4ᵗʰ Semester

PEI4I101   COMMUNICATION SYSTEM ENGINEERING

University level 80%

MODULE-I (12 Hrs)

INTRODUCTION: Signals and their classifications, Elements of a Communication System, Transmission of message signals, limitations and resources of Communication Systems
FREQUENCY ANALYSIS OF SIGNALS AND SYSTEMS: Fourier series, Fourier Transforms, Properties of Fourier transform, Dirac Delta function, Fourier transforms of Periodic signals, Energy Spectral Density, Power Spectral Density, Correlation of Energy Signals, Correlation of Power Signals

MODULE-II (15 Hrs)

ANALOG SIGNAL TRANSMISSION AND RECEPTION: Introduction to modulation, Amplitude Modulation (AM), Angle Modulation, Radio and Television broadcasting

MODULE-III (11 hrs)

ANALOG PULSE MODULATION SYSTEMS:
Modulators and demodulators for pulse amplitude modulation, pulse Time Modulation, pulse position modulation

Text Book:
1. *Simon Haykin, An Introduction to Analog and Digital Communications, John Wiley and Sons*
2. *B.P. Lathi, Modern Digital and Analog Communication Systems, Oxford*

1. *Reference Book:*
2. *Taub, Schilling, Saha, Taub, " Principles of Communication Systems", TMH*
3. *A.B. Carlson and P.B.Crilly, " Communication Systems An Introduction to Signals and Noise in Electrical Communication", 5th Edn., TMH*