

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma in Power Electronics Engineering

Semester: 3

Subject Code

Subject Name Electrical and Electronics Workshop

Objectives:

1. To develop practical skills for working with basic tools used for assembling electronics circuits and electrification.
2. To understand the breadboard and develop ability to work with the same.
3. To become familiar with the General Purpose PCB and working with it.
4. To become familiar with test & measurement instruments used in electrical /electronic laboratory.
5. To understand basic wiring details.

Suggested Laboratory Work:

Following laboratory work is suggested for the subject. At least 50% of the work should include practical demonstration/ laboratory practice.

1. Study of basic tools used for Electronics Assembly / Electrical Wiring work like nose plier, wire stripper, wire cutter etc.
2. Study of soldering techniques, materials and safety precautions.
3. Study of advanced techniques for soldering (Study Only).
4. Study of Analog & Digital Multi-meters.
5. Study of functionality Oscilloscope.
6. Study of breadboard and bread-boarding techniques.
7. Study of different electronics components and their identification.
8. Study of different wires and cables.
9. Study of construction and requirements of transformers and inductors.
10. Study of various circuits used in house wiring like door bell, staircase, go down wiring etc.
11. Assembling small electronics circuit like unregulated power supply, regulated power supply etc. Some simple experiment board can also be assembled under this lab work. This lab work should be given after completion of work mentioned in 2 above. The students can use general purpose PCB.