Code : 15EC43T

IV Semester Diploma Examination, Nov./Dec.-2018

DIGITAL COMMUNICATION

Time : 3 Hours] | Max. Marks : 100

Instructions : (1) Answer any **six** questions from Part – A. (5 × 6 = 30 Marks)

(2) Answer any **seven** questions from Part – B. (10 × 7 = 70 Marks)

PART – A

1. Compare Analog and Digital Communication Systems.   5

2. Mention the advantages, disadvantages and applications of PCM.   5

3. Write a brief note on Companding Process.   5

4. What is digital modulation ? Name the types of digital modulation techniques. 5

5. Explain briefly about eye pattern.   5

6. What is multiple access methods ? Name the types.   5

7. Explain the concept of FDM.   5

8. Write a brief note on redundancy.   5

9. Write a note on Errors.   5

PART – B

10. (a) Describe the generation of PWM.

    (b) Mention the merits and demerits of PWM.

11. Describe briefly the functional, block diagram of digital communication system.   **10**

12. Describe briefly the Digital Pulse Code Modulation (DPCM) System with the help of functional block, diagram.   **10**

13. (a) Describe briefly the generation of binary FSK.   **6**

    (b) Explain briefly the binary FSK with the help of waveforms.   **4**

14. (a) Write a brief note on GMSK.   **5**

    (b) Compare the different digital modulation techniques.   **5**

15. (a) Describe the working of 4 channel TDM/PAM system.   **6**

    (b) Describe signaling rate and synchronization.   **4**

16. (a) Describe Parity bit Check Coding Method.   **5**

    (b) Explain briefly the VRC method of coding.   **5**

17. Write a note on :   **10**

    (a) Splicers

    (b) Connectors

    (c) Couplers

    (d) Switches

18. Describe the block diagram of an optical fibre communication system.   **10**

19. (a) Describe briefly the construction of semiconductor laser.   **6**

    (b) Compare LED and semiconductor laser.   **4**

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