

Total No. of Questions : 4]

SEAT No. :

PA-28

[Total No. of Pages : 2

[5931]-39

S.E. (Information Technology)

(214445): BASICS OF COMPUTER NETWORK

(2019 Pattern) (Semester - I)

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) Draw ISO/OSI model and explain functions of following layers : [5]

- i) Physical
- ii) Data link
- iii) Network layer

b) List and explain different types of Transmission Impairment. [5]

c) Encode the following binary stream [1 0 1 0 0 0 1 1 0] into NRZ-L, NRZ-I. [5]

OR

Q2) a) Explain different addressing schemes in TCP/IP model. [5]

b) What is mean by Delta Modulation? Explain Distortion in Delta Modulation. [5]

c) Write a short note on Bus topology & Star topology. [5]

P.T.O.

- Q3)** a) What is CRC? Generate the CRC code of message 1101011101. Given generator Polynomial $g(x) = x^3 + x^2 + 1$. [5]
- b) Explain the working mechanism of [5]
- i) Go back-N ARQ
 - ii) Selective Repeat ARQ
- c) What is hamming code? Also find Hamming Code word for following Data word 1001011 using even parity. [5]

OR

- Q4)** a) Explain with example fixed-size framing and variable size framing. [5]
- b) Explain Two dimensional parity check. [5]
- c) Discuss the concept of redundancy in error detection and correction. [5]

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