

**FINOLEX ACDAEMY OF MANAGEMENT & TECHNOLOGY, RATNAGIRI.**

**DEPT. OF ELECTRONICS ENGG.**

**Name of the laboratory: - Communication Engg.**

**LIST OF EXPERIMENTS.**

<b>Basic Communication Engg: - Study of</b>	
1	Amplitude Modulation (AM) & calculation of modulation index.
2	Double Sideband Suppressed Carrier (DSBSC) modulator / Ring modulator.
3	DSBFC / SSB AM Transmitter.
4	Diode Detector ( AM ) demodulator.
5	AM super-heterodyne receiver.
6	Frequency Modulator ( FM ) & Demodulator.
7	FM Transmitter & Receiver.
8	Signal Sampling and Reconstruction.
9	Pulse Amplitude Modulator (PAM) and Demodulator.
10	Pulse Width Modulation (PWM).
11	Pulse Position Modulation (PPM).
<b>Digital Communication :- Study of</b>	
12	Natural sampling technique.
13	Flat Top Sampling.
14	Pulse Code Modulation (PCM).
15	Delta Modulation (DM) and Demodulation.
16	Adaptive delta modulation (ADM) and Demodulation.
17	Data Formatting – (NRZ(L), NRZ(M), RZ).
18	Bi-phase Codes – ( Manchester, Mark).

19	3 Level Codes - (AMI & Return to bias RB).
20	Duo-binary encoding.
21	Amplitude Phase shift keying (ASK) Modulation and Demodulation.
22	Frequency Shift Keying (FSK) Modulation and Demodulation.
23	Phase Shift Keying (PSK) Modulation and Demodulation.
24	Quadrature Phase Shift Keying (QPSK) Modulation and Demodulation.
25	Error detecting and correcting codes ( Parity Check codes & Hamming code).
	<b>Microwave Communication Engg.</b>
26	To study the characteristics of the Reflex Klystron Tube.
27	To determine the frequency and wavelength in a rectangular wave-guide working under on TE <sub>10</sub> mode.
28	To determine the Standing Wave Ratio (SWR) and reflection coefficient.
29	Study the characteristics of Gunn Diode.
30	To measure an unknown impedance with Smith Chart.
31	To measure the polar pattern and the gain of a wave-guide horn antenna.
32	Study of Magic Tee.
33	To study the isolators and circulators.
34	To study the attenuators (Fixed and Variable type).
	<b>Fiber Optics Communication.</b>
35	Setting up fiber optic Analog link.
36	Setting up fiber optic Digital link.
37	Study of losses in Optical fiber.
38	Study of Numerical aperture of optical fiber.
39	Study of Time Division Multiplexing (TDM).

40	Study of framing in TDM.
41	Study of Marker in TDM.
42	Study of Manchester coding and decoding.
43	Study of PCM voice coding and codec chip.