

# SPPU-TE-COMP-CONTENT – KSKA Git

Total No. of Questions : 4]

SEAT No. :

P-5028

[Total No. of Pages : 1

[6187]-428

**T.E. (Insem.) (Computer Engineering)**  
**COMPUTER NETWORKS & 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 side 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 i) Router ii) Switch. [4]

OR

- Q2)** a) Explain TCP/IP Model. [6]  
b) Draw Manchester and differential Manchester code for the bit sequence: 01001011. [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 is sliding window protocol? How it works? [6]  
b) Explain CSMA in detail. [5]  
c) Explain PPP. [4]

