

# GUJARAT TECHNOLOGICAL UNIVERSITY

## Diploma in Electrical Engineering

### Semester: 3

**Subject Code**

**Subject Name** COMPUTER AIDED ELECTRICAL DRAWING AND DRAFTING

Sr. No.	Course content
1.	<b>COMPUTER AIDED ELECTRICAL DRAWING</b> 1.1 Draw Electrical symbols (take Print out) 1.2 Draw D.C. m/c parts (take print out) 1.3 Draw A.C.m/c parts (take print out) 1.4 Draw R-L series circuit (take print out) 1.5 Draw R-C series circuit (take print out) 1.6 Draw R-L-C series circuit (take print out) 1.7 Draw A.C. & D.C. winding diagrams (take print out)
2.	<b>COMPUTER AIDED ELECTRONIC DRAWING</b> 2.1 Draw Electronic Symbol (take Print out) 2.2 Draw rectifier circuit (take print out) 2.3 Draw Amplifier circuit (take print out) 2.4 Draw Oscillator circuit (take print out)
3.	<b>COMPUTER BASED ELECTRICAL CIRCUIT SOLUTION</b> 3.1 Solution of R-L, R-C, R-L-C circuit (take print out) 3.2 Electrical machines circuits solution (take print out)
4.	<b>COMPUTER BASED ELECTRONICS CIRCUIT SOLUTION</b> 4.1 Rectifier circuit solution (take print out) 4.2 Amplifier circuit solution (take print out) 4.3 Oscillator circuit solution (take print out)
5.	<b>DESIGN OF SINGLE PHASE TRANSFORMER USING COMPUTER SOFTWARE</b> 5.1 Awareness of available software 5.2 Design of single phase transformer using software for given data (take print out)
6.	<b>DESIGN OF THREE PHASE INDUCTION MOTOR USING COMPUTER SOFTWARE</b> 6.1 Awareness of available software 6.2 Design of three phase induction motor using software for given data (take print out)

7.	<b>COMPUTER AIDED P.C.B. DESIGN</b> 7.1 Awareness of software for PCB design 7.2 PCB layout of rectifier circuit (take print out) 7.3 PCB layout of amplifier circuit (take print out) 7.4 PCB layout of oscillator circuit (take print out)
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### **LABORATORY EXPERIMENTS :**

1. Draw electrical and electronic symbols and take print out with the help of computer
2. Draw D.C. & A.C machine parts and take print out
3. Develop winding diagram for given data and take print out
4. Draw different types of rectifier circuit and take print out
5. Draw R-C couple amplifier circuit and take print out
6. Draw Hartley oscillator circuit and take print out
7. Prepare and test the performance of the given electrical circuit using computer
8. Design single phase transformer using software for given data (take print out)
9. Design three phase induction motor using software for given data (take print out)
10. Develop P.C.B. layout for a given circuit using software

### **NOTE :**

1. Term work of this course should contain a print out of all above experiments performed on computer
2. Prepare the brief write-ups of operating instructions of all the softwares used in laboratory for practical.

### **Reference Books:**

1. Inside AUTO-CAD by Racter & Rice
2. Mastering AUTO-CAD by Georse Omura