

EE 102 Basic Electronics Laboratory (0-0-3-3)

Experiments using diodes and bipolar junction transistor (BJT): design and analysis of half - wave and full-wave rectifiers, clipping circuits and Zener regulators, BJT characteristics and BJT amplifiers; experiments using operational amplifiers (op-amps): summing amplifier, comparator, precision rectifier, astable and monostable multivibrators and oscillators; experiments using logic gates: combinational circuits such as staircase switch, majority detector, equality detector, multiplexer and demultiplexer; experiments using flip-flops: sequential circuits such as non-overlapping pulse generator, ripple counter, synchronous counter, pulse counter and numerical display.

References:

- [1] P. Malvino, Electronic Principles, Tata McGraw-Hill, New Delhi, 1993.
- [2] R. A. Gayakwad, Op-Amps and Linear Integrated Circuits, PHI, New Delhi, 2002.
- [3] R.J. Tocci, Digital Systems, 6th Ed., 2001.