

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

PRINCIPLES OF COMMUNICATION ENGINEERING
3rd Exam/ECE/ETV/ECE-II/0615/Jun'2021

Duration: 1.15Hrs.

M.Marks:25

SECTION-A

Q1. Attempt any three questions.

3x5=15

- i. Explain the working of Balanced Modulator.
- ii. What is Modulation? Explain the need of Modulation in Communication system.
- iii. What is Pulse Modulation? Explain PAM, PWM, and PPM.
- iv. What do you understand by pre-emphasis and de-emphasis?
- v. Explain the basic principle of FM detection using slope detector.
- vi. Derive an expression for Phase Modulated wave.
- vii. Explain the working principle of Reactance Modulator.

SECTION-B

Q2. Attempt any one question.

1x10=10

- a. What is Amplitude Modulation and Modulation index in AM? Derive an expression for an Amplitude Modulated wave.
- b. Give the comparison of AM and FM.
- c. Explain the basic scheme of PCM system. Also write the advantages of PCM system.
- d. Explain working of Ring Modulator with suitable diagram.