III Year I Semester	**L**	**T**	**P**	**C**
Code:20EC5109	**0**	**0**	**3**	**1.5**

ANALOG & DIGITAL COMMUNICATIONS LAB

Course Objectives:

1. To analyse modulation and demodulation of AM Waves.
2. To analyse modulation and demodulation of FM Waves.
3. To analyse various pulse modulated Waves.
4. To analyse various digital modulation techniques.
5. To plot characteristics of Mixer, Pre-emphasis & De-emphasis.

List of experiments:

1. Generation and Detection of Amplitude modulated signal.
2. Generation and Detection of Double Sideband Suppressed Carrier signal.
3. Generation and Detection of Single Sideband Suppressed Carrier signal.
4. Generation and Detection of Frequency modulated signal.
5. Generation of Intermediate Frequency (IF) signal using mixer circuit.
6. Pre-Emphasis & De-Emphasis.
7. Generation and Detection of PAM, PWM & PPM signals.
8. Verification of the operation of Pulse Code Modulation and Delta modulation.
9. Generation and Detection of Amplitude Shift Keying signal.
10. Generation and Detection of Frequency Shift Keying signal.
11. Generation and Detection of Phase Shift Keying signal.
12. Generation and Detection of Differential Phase Shift Keying signal.
13. Verification of the operation of Time Division Multiplexing.
14. Generation and Detection of Amplitude modulated signal using MATLAB.
15. Generation and Detection of Frequency modulated signal using MATLAB.

Note: Any TWELVE of the experiments are to be conducted

Course Outcomes:

A student who successfully fulfils this course requirement will be able to:

S. No	Course Outcome	BTL
1.	Analyse the operation of various Amplitude modulation & demodulation systems.	L4
2.	Analyze the operation of Angle modulation & demodulation systems.	L4
3.	Model various Digital modulation & demodulation systems.	L3
4.	Illustrate the operation of Time Division Multiplexing.	L3
5.	Analyse the characteristics of Mixer, Pre-emphasis & De-emphasis.	L4

Correlation of COs with Pos & PSOs:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	-	-	3	-	-	-	3	-	-	-	3	3
CO2	2	3	-	-	3	-	-	-	3	-	-	-	3	3
CO3	2	3	-	-	-	-		-	3	-	-	-	2	-
CO4	1	2	-	-	-	-	-	-	3	-	-	-	2	-
CO5	3	2	3	-	-	-	-	-	3	-	-	-	3	-