

Seat
No.

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BII1315

Data Communications (New) (1110)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Answer **any two** question from each unit.
5. Figure to right indicate full mark.
6. Assume suitable data if necessary.

UNIT - I

1. a) i) Explain in detail various forms of data representation. 5
ii) Explain Design issues of layes. 5
b) i) What is transmission impairments ? Also explain causes of impairments ? 5
ii) A signal of 100 W power, going into channel with noise of 10W.
In order to send 10,000 bits/sec, how much bandwidth is needed. 5
c) Explain with diagram OSI reference model. 10

UNIT - II

2. a) What are different digital modulation techniques ? Explain any one in detail. 10
b) What is sampling ? Explain pulse code modulation in detail. 10
c) i) Compare ASK & FSK. 5
ii) What is line coding ? Explain characteristic of line coding. 5

UNIT - III

3. a) Define switching ? Compare different switching techniques. 10
- b) i) Explain with neat diagram major component of telephone network ? 5
- ii) Compare WDM & TDM. 5
- c) Explain in detail different types of transmission media. 10

UNIT - IV

4. a) i) What are the types of errors & why error detection & correction is essential. 5
- ii) Calculate CRC checksum for message polynomial $G(x) = x^5 + x^2$ with the help of generator polynomial $P(x) = x^3 + x^2 + 1$. 5
- b) Explain concept of error detection ? Also explain priority check in detail. 10
- c) Compare flow control & error control ? Explain one of flow control & error control mechanism in detail. 10

UNIT - V

5. a) What do you mean by control access. Explain FDMA in detail. 10
- b) Write short note on. 10
- i) Repeater ii) Bridge
- iii) Router iv) Gateway
- v) Hub
- c) Explain with frame format. 10
- i) IEEE 802.3 standard.
- ii) IEEE 802.4 standard.
