Digital Communication Laboratory

Semester - EVEN (2019-20)

List of Experiments:

S. No.	Aim of Experiments
1	1. To generate periodic rectangular signals of varying duty cycles (10%, 30%, 50%, and 75%). 2. Observe the Fourier domain representation of the above generated periodic signals. 3. Observe the change in spectrum of the signals when passed through an integrator/low-pass R-C filter.
2	1. To verify the linearity property of Fourier series/transform. 2. Add two sinusoidal signals and eliminate the higher frequeny component using second order low pass Butterworth filter. 3. To shift the phase of a sinusoindal signal by $\frac{\pi}{2}$ and understand the difference between phase shift and time delay.
3	1. To study a switching modulator for generating conventional AM waves. (μ = 0.3, 0.5 and 1). 2. Analyze the effect of modulation index on modulation efficiency. 3. Design an envelope detector to demodulated the AM wave.
4	1. To implement a Double Side Band - Suppressed Carrier (DSB-SC) modulator using a sampler (switch) and a band-pass filter. 2. To recover the modulating signal with help of an coherent detector.
5	1. To study the characteristics of Phase Locked Loop, identify Lock and Capture range. 2. To generate frequency modulated signal (using varactor diodes in the oscillator circuit).