

Total No. of Questions : 6]

SEAT No. :

P5091

[Total No. of Pages :2

**T.E./Insem. - 640**  
**T.E. (Computer Engineering)**  
**COMPUTER NETWORK**  
**(2015 Pattern) (Semester-I)**

*Time : 1 Hour]*

*[Max. Marks : 30*

*Instructions to the candidates:*

- 1) *Attempt Q.1 or Q.2, Q.3 or Q.4 & Q.5 or Q.6.*
- 2) *Neat diagram must be drawn wherever necessary.*
- 3) *Figure to the right indicate full marks.*
- 4) *Assume suitable data, if necessary.*

- Q1) a)** What are the design issues of layers? Explain it. **[5]**
- b) What are the different network devices? Explain difference between switch and hub. **[5]**

OR

- Q2) a)** What are the transmission techniques used by 802.11 to send a MAC frame from one station to another? Explain two of them. **[5]**
- b) What is line encoding? Give the Manchester line code and differential Manchester code for the bit sequence: 1100110 **[5]**

- Q3) a)** What is need of framing? What are the different techniques of framing? Explain any two. **[5]**
- b) The data word 1101011011 is to be sent using generator polynomial  $x^4+x+1$ , Use CRC to compute the code word at the sender side. **[5]**

OR

- Q4) a)** Explain Go back N Sliding window protocol with example. **[5]**
- b) Explain bit oriented protocol for communication over point to point and multipoint link. **[5]**

**P.T.O.**

- Q5)** a) Draw and explain frame format of 802.16 standard. [5]
- b) Consider building a CSMA/CD network running at 1 Gbps over a 1km cable with no repeaters. The signal speed in the cable is 200000km/sec. What is the minimum frame size? [5]

OR

- Q6)** a) State the difference between static and dynamic channel allocation? Give two examples for each? [5]
- b) Explain working of CSMA/CA with the help of flow diagram. [5]

