SEMESTER IV

EC1407 CIRCUITS DESIGN SIMULATION AND LINEAR INTEGRATED CIRCUITS LABORATORY

LIST OF EXPERIMENTS

DESIGN AND ANALYSIS OF THE FOLLOWING CIRCUITS

1. Series and Shunt feedback amplifiers-Frequency response, Input and output impedance calculation
2. RC Phase shift oscillator and Wien Bridge Oscillator
3. Hartley Oscillator and Colpitts Oscillator
4. Single Tuned Amplifier
5. RC Integrator and Differentiator circuits
6. Astable and Monostable Multivibrators
7. Clippers and Clampers
8. Integrator and Differentiator.
9. Instrumentation amplifier.
10. Active low-pass, High-pass and band-pass filters.
11. Astable & Monostable multivibrators using Op-amp
12. Schmitt Trigger using op-amp.
13. Phase shift and Wien bridge oscillators using Op-amp.
14. Astable and Monostable multivibrators using NE555 Timer.
15. Study of SMPS

SIMULATION USING SPICE (Using Transistor)

1. Tuned Collector Oscillator
2. Twin-T Oscillator /Wein Bridge Oscillator
3. Double and Stagger tuned Amplifiers
4. Bistable Multivibrator
5. Schmitt Trigger circuit with Predictable hysteresis
6. Monostable multivibrator with emitter timing and base timing
7. Analysis of Power Amplifier
8. Active low-pass, High-pass and band-pass filters using Op-amp
9. Astable and Monostable multivibrators using NE555 Timer

LIST OF EQUIPMENT & COMPONENTS

Sl. No.	Description of Equipment
1.	Standalone desktop PCs with SPICE software
2.	Signal Generator /Function Generators (3 MHz)
3.	Dual Regulated Power Supplies (0 - 30V)
4.	Digital Multimeter
5.	Digital LCR Meter
6.	Digital Storage Oscilloscope (50MHz)
7.	Transistor/FET (BJT-NPN-PNP and NMOS/PMOS)
8.	Resistors, Capacitors, Diodes, Zener Diodes, Bread Boards,
9.	IC741, IC555, Transformers
10.	IC Tester