List of Practicals BE-III, 6th Sem ECC(2007-08), Analog and Digital Communications

Sr.No.	Practical
1	Introduction to Matlab and related lab exercise
2	Introduction to signals using matlab like sinewave and their characteristics, effects
	of addition and multiplication of multiple sine waves, Fourier series and its
	complex and exponential representation of various waveforms like
	cosine,square,triangular.
3	To study Amplitude Modulation:
	• To observe base band signal, carrier signal and modulation section output
	and see the waveforms for Under, Over & Critical Modulation.
	• To observe the demodulation of Amplitude Modulated signal by diode
	detector and synchronous detector
	• To observe modulation indices for Under modulation. Over modulation and
	Critical modulation using Trapezoidal Method
	 Perform wireless communication on AM
4	To study DSB-SC/SSB-SC:
-	To study Double Side Band Generation & recention
	 To study Double Side Band Concretion & reception. To study Single Side Pand Concretion & reception.
	• To study Single Side Band Generation & Teception.
5	To study Frequency Modulation:
	• To modulate signal by Frequency Modulation scheme by Reactance
	Modulator & Varactor Modulator.
	• To demodulate Frequency Modulated signal by (1) PLL, (2) Foster Selley
	Detector & (3) Quadrature Detector.
6	To study Pulse Amplitude Modulation:
	• To modulate signal by Pulse Amplitude Modulation Scheme using Natural
	Flat Top Sampling & Sample and Hold circuit.
	• To demodulate the Pulse Amplitude Modulated signal.
	• Verify the sampling theorem by changing modulating & carrier frequency.
7	To study Pulse Width Modulation/Demodulation:
	• To modulate and demodulate signal by Pulse Width Modulation Scheme
	with Analog modulating Signal.
	• See the effects by varying the sampling frequency and the modulating
	signal frequency.
8	<u>To study Pulse Code Modulation / Time Division Multiplexing</u>
	• To modulate and demodulate signal by Pulse Code Modulation Scheme
	 To multiplex two channel signals using TDM scheme
	• To demultiplex two channel signals into individual signal.
9	To study Delta Modulation:
	• To modulate and demodulate signal by Delta Modulation Scheme.
	• Observe the integrator output, D.M output, Hunting error & Slop overload
	error and Demodulated output.
10	To study Adaptive-Delta Modulation:
	• To modulate and demodulate signal by Adaptive-Delta Modulation
	scheme.
	• Observe the integrator output, A D.M output, outcome of gain increment
	and Demodulated output.
11	To study Data-formatting schemes:
	• Use the Bit-Pattern generator to provide required 8 bit-pattern to different
	Data-formatting Schemes.
	• Compare different Data-formatting schemes
12	To study Amplitude Shift Keving:
	To modulate and demodulate signal by Amplitude Shift keying.
13	To study Frequency Shift Keving:
	To modulate and demodulate signal by Frequency Shift Keying
	To study Phase Shift Keying
	To modulate and demodulate signal by Quadrature Phase Shift Keving