

Roll No.

Total No. of Questions : 09]

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B. Tech. (Sem. - 4th)

DATA COMMUNICATION

SUBJECT CODE : CS - 206

Paper ID : [A0460]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section - A

Q1)

(10 × 2 = 20)

- a) Define the term: network topology and name its various types?
- b) What is the advantage of layered architecture?
- c) Why do we need multiplexing?
- d) Define the term: Multimedia and WWW.
- e) Name various operations of Physical layer?
- f) What is Block parity?
- g) What do you mean by packet switched network?
- h) Differentiate between LAN and MAN?
- i) What do you mean by Network reliability?
- j) Define the term Subnet and its need?

Section - B

(4 × 5 = 20)

- Q2) Describe in brief the Architecture of TCP/IP model.
- Q3) What do you mean by Switching? Describe in brief the various switching methods.
- Q4) Explain the functioning of Sliding Window protocol.
- Q5) Differentiate between E-mail and DNS services.
- Q6) Discuss in brief the various issues related to Network Security.

Section - C

(2 × 10 = 20)

- Q7) Name various Error Detection and Correction techniques? Explain in detail the Hamming error correction method. Also find the CRC using a polynomial, $P = 110011$, for a given data, $M = 11100011$.
- Q8) a) Explain in detail the design issues of Transport layer protocols.
b) Describe in brief the terms: FDM, WDM and TDM.
- Q9) Write short notes on any two:
- a) Routing Algorithms.
 - b) Channel allocation.
 - c) IP addressing.

