1286

Code : 15EC43T

Register Number | | | | | | | |

IV Semester Diploma Examination, April/May-2018

DIGITAL COMMUNICATION

Time : 3 Hours] **[Max. Marks : 100**

Note : (i) Answer any **six** full questions from Part – **A**. (5 × 6 = **30** Marks)
(ii) Answer any **seven** full questions from Part – **B**. (7 × 10 = **70** Marks)

PART – A

1. Compare analog and digital communication systems. **5**

2. Define quantization and briefly explain types of quantization noise. **5**

3. Explain transmitter and receiver of adaptive delta modulation. **5**

4. Compare coherent and non-coherent digital modulation methods. **5**

5. Explain minimum shift keying (MSK) transmitter. **5**

6. Explain cross talk and guard time. **5**

7. Write a brief note on block codes. **5**

8. What is transmission media and name the types of transmission media with examples. **5**

9. Write a brief note on co-axial cable. **5**

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PART – B

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

11. (a) Describe the generation of Pulse Position Modulation (PPM) with waveforms. **5**

    (b) Mention advantages and disadvantages of Pulse Width Modulation (PWM). **5**

12. Describe briefly the Differential Pulse Code Modulation (DPCM) with the help of diagram. **10**

13. (a) Describe briefly the coherent detection of binary Amplitude Shift Keying (ASK). **5**

    (b) Mention advantages and disadvantages of Frequency Shift Keying (FSK). **5**

14. Describe briefly the transmission and detection of Differential Phase Shift Keying (DPSK). **10**

15. (a) Write briefly about the working principle of T1 carrier system. **5**

    (b) Mention advantages and disadvantages of Time Division Multiplexing (TDM). **5**

16. (a) Explain synchronization and its need. **5**

    (b) Write a note on CRC coding method. **5**

17. (a) Write a note on check sum coding method. **5**

    (b) List the applications of Error Control scheme. **5**

18. Explain the block diagram of optical fiber communication system. **10**

19. (a) Explain briefly the different types of fiber losses. **5**

    (b) Compare LED and semiconductor LASERS. **5**