

Roll No.

Total No. of Pages : 02

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B.Sc. (CS) (Sem.-4)
DATA COMMUNICATION AND COMPUTER NETWORKS

Subject Code : BCS-406

M.Code : 72322

Date of Examination : 19-07-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.

SECTION-A

1. Answer briefly :

- a) What are the advantages of a multipoint connection over a point-to-point connection?
- b) Assume six devices are arranged in a mesh topology. How many cables are needed? How many ports are needed for each device?
- c) What is a peer-to-peer process?
- d) How does information get passed from one layer to the next in the Internet model?
- e) Explain the use of address resolution protocol.
- f) Describe the goals of multiplexing.
- g) What is the hamming distance?
- h) Apply the following operations on the corresponding polynomials :
 $(x^3 + x + x + 1)/(x^2 + 1)$.
- i) What are the main difference between SLIP and PPP?
- j) Explain IEEE 802.5 token ring.

SECTION-B

2. List and explain the layers of TCP/IP reference model.
3. Draw a hybrid topology with a star backbone and three ring networks.
4. List and explain the basic multiplexing techniques.
5. List and explain data link layer design issues.
6. How to avoid collision in CSMA/CA? Explain in detail.
7. Write a note on shortest path routing in the network layer.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.