

# 1137

Code : 15EC43T

Register Number

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IV Semester Diploma Examination, April/May-2017

## DIGITAL COMMUNICATION

Time : 3 Hours ]

[ Max. Marks : 100

- Note :** (i) Answer any **six** questions from **Part-A**.  
(ii) Answer any **seven** full questions from **Part-B**.

### PART – A

1. Compare analog and digital communication systems. 5
2. Define quantization and quantization noise. 5
3. Write a brief note on companding process. 5
4. What is digital modulation ? Name types of digital modulation techniques. 5
5. Mention the merits and demerits of DPSK. 5
6. What is multiplexing ? Write the advantages of multiplexing. 5
7. Describe briefly about an error and name the types. 5
8. What do you mean by transmission media ? And name the types. 5
9. List the advantages of an optical fiber. 5

## PART – B

10. Explain briefly the functional block diagram of digital communication system. 10
11. (a) Describe the generation of PWM. 5  
(b) Mention the merits and demerits of PWM. 5
12. Explain briefly the delta modulation system with block diagram and mention it's merits. 10
13. (a) Describe briefly the binary ASK with the help of waveforms. 5  
(b) Explain briefly the non-coherent detection of binary ASK. 5
14. Describe briefly the Generation and detection of DPSK signal. 10
15. (a) Write briefly about CDMA technique. 5  
(b) Compare TDMA with FDMA. 5
16. (a) Write a brief note on TDMA. 5  
(b) Describe parity bit check coding method. 5
17. (a) Write a brief note on CRC coding method. 5  
(b) Explain ARQ error control scheme. 5
18. (a) Compare LED and Semiconductor LASERs. 5  
(b) Describe the numerical aperture and angle of acceptance. 5
19. Describe the block diagram of an optical fiber communication system. 10

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