Name of the laboratory: Linear Integrated Circuit Applications

COURSE OBJECTIVES

1. To perform the experiments on Op-amp 741 as Adder, Subtractor, Comparator, Integrator, Differentiator and Waveform generator.
2. To perform experiments on IC 555 timer as Monostable& Astable multivibrators, Schmitt trigger.
3. To perform experiments on Voltage regulator IC's

COURSE OUTCOMES
At the end of the course, student will able to

CO1: Design and perform op-amp 741 applications.

CO2: Calculate Duration of pulse widths generated in various multivibrators of timer IC555

CO3: Test and measure the locking and capturing of IC 565 PLL operation.

CO4. Perform Load and Line voltage Regulation on IC 723, Three terminal voltage regulators

List of the equipment:

1. CRO's: 0-20 MHz.
2. Regulated Power supplies (RPS) : 0-30 V
3. Function Generators: 0-1 MHz.
4. Digital Multimeters
5. IC 555 Timer, 741 Op-amp.
6. Voltage regulator 723, 7805, 7809 and 7912.
7. IC 565 PLL applications

List of experiments:

1. Inverting and Non-inverting Amplifiers using Op Amps.
2. Adder and Subtractor using Op Amp.
3. Comparators using Op Amp.
4. Integrator Circuit using IC 741.
5. Differentiator circuit using Op Amp.
6. Active Filter Applications – LPF, HPF (first order)
7. IC 741 Waveform Generators – Sine, Square wave and Triangular waves.
8. Mono-stable Multivibrator using IC 555.
9. Astable Multivibrator using IC 555.
10. Schmitt Trigger Circuits – using IC 741.
11. IC 565 – PLL Applications.
12. Voltage Regulator using IC 723.
13. Three Terminal Voltage Regulators –7805, 7809, 7912.