Roll No. ....

Networking Fundamentals
2K7-CS-02

[M.M. : 100]

Time : 03 hrs.]

Note :—
1. Part 'A' may be attempted in first 5 pages of Answer Sheet.
   भाग क के सभी उत्तर, उत्तर-पुस्तिका के प्रथम छः पृष्ठों में ही करने है।
2. Part 'B' in rest of the Sheets of Answer Sheet.
   भाग 'ख' के उत्तर, उत्तर-पुस्तिका के अगले शेष पृष्ठों में लिखिये।
3. Answers may be given in English or Hindi.
   प्रश्नों के उत्तर अंग्रेजी अथवा हिन्दी में दीजिये।

PART – A

1. Answer the following questions in short (Attempt any ten) :   (2×10=20)

   (a) What is guided media ?

   (b) Define channel capacity.

   (c) What do you mean by PCM

   (d) Define the term noise in data communication.

   (e) What is protocol ?

   (f) What is meant by digital signal ?

   (g) What is bandwidth ?

   (h) Define baud rate.

   (i) What is parity bit ? Write its use.

   (j) Define the term attenuation.

   (k) What is CRC. Why it is used ?

   (l) Name different networking diveces used.

   (m) What is multiplexing ?

   (n) What do you mean by data communication.

(5x4=20)

2. **Answer the following questions (Attempt any five):**

    (a) Explain different mode of fiber optic.

    (b) Explain the difference between coaxial cable and optical fiber ?

    (c) Differentiate between synchronous and asynchronous transmission.

    (d) What are advantages of frame relay ?

    (e) Differentiate between guided and unguided media.

    (f) Explain IEEE-488 standard.

    (g) Explain AM and FM with waveforms.

PART- B

(3x20=60)

Answer any three questions :

3. (a) Explain various physical topologies with diagram.

    (b) Compare terrestrial and satelite microwave links.

4. (a) State sampling theorem and describe pulse code modulation.

    (b) Describe frequency division multiplexing and time division multiplexing.

5. (a) Compare circuit switching and packet switching.

    (b) Explain how connection is established for data communication in direct and 3-way handshake mode.

6. (a) Distinguish between half duplex and full duplex. Give example.

    (b) Explain transmission impairments in details. Also explain types of errors in the data communications.

7. Write short note on following :

    (a) Scrambling technique

    (b) Parity check

    (c) RS-232

    (d) NRZ encoding