

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 : [A0406]

[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 Marks)**

Q1.

- a) List different topologies available for networking?
- b) What is the advantage of layered architecture?
- c) What is the use of modulation?
- d) Differentiate between LAN and WAN.
- e) Name various operations of Data link layer.
- f) What do you understand by term protocol?
- g) What do you mean by packet switched network?
- h) What is flow control?
- i) What do you mean by Network reliability?
- j) Define the term congestion.

**SECTION - B**

**( 4 \*5 = 20 Marks)**

- Q2. Describe in brief the working of different layers of TCP/IP model.
- Q3. Explain briefly different error detection and correction methods.  
Construct the Hamming code for the bit sequence 1001 1101.
- Q4. Explain the functioning of Go back by n protocol.
- Q5. Explain briefly how the network security is taken care of in application layer?
- Q6. List and explain different digital-to-analog conversion methods.

**SECTION - C**

**( 2\*10 = 20 Marks)**

- Q7. Explain in detail the different fields of IP header format? Also give the detail of IP addresses?
- Q8. (a) Explain in detail the design issues of Transport layer protocols.  
(b) Describe in brief the terms : DNS, World Wide Web, E-mail.
- Q9) Write short notes on :
- (a) Routing Algorithms.
- (b) Congestion control algorithms.