

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

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

(10 × 2 = 20)

Q1)

- 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.

