

## DATA COMMUNICATION

2K5-DS-3

Time : 3 Hrs.

M.M. : 100

**Note :—**

1. Part 'A' may be attempted in first 5 pages of Answer Sheet.
2. Part 'B' may be attempted in rest of the sheets of Answer Sheet.

## PART - A

1. Attempt any ten questions:

(10 x 2 = 20)

- (a) What do you understand by communication channel?
- (b) What is cross talk?
- (c) What is transmission speed?
- (d) Explain different types of errors in respect of communication.
- (e) What is demultiplexing?
- (f) Define DPSK?
- (g) Differentiate between odd parity and even parity.
- (h) What is S.N.R.?
- (i) Define time period.
- (j) What is Bandwidth?
- (k) The bit rate of a signal is 3000 bps. If each signal element carries six bits, what is the baud rate?
- (l) Communication between a computer and keyboard involve \_\_\_\_\_ transmission.
- (m) What is the purpose of carrier signal in modulation?
- (n) What are the goals of multiplexing?

2. Attempt any five questions:

(5 x 4 = 20)

- (a) Differentiate between serial and parallel transmission.
- (b) Explain Shannon capacity.
- (c) Explain satellite communication system.
- (d) What are various signal formats?
- (e) Explain transmission impairment in terms of attenuation, distortion and noise.
- (f) What is BERT?

- (g) Explain MODEM.
- (h) What is protocol analyzer?

**PART - B****Note: Attempt any three questions:****(3 X 20 = 60)**

- 3. (a) What are transmission lines? Explain their characteristics.  
(b) What is modulation? Explain digital to analog conversion methods.
- 4. (a) What is multiplexing? Explain TDM.  
(b) Compare between simplex, half-duplex and full duplex communication.
- 5. (a) Explain the basic principle of error detection and error correction. Explain CRC method.  
(b) Explain communication using frames and packets. Write their formats in detail.
- 6. (a) Explain direct and handshake mode of communication.  
(b) Compare physical aspects of different interface standards.
- 7. (a) Explain test procedures and test equipments in details.  
(b) Explain TDR and OTDR method of cable testing.

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