

S. B. Roll. No.....

PRINCIPLES OF COMMUNICATION ENGINEERING
3rd Exam/ECE/4461/Nov'24
(For 2018 Batch Onwards)

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. Give answer in one line.

15x1=15

- a. Write one advantage of phase discriminator?
- b. What is the output of PLL, when no signal is applied?
- c. What is Quantization?
- d. What is the advantage of delta modulation?
- e. What is the name of technique for separating signal in the time domain?
- f. Define SNR.
- g. SSB (full forms)
- h. VCO (full forms)
- i. UHF (full forms)
- j. Give one application of AM.
- k. Which is the most commonly used semiconductor device used in AM demodulation?
- l. Give the name of indirect method of FM generation.
- m. What is the maximum value of modulation index in AM?
- n. Define demodulation.
- o. What is the purpose of balance modulator circuit?

SECTION-B

Q2. Attempt any six questions.

6x5=30

- i. Describe the working of reactance modulators.
- ii. Explain the working of Envelope Detector.
- iii. What is the need of modulation in the communication System?
- iv. Explain relation between phase and frequency modulation.
- v. Define Phase Modulation. Derive an expression for phase modulation?
- vi. Explain square law modulator with diagram.
- vii. Give comparison between FM demodulators.
- viii. What are PAM and PWM? Draw waveforms.

SECTION-C

Q3. Attempt any three questions.

3x10=30

- a. What is Frequency Modulation? Compare Frequency Modulation with Amplitude Modulation.
- b. What are AM Modulators? Draw and explain working of balance modulators.
- c. Explain PCM with diagram and Give its advantages, disadvantages and applications.
- d. Discuss Amplitude Modulation in detail. Give its advantages disadvantages and applications.
- e. Write Short note on:
 - i) Armstrong method
 - ii) Diagonal Clipping
 - iii) Phase locked loop FM demodulator

