

EC III - COMMUNICATION ELECTRONICS

Unit I – MODULATION

Amplitude Modulation – Methods – Transistor modulators – Single sideband generation (SSB) – Suppression of carried waves – Frequency modulation – Relative merits and demerits of FM, and AM – Basic reactance modulator.

Unit II – DEMODULATION OF AM AND FM

Basic Principles of demodulation – The diode detector – Slope detector – Frequency demodulators – Distortion.

Unit III – ANALOG AM AND FM TRANSMISSION AND RECEPTION

AM Transmitter – SSB Transmitter – Armstrong FFM system straight receivers – Regeneration receivers – Super heterodyne receivers – Receiver noise – FM

Unit IV – DIGITAL COMMUNICATION

Pulse – modulation systems: Pulse code modulation (PCM) – Pulse width modulation (PWM), Pulse amplitude modulation (PAM) and Pulse position modulation (PPM) – Applications

Unit V – MICROWAVE COMMUNICATION

Advantages and Disadvantages of microwave transmission, loss in free space, propagation of microwaves, atmospheric effects on propagation, ground reflection

Reference:

1. G. Kennedy, Electronics Communication Systems (3 Ed.), Tata Mc Graw Hill Ltd., New Delhi (1994)
2. A.P. Malvino, Electronic Principles (4 Ed.), Tata Mc Graw Hill Ltd, New Delhi (1995)