

# C.U.SHAH UNIVERSITY

## Summer Examination-2019

Subject Name : Networking Essentials

Subject Code : 4CS04INE1

Branch: B.Sc.I.T.

Semester : 4

Date : 22/04/2019

Time : 02:30 To 05:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
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**Q-1                    Attempt the following questions:                    (14)**

- a) \_\_\_\_\_ is connected to every computer that is involved in data communication over telephone lines for signal propagation and information encoding.
- b) Give types of Standard.
- c) Define the term Noise.
- d) \_\_\_\_\_ signals are discrete in nature.
- e) Data link layer is sub divided into \_\_\_\_\_ & \_\_\_\_\_.
- f) Define the term Amplitude.
- g) Full Form of CRC.
- h) What is FSK?
- i) List the layers of OSI model.
- j) What is multiplexing?
- k) The Process of converting analog data to analog signal is called \_\_\_\_\_.
- l) Give Odd Parity for :1000101
- m) What is FDDI?
- n) List types of channel in ISDN.

**Attempt any four questions from Q-2 to Q-8**

**Q-2                    Attempt all questions                    (14)**

- a) Explain AM, FM & PM in detail.                    **07**
- b) What is Data Communication? Explain its characteristics and components of Data communication.                    **07**

**Q-3                    Attempt all questions                    (14)**

- a) List multiplexing techniques and explain each in detail.                    **07**
- b) Explain Token Ring in detail.                    **07**

**Q-4                    Attempt all questions                    (14)**

- a) Write a note on ISDN Architecture and its Channel types.                    **07**
- b) Explain Simplex, Half-duplex, and Full duplex modes with diagram                    **07**



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| <b>Q-5</b> | <b>Attempt all questions</b>   | <b>(14)</b> |
|            | a) Explain CRC with example.   | <b>07</b>   |
|            | b) List line encoding polar techniques and explain them  | <b>07</b>   |
| <b>Q-6</b> | <b>Attempt all questions</b>   | <b>(14)</b> |
|            | a) Explain Serial transmission mode and its types.   | <b>07</b>   |
|            | b) Write a note on OSI model.  | <b>07</b>   |
| <b>Q-7</b> | <b>Attempt all questions</b>   | <b>(14)</b> |
|            | a) If the data to be transferred is: <b>10011001111000100010010010000100.</b>  | <b>07</b>   |
|            | Calculate its checksum value at sender's side and Receiver's side and give conclusion whether data is accepted or not. |             |
|            | b) Explain LRC in detail.  | <b>07</b>   |
| <b>Q-8</b> | <b>Attempt all questions</b>   | <b>(14)</b> |
|            | a) What are protocol? Explain its elements.  | <b>07</b>   |
|            | b) What is Topology? Explain various topologies in detail.   | <b>07</b>   |

