GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma in Electronics & Communication Engineering

Semester: 3

Subject Code
Subject Name ELECTRONIC WORKSHOP

LABORATORY EXPERIENCES:

The sample experiments to be performed include, but are not limited to the following.

1. ELECTRONIC COMPONENT SELECTION PRACTICES
1.1 Use of data book for discrete electronic components.
1.2 Use of data book for ICs.
1.3 Use of internet for searching components and datasheets
1.4 Access to websites of leading semiconductor device manufacturing industries
1.5 Use of application notes on electronic components

2. CIRCUIT DRAWING AND PCB LAYOUT PRACTICES
2.1 Symbols of electronic components
2.2 Use of ORCAD
2.3 Use of SmartWork
2.4 Use of AutoCAD
2.5 Use of MultiSim
2.6 Use of Electronic WorkBench

3. TESTING OF ELECTRONIC COMPONENTS
3.1 Use of analog multimeter
3.2 Use of digital multi-meter
3.3 Use of power supply
3.4 Use of signal generator
3.5 Use of oscilloscope

4. PCB MAKING AND COMPONENT MOUNTING
4.1 PCB for transistor based small circuits
4.2 PCB for circuits based on small IC
4.3 PCB etching
4.4 PCB drilling
4.5 PCB testing
4.6 Soldering and desoldering

5. MINI ELECTRONIC PROJECT FABRICATION
5.1 Project selection
5.2 Circuit drawing using softwares
5.3 Component selection and procurement
5.4 Component testing
5.5 PCB making and testing
5.6 Soldering and desoldering
5.7 Testing and fault finding

6. MAINTANANCE AND REPAIRING PRACTICES

6.1 Maintenance and repairing of laboratory equipments
6.2 Repairing of domestic electronic appliances
6.3 Maintenance of computers and peripherals
6.4 Inspection of electronic goods

Reference Books:

1. Data books for discrete electronic components
2. Data book for analog and digital ICs
3. Internet References
4. Consumer Electronics - Bali -Pearson