

Roll No. ....

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Sem. – 4<sup>th</sup>)  
DATA COMMUNICATION  
SUBJECT CODE : CS - 206  
Paper ID : [A0460]

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

**Time : 03 Hrs.**

**Max. 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 Marks )**

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 Marks)**

- 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 Marks)**

- 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.