

8. Write short notes on any *two* of the following :

(i) Modes and Media's of Communication

(ii) BPSK

(iii) VSB 10×2=20

No. of Printed Pages : 4

Roll No.

W323

**B. Tech. (Weekend) EXAMINATION,
May 2019**

(Third Semester)

(Re-appear Only)

(EE, ECE)

ECEW203

COMMUNICATION SYSTEMS

Time : 3 Hours]

[Maximum Marks : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt any *Five* questions. All questions carry equal marks.

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P.T.O.

1. (a) Describe a modern communication system. What are the basic constituents of a communication system ? **10**
- (b) Explain the linearity and time scaling properties of Fourier transform. **5**
- (c) Write the Dirchlet's condition for Fourier series. **5**
2. (a) Prove that the balanced modulator produces an output consisting of side-bands only, with the carrier removed. **10**
- (b) What is single side band suppressed carrier modulation ? What are its advantages over ordinary AM ? **10**
3. (a) Draw and explain the complete block diagram of the Armstrong frequency modulation system. **10**
- (b) Discuss the various advantages of FM over AM. **5**
- (c) What is Pre-emphasis ? Why is it used ? **5**

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4. (a) What do you mean by the term multiplexing ? Explain time division multiplexing. **10**
- (b) Define and describe PPM and explain with waveforms how is it derived from PWM. **10**
5. (a) Explain Delta modulation in detail with suitable diagram. **10**
- (b) Explain differential pulse code modulation. **10**
6. (a) Explain coherent binary FSK. **10**
- (b) Explain M-ary FSK system with the help of transmitters and receivers. **10**
7. (a) What is shot noise ? Write expression for the shot noise current in a diode. **5**
- (b) What is meant by the term 'cosmic noise'. Give its salient features. **5**
- (c) Define transistor signal to noise ratio and noise figure of a receiver. **10**

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