSI model.

OR

- (b) What is Circuit Switching, Packet Switching and Network Switching? Compare all three using timing diagram.

Unit-III

3. (a) What do you mean by network topology? Explain any three types of topologies in detail.

OR

- (b) What do you mean by Collision Detection? Explain CSMA/CD and CSMA/CA network protocols in detail.

Unit-IV

4. (a) Discuss the concept of redundancy in error detection and correction. Also explain Parity Generation Code with example.

OR

- (b) Briefly explain the cyclic redundancy check (CRC) error detection scheme. Prove the validity of the scheme.

Unit-V

5. (a) What is the importance of subnet masking in IP addressing? Give the example of IP addressing and corresponding subnet masking.

OR

- (b) Write short note on following :

(i) Logical Addresses

(ii) Physical Addresses

(iii) Network Mask

(iv) Host Part

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Computer Section
Faculty of Science, J N Vyas University, Jodhpur

Term-Test
BCA-III SEM II Year 2024-25

Subject: CSA6002T COMPUTER NETWORKS
Duration: 2 Hrs.

M.M.:50

Section -I

(Answer all questions. Each question is of 2 marks)

- Q1. Write any one advantage and disadvantage of coaxial cable
- Q2 .Differentiate between Bridge and Router
- Q3. What are the functions of the Network layer in the OSI model?
- Q4. What are the names of the layers in the TCP/IP model?
- Q5. How does circuit switching differ from packet switching?
- Q6. What are the three main types of switching techniques used in computer networks?
- Q7. What is a network topology? Name the different types of LAN topologies.
- Q8. Describe the characteristics of a bus topology.
- Q9. Define ALOHA.
- Q10. What is Wifi.

Section II

(Answer three Question. Each question is of 10 marks)

Q1. Explain the OSI-ISO model of computer with neat diagram.

OR

Q2. Discuss in detail about TCP/IP protocol suite.

Q3. Explain various switching mechanism in detail.

OR

Q4. Discuss various transmission media available for building network.

Q5. Explain LAN, WAN and MAN in detail

OR

Q6. Explain STAR and RING topologies in detail.