

Total No. of Questions : 4]

SEAT No. :

P-5405

[Total No. of Pages : 2

[6186]-531

S.E. (Information Technology) (Insem.)
BASICS OF COMPUTER NETWORK
(2019 Pattern) (Semester - III) (214445)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

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

- Q1)** a) Explain the data communications system with its five components and discuss the fundamental characteristics of data communication system. [5]
- b) Write a short note on Bus Topology & Star Topology. [5]
- c) Differentiate Frequency Division Multiplexing and Time-Division Multiplexing. [5]

OR

- Q2)** a) Write short note on Analog Signals and Digital Signals with the help of waveforms. [5]
- b) Explain Nyquist theorem with suitable example. [5]
- c) Explain TCP/IP protocol suite with layered architecture. [5]

- Q3)** a) Describe in detail Internet Checksum method with suitable example. [5]
- b) Demonstrate following Error detection methods with suitable example: [5]
- i) Parity Checks
 - ii) Hamming code
- c) Explain in detail Go-Back-N and Selective Repeat ARQ system. [5]

OR

P.T.O.

- Q4) a)** Describe following types of framing methods [5]
- i) Character Count
 - ii) Bit stuffing
- b) Explain Two dimensional parity check. [5]
- c) What is Hamming code? Also find Hamming Code word for following Data word 1001011 using even parity. [5]

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