

33055- COMPUTER AIDED ELECTRICAL DRAWING PRACTICAL

DETAILED SYLLABUS

OBJECTIVES

At the end of the semester the student must be able to draw

- 2D diagrams using Auto CAD
- Symbols widely used in Electrical and Electronics circuits
- Single line diagram of different types of panels.
- Single line diagrams of substation layout.
- Winding diagrams
- Line diagram of distribution panels Subject Instruction Examination

PART-A

ELECTRICAL SYMBOLS-DRAWING

1. Draw the symbols for components: Resistor, Capacitor, Inductor, Diode, Transistor, FET, SCR, UJT, TRIAC, DIAC, and Gates AND, OR, NOT, NAND, NOR, EXOR.
2. Draw the symbols used in electrical wiring: Relays, contactors, fuses, main switch, electric bell, earth, DPST, DPDT, TPST, Neutral link.
3. Draw the symbols for instruments: Ammeter, Voltmeter, Wattmeter, Energy meter, Frequency meter, Power factor meter, Timer and Buzzers.
4. Draw the symbols for machines: Armatures, Alternators, Field winding (Shunt, Series and Compound) Transformer and Autotransformer.

PART-B

ELECTRICAL CONNECTION DIAGRAMS- DRAWING

1. Draw the Single Line diagram of Single phase MCB Distribution board.
2. Draw the Single Line diagram of three phase MCB Distribution board.
3. Draw the Single Line diagram of typical MV Panel.
4. Draw the Single Line diagram of Lighting Distribution Board (LDB).
5. Draw the Single Line diagram of Motor Control Centre (MCC) Panel.
6. Draw the Single Line diagram of fire alarm riser arrangement in multi-storey building.
7. Draw the Single Line diagram of intercom arrangement in multi-storey building.
8. Draw the front end schematic diagram of typical Sub switch board (SSB).

9. Draw the winding diagram of lap connected DC armature with commutator connections and brush positions.
10. Draw the control and main circuit of automatic star delta starter.
11. Draw the mush winding diagram of a three phase induction motor.
12. Draw the concentric winding diagram of a single phase induction motor.
13. Draw the single line diagram of 110 KV / 11 KV receiving substation.