

Total No. of Questions : 4]

SEAT No. :

PC411

[Total No. of Pages : 1

[6359]-531

**S.E. (Information Technology) (Insem)**  
**BASICS OF COMPUTER NETWORK**  
**(2019 Pattern) (Semester - III) (214445)**

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q1 or Q2, Q3 or Q4.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

- Q1)** a) Differentiate between OSI model and TCP/IP model. [5]  
b) Demonstrate and five types of noise in communication system. [5]  
c) Draw and explain Pulse Code Modulation. [5]

OR

- Q2)** a) Write a short note on Mesh topology & Hybrid topology. [5]  
b) Explain the FDM and TDM Multiplexing with their Advantages and Disadvantages. [5]  
c) Explain the following shift Keying techniques with suitable examples : [5]  
i) ASK  
ii) FSK

- Q3)** a) Demonstrate Checksum method with suitable example. [5]  
b) A Seven Bit Even Parity Hamming Code is received as 1110101? What is Correct Code? [5]  
c) Explain the working mechanism of [5]  
i) Simplest Protocol  
ii) Stop and Wait Protocol

OR

- Q4)** a) Demonstrate Functions of the Data Link Layer. [5]  
b) What is CRC? Generate the CRC code of message 1001101010. Given generator Polynomial  $g(x) = x^4 + x^2 + 1$ . [5]  
c) Explain the terms : [5]  
i) Piggybacking  
ii) Parity check

