

PRINCIPLES OF COMMUNICATION ENGINEERING

TIME: 2:30 HOURS

SEM.- ELECTRONICS

MAX. MARKS - 50

IVth

NOTE!- ATTEMPT ANY FIVE QUESTIONS (PARTS)

Q. 1. Deduce the expression for Amplitude modulated wave.

Also give the advantages of Frequency modulation over Amplitude modulation.

PART-1
Q. 2. Describe working of balanced modulator with proper diagram.

— X — X —

Q. 1. Describe Foster-Seeley discriminator and its working principles.

PART-2
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 —

PART-4

Q.1. Derive the expression for Phase Modulated Wave, its modulation Index. Also comparison with frequency modulation.

Q.2. Give short notes on:-

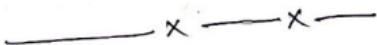
- (a) Quantization theorem
- (b) Shannon's theorem.



PART-5

Q.1 Explain the classification of transmitters on the basis of modulation and power.

Q.2. Explain the block diagram of TRF Radio Receiver.



PART-6

Q.1. Explain the working principle of Armstrong FM transmitters.

Q.2. What is multiplexing? Explain different types of multiplexing.

