



**DIPLOMA IN ELECTRICAL AND ELECTRONICS ENGINEERING**

**CENTRALIZED QUESTION BANK**

**1030234440 - ELECTRICAL CAD DESIGN**

**DIRECTORATE OF TECHNICAL  
EDUCATION GOVERNMENT OF  
TAMILNADU**

**DIPLOMA END SEMESTER / YEAR EXAMINATION – 2025**

**Course:** Electrical and Electronics Engineering

**Subject :** Electrical CAD Design

**QP Code :** 1030234440

**Time :** 3 Hours

**Date :**

**Session:**

**Max Marks:**100

**Answer the following Questions**

- 1 Draw the following symbols using AutoCAD: Relay, Fluorescent Lamp, Ceiling Fan, Exhaust Fan, One Way Switch, 5A Socket Outlet with Switch, Energy Meter, Star Delta Starter, DC Shunt Motor, Step Down Transformer, PN Junction Diode, BJT, AND Gate and OR Gate.
- 2 Draw the single line diagram of Three phase MCB Distribution Board using Auto CAD.
- 3 Draw the panel wiring diagram of Horizontal bus bar arrangement with Incoming and Outgoing Switches using AutoCAD.
- 4 Draw the single line diagram of typical Medium Voltage ( MV Panel) with following feeders using AutoCAD.  
Incoming: One from EB and Another from DG with Interlock.  
Outgoing: 12 Outgoing feeders with various loads.
- 5 Draw the Mush Winding Diagram of a Three Phase Induction Motor using AutoCAD.
- 6 Draw the Winding Diagram of Lap Connected DC Armature with Commutator Connections and Brush Positions using AutoCAD.
- 7 Draw the single line diagram of 110KV/11KV Receiving Substation using AutoCAD.
- 8 Draw the Single Line Diagram of Fire Alarm Riser Arrangement in typical Multi-Storey Building using AutoCAD.
- 9 Estimate the quantity of Materials and Cost required for a single Bed room residential Building (1BHK).
- 10 Estimate the quantity of Materials and Cost required for Irrigation Pump wiring 5hp Induction Motor.
- 11 Estimate the quantity of Materials and Cost required for Industrial power wiring having Four machines.
- 12 Estimate the quantity of Materials and Cost required for street light service having 12 Lamps light fittings.

**For Question No. 1 to 8**

**Allocation of Marks**

<b>Sl. No</b>	<b>Description for CAD Ex.</b>	<b>Marks</b>
1	Aim & Apparatus Required	05
2	Manual Drawing	10
3	Circuit using CAD Software	45
4	Printout	10
5	MCQ from Theory Portions	20
6	Viva Voce	10
	<b>Total</b>	<b>100</b>

**For Question No. 9 to 12**

**Allocation of Marks**

<b>Sl. No</b>	<b>Description for Estimate Ex.</b>	<b>Marks</b>
1	Aim & Apparatus Required	05
2	Pipe Layout & Load Calculation	15
3	Wiring Diagram & Material Calculation	25
4	Schedule of Materials with Cost	25
5	MCQ from Theory Portions	20
6	Viva Voce	10
	<b>Total</b>	<b>100</b>