

# AMICE20 ANALOG & DIGITAL COMMUNICATION

## ELEMENTS OF COMMUNICATION SYSTEM AND ITS LIMITATIONS

### UNIT-1 AMPLITUDE MODULATION

- 1.1 Amplitude modulation and detection,
- 1.2 Generation and detection of DSB-SC,
- 1.3 SSB and vestigial side band modulation,
- 1.4 Carrier acquisition AM transmitters and receivers,
- 1.5 Super heterodyne receiver,
- 1.6 IF amplifiers,
- 1.7 AGC circuits,
- 1.8 Frequency Division multiplexing

### UNIT-2 ANGLE MODULATION

- 2.1 Basic definitions narrow band and wideband frequency modulation,
- 2.2 Transmission bandwidth of FM signals
- 2.3 Generation and detection of frequency Modulation

### UNIT-3 NOISE

- 5.6 External noise,
- 5.7 Internal noise calculations,
- 5.8 Signal to noise ratio Noise in AM and FM systems

### UNIT-4 PULSE MODULATION

- 4.1 Introduction,
- 4.2 Sampling process
- 4.3 Analog Pulse Modulation Systems
- 4.4 Pulse Amplitude Modulation,
- 4.5 Pulse width modulation and Pulse Position Modulation.

### Reference Books:

1. B.P. Lathi, "Modern Analog & Digital Communication Systems" Oxford University Press.
2. Taub & Schilling, "Communication System: Analog and Digital" Tata McGraw Hill R. P.
3. Singh & S.D. Sapre, "Communication Systems Analog and Digital" Tata McGraw Hill