

Total No. of Questions : 4]

**PE27**

SEAT No. :

[Total No. of Pages : 1

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

*Time : 1 Hour]*

*[Max. Marks : 30*

*Instructions to the candidates:*

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

**Q1)** a) Draw and explain OSI Model. [6]

b) Explain Direct Sequence Spread Spectrum. [5]

c) Explain : [4]

- i) Router
- ii) Switch

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) Justify answer using CRC for divisor : 1101 dividend : 100100. [6]

b) Explain IEEE 802.15 frame format. [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]



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