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SEAT No. :

PC-28

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[6360]-28

**T.E. (Computer Engineering) (Insem.)**  
**COMPUTER NETWORKS AND SECURITY**  
**(2019 Pattern) (Semester - I) (310244)**

*Time : 1 Hour]*

*[Max. Marks : 30]*

*Instructions to the candidates :*

- 1) *Neat diagrams must be drawn whenever necessary.*
- 2) *Figures to the right side indicate full marks.*
- 3) *Assume Suitable data if necessary.*
- 4) *Answer Q.1 or Q.2, Q.3 or Q.4.*

- Q1)** a) Describe Bridge, Gateway and Access point. [6]  
b) Explain Frequency Hopping Spread Spectrum. [5]  
c) Explain LAN and MAN. [4]

OR

- Q2)** a) Draw Manchester and differential Manchester code for the bit sequence: 01001011. [6]  
b) Explain TCP/IP Model. [5]  
c) Explain Ring and Mesh topologies. [4]

- Q3)** a) Give brief about HDLC Protocol. [6]  
b) Justify answer using CRC for divisor: 1101 dividend: 100100. [5]  
c) Give brief about design issues in DLL. [4]

OR

- Q4)** a) What are Framing, Error control and Flow control? [6]  
b) Give short note on CSMA/CA, CSMA/CD. [5]  
c) Explain Stop and Wait Protocol. [4]

