



**C23-EE-401**

**23435**

**BOARD DIPLOMA EXAMINATION, (C-23)  
MARCH/APRIL—2026  
DEEE – FOURTH SEMESTER EXAMINATION**

**ELECTRICAL INSTALLATION AND ESTIMATION**

*Time : 3 hours ]*

*[ Total Marks : 80*

**PART—A**

3×10=30

- Instructions :**
- (1) Answer **all** questions.
  - (2) Each question carries **three** marks.
  - (3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define MCB and list different types.
2. State the merits and demerits of surface conduit wiring system.
3. Draw electrical symbols for the following :
  - (a) Earth
  - (b) Switch
  - (c) Plug and socket
4. List different service mains in use.
5. Mention different types of insulators used in overhead lines.
6. State the purpose of earthing in an electrical installation.

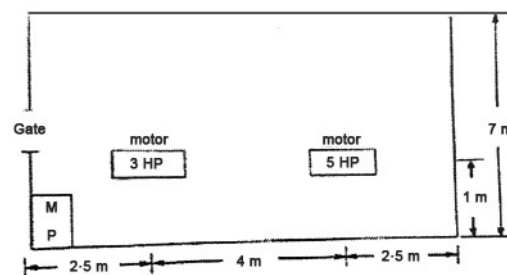
7. State the factors to be considered for the location of a transformer.
8. List different tests to be conducted before energizing a newly constructed electrical installations.
9. State the prevention techniques of fire accidents.
10. Mention different fire extinguishers.

### PART—B

10×5=50

- Instructions :**
- (1) Answer *any five* questions.
  - (2) Each question carries **ten** marks.
  - (3) Answers should be comprehensive and the criteria for valuation is the content but not the length of the answer.

11. Explain about concealed conduit wiring system.
12. Two three-phase, 400V induction motors are installed in a work shop of plan, shown in the figure. Prepare the list of materials required and their cost for the power wiring installation. Assume missing data, if any.



13. Prepare the quantity of materials and their cost for an agricultural pump set of 5.5 kW 3-phase, 400 V motor. The distance between LT pole and the pump set shed (5 × 3 × 3) is 10 meters. Assume any missing data.

- 14.** Explain the procedural steps for the complete estimation of power loads.
- 15.** Draw the neat sketch of plinth mounted transformer substation and label the parts.
- 16.** Explain the installation of pipe earthing with a neat sketch.
- 17.** Explain the test procedure with neat diagram to find the insulation resistance between conductors and earth.
- 18.** (a) Specify any five precautions to avoid electric shock.  
(b) Write the common electrical hazards.

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