

PRINCIPLES OF COMMUNICATION
ENGINEERING

TIME: 2:30 HOURS

SEM.- ELECTRONICS MAX. MARKS - 50
IVth

NOTE:- ATTEMPT ANY FIVE QUESTIONS (PARTS)

PART-1
Q.1. Deduce the expression for Amplitude modulated wave. Also give the advantages of Frequency modulation over Amplitude modulation.

Q.2. Describe working of balanced modulator with proper diagram.
_____ x _____ x _____

PART-2
Q.1. Describe Foster-Seely discriminator and its working principles.

Q.2. Draw and explain the block diagram of Super heterodyne AM Receiver.
_____ x _____ x _____

PART-3
Q.1. Define the terms DSB-SC, SSB-SC, SSB and VSB and Also define their area of applications

Q.2. Derive the expression for relative power distribution in carrier and side bands of Amplitude modulated wave.
_____ x _____ x _____

Q1. Derive the expression for Phase Modulated wave, its modulation Index. Also comparison with frequency modulation.

PART-4

Q2. Give short notes on:-

(a) Quantization theorem

(b) Shannon's theorem.

_____ x _____ x _____

PART-5 Q1. Explain the classification of transmitters on the basis of modulation and power.

Q2. Explain the block diagram of TRF Radio Receiver.

_____ x _____ x _____

PART-6

Q1. Explain the working principle of Armstrong FM transmitters.

Q2. What is multiplexing? Explain different types of multiplexing.

_____ x _____ x _____