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Code : 15EC43T

Register Number | | | | | | | | | | |

IV Semester Diploma Examination, Oct./Nov.-2019

DIGITAL COMMUNICATION

Time : 3 Hours] [Max. Marks : 100

Instructions : (i) Answer any **six** questions from Part – **A**

(ii) Answer any **seven** full questions from Part – **B**.

PART – A

1. Describe briefly the sampling process. 5

2. Describe RZ and NRZ bipolar signalling format with waveforms. 5

3. Describe briefly quantization process. 5

4. Write a note on Inter-symbol Interference (ISI). 5

5. Compare BASK, BFSK, BPSK Digital modulation techniques with definition and waveforms. 5

6. Write a note on FDMA. 5

7. Describe ARQ error control scheme. 5

8. Describe briefly construction of coaxial cable. 5

9. What do you mean by fiber losses ? List the different types of losses. 5

PART – B

10. (a) Describe the generation of PWM. 6

(b) Define the following terms : 4

(i) Amount of Information

(ii) Baud Rate

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11. Define the following signals : $2 \times 5 = 10$

(a) Continuous and discrete time signals.

(b) Analog and Digital signals

(c) Deterministic and Random signals.

(d) Even and odd signals.

(e) Periodic and Non-periodic signals.

12. Explain briefly the pulse code modulation system with the help of functional block diagram. 10

13. (a) Describe briefly the generation of BFSK. 7

(b) Mention merits and demerits of BFSK. 3

14. (a) Explain QPSK with a neat sketch. 8

(b) Mention the applications of QPSK. 2

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

(b) Write the advantages of CDMA. 4

16. (a) Write the concept of TDM. 5

(b) Describe VRC method of coding. 5

17. (a) List the types of errors. 5

(b) Explain the concept of WDM. 5

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

19. (a) Explain the concept of minimum shift keying. 5

(b) Compare LED and semiconductor LASER. 5