BASIC ELECTRONICS ENGINNERING LAB
(Common to CSE, IT during I B.Tech., II Semester)

Course Code: CS2L2, IT2L2   **Credits: 2**
Lecture: --   **Internal assessment: 25 marks**
Lab: 3 period /week   **Semester end examination: 50 marks**

Course Objectives:
1. To study basic electronic components.
2. To observe characteristics of electronic devices.
3. To get the practical exposer of the Op-amp applications.
4. To study the practical limitations of the Op-amp.
5. To study Linear & Non linear wave shaping.

Course Outcomes:
The student will be able
1. To apply the concepts and analytical principles to analyze electronic (diodes, transistors) circuits.
2. To Understanding of the operation diodes and transistors in order to build circuits.
3. To learn to the characteristics of Transistor.
4. To learn the basics of Amplifiers.
5. The students are able to design Op-amp circuits.

Part I
1. The identification & Testing of Electronic component like R,L,C, Diodes,Transistors
    etc.
2. Study of CRO, function generator, regulated power supply etc.,

Part II   any TEN Experiments

1. Diode Characteristics(Si) a) Forward Bias b) Reverse Bias
2. Zener Diode Characteristics
3. Half Wave rectifier with & without filter
4 Full Wave rectifier with & without filter
5. Transistor CB Characteristics (I/P & O/P)
6. Transistor CE Characteristics (I/P & O/P)
7. CE Amplifier
8. CC Amplifier
9. CB Amplifier
10. Op-amp inverting amplifiers (OP -AMP Applications) – Adder, Subtractor, Comparator Circuits.
11. Op-amp non-inverting amplifiers (OP -AMP Applications) – Adder, Subtractor, Comparator   Circuits
12. Op-amp inverting amplifier for desired gain and bandwidth.

Learning Resources

REFERENCE BOOKS:

1. Electronic devices & circuits by B.L.Theraja,R.S.Sedha,S.Chand publications
2. Electronic devices & circuits by Robert L.Boylested
3.Linear Integrated Circuits – D. Roy Chowdhury, New Age International   Pvt.Ltd., 2nd   Edition, 2003.