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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 x 2 = 20)*

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

*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 10011101.

*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 x 10 = 20)*

*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.

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