# II B.Tech – I Semester (17EC413) PULSE AND DIGITAL CIRCUITS LAB

Int. Marks Ext. Marks Total Marks L Т С Р 40 100 3 2 **Pre-Requisites: Electronic Devices and Circuits** 

# **Course Objectives:**

60

To make the students exposed on

- Generation and processing of sinusoidal signals using linear network. •
- Generation and processing of non-sinusoidal signals using non-linear networks •
- fundamentals of basic logic gates and design application •
- fundamentals of sampling gates •
- Design and analysis of various multivibrator circuits. •
- Design and analysis of UJT relaxation oscillator and boot-strap sweep circuits •

# **List of Experiments:**

- 1. Linear wave shaping.
- Non Linear wave shaping Clippers. 2.
- Non Linear wave shaping Clampers. 3.
- Transistor as a switch. 4.
- 5. Study of Logic Gates & Some applications.
- 6. Study of Flip-Flops & some applications.
- 7. Sampling Gates.
- 8. Astable Multivibrator.
- 9. Monostable Multivibrator.
- 10. Bistable Multivibrator.
- 11. Schmitt Trigger.
- 12. UJT Relaxation Oscillator.
- 13. Bootstrap sweep circuit.

#### **Equipment required:**

- 1. RPS 0 30 V
- 2. CRO 0 20 M Hz.
- 3. Function Generators 0 1 M Hz
- Components 4.
- Multi Meters 5.

## **Course Outcomes:**

After successful completion of the course, the students can be able to:

S.No	Course Outcome							
1.	Generate and process sinusoidal signals using linear network.	L3						
2.	Generate and process non-sinusoidal signals using non-linear networks	L3						
3.	Understand fundamentals of basic logic gates and design application	L2						
4.	Understand the fundamentals of sampling gates	L2						
5.	Design and analyze various multivibrator circuits.	L4						
6.	Design and analyze UJT relaxation oscillator and boot-strap sweep circuits	L4						

CO	<b>PO1</b>	PO2	PO3	PO4	PO5	PO6	<b>PO7</b>	<b>PO8</b>	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	2	-	2	-	-	-	3	2	2	-	3	-
CO 2	3	2	2	-	2	-	-	-	3	2	2	-	3	-
CO 3	2	3	2	-	2	-	-	-	3	2	2	-	3	-
CO 4	2	2	3	-	2	-	-	-	3	2	2	-	3	-
CO 5	2	3	2	-	2	-	-	-	3	2	2	-	3	-
CO 6	3	2	3	-	2	-	-	-	3	2	2	-	3	-

# **Correlation of COs with POs & PSOs:**