

**B. Tech. 3rd Semester (CSE) F- Scheme
Examination, December – 2016
DIGITAL ANALOG COMMUNICATION
Paper–EE-217-F**

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt a total of five questions. Question No. 1 is compulsory. Attempt one question from each unit. Each question carries equal marks.

1. (a) Give out applications of Fourier Transform in Communication system. (3)
- (b) Difference between frequency and phase of a signal. (2)
- (c) Give out advantages of wireless communication. (3)
- (d) State Shannon theorem. (2)
- (e) Difference between Duplex and Half duplex communication system. (5)
- (f) Discuss Parity check method. (5)

Unit–I

2. (a) What do you understand by Signal ? Discuss various properties of signals. (10)
- (b) Differentiate between analog and digital communication system. Also give out advantages of digital communication system. (10)

(2)

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3. (a) Find out Fourier series expansion of a signal given by $x(t) = 2 \cos 2\pi(t)$ where $0 < t < 3$ (10)
- (b) How bandwidth scarcity affects the digital communication system? (10)

Unit-II

4. (a) Define Amplitude Modulation with the help of wave diagram. Also give out its advantages and disadvantages. (10)
- (b) Write briefly about differential Manchester encoding scheme. Also draw the waveform. (10)
5. (a) Explain the working of Optical Fiber cable as wireline communication medium. Also give out its advantages. (10)
- (b) Explain in details X.21 physical layer interface. (10)

Unit-III

6. Give out difference and advantages / disadvantages of the following :
- (a) Simplex and Duplex transmission (10)
- (b) Connectionless and connection oriented services. (10)

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7. (a) Write in details about ISDN system with the help of block diagram. (10)
- (b) Discuss in details TDM. (10)

Unit-IV

8. Discuss various error detection and correction techniques. Give out advantages and disadvantages of each one. (20)
9. Write short notes on the following :
- (a) Run length encoding (10)
- (b) Cryptography and its advantages (10)

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