



Kavitha Memorial Educational Society's
VIJAYA ENGINEERING COLLEGE

(Approved by AICTE – New Delhi & Affiliated to JNTU – Hyderabad)
WYRA ROAD, AMMAPALEM (V), KONIJERLA (M), KHAMMAM – 507 305

ELECTRONICS & COMMUNICATION ENGINEERING

(A50488) IC APPLICATIONS AND HDL SIMULATION LAB

List of Experiments:

PART-I: LINEAR IC EXPERIMENTS

1. OP AMP Applications- Adder, Subtractor, Comparators.
2. Integrator and Differentiator Circuits Using IC 741.
3. Active Filter Applications – LPF, HPF (first order)
4. IC 741 Waveform Generators –Sine, Square wave and Triangular waves.
5. IC 555 Timer - Monostable and Astable Multivibrator Circuits.
6. Schmitt Trigger circuits – using IC 741.
7. IC 565 –PLL Applications.
8. Voltage Regulator Using IC 723, Three Terminal voltage Regulators-7805, 7809, 7912.

PART-II: HDL Simulation Programs:

1. HDL Code to realize all the logic gates
2. Design of 2-to-4 decoder
3. Design of 8-to-3 encoder(without and with priority)
4. Design of 8-to-1 multiplexer and 1*8 demultiplexer.
5. Design of 4 bit binary to gray code converter
6. Design of 4-bit comparator
7. Design of Full adder using 3 modeling styles
8. Design of flip flops: SR, D, JK, T
9. Design of 4 bit binary, BCD counters (synchronous/a synchronous reset)
10. Finite State Machine Design

**Note: Minimum of 16 experiments to be conducted. (Choosing
at least seven from each part)**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY
HYDERABAD**