



C14-EE-404

4464

BOARD DIPLOMA EXAMINATION, (C-14)
OCT/NOV—2018
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. List out the advantages and disadvantages of cadridge fuse.
2. State the reasons for fire accidents in electrical system.
3. How standard wire gauge is used to measure size of the wire.
4. Draw the symbols of following apparatus :
(a) Fluorescent bulb, (b) Circuit breaker, (c) Bell
5. Draw the single line diagram of an electrical installation of a motor.
6. State difference types of starters used for different motors.
7. What is guarding? Mention its types. State when they are used.
8. What is the purpose of earthing?
9. Define voltages regulation and give its formulac.
10. State IE rules followed while connecting earth wire to home appliances.

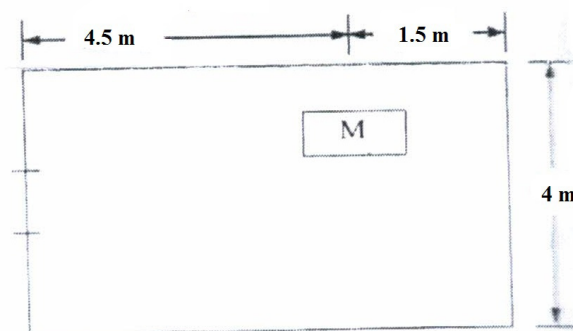
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PART-B

10×5=50

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

- 11.** (a) Explain briefly CTS/TRS wiring system with neat sketch and list out the accessories required for that wiring system.
- (b) Explain with neat sketch the construction and working of HRC fuse.
- 12.** Prepare the quantity of material required for an agriculture pump set of 5.5kW, 3-φ, and 400V squirrel cage induction motor. The distance between the LT pole and pump set shed (5m x 3m x 3m) is 10m. Assume any missing data.
- 13.** In the flour mill one 10HP, 3-φ, 400V, 50Hz squirrel cage induction motor is to be installed. Draw single line diagram of wiring and estimate the quantity of materials required. Plan of flour mill is shown below. Assume missing data if any.



- 14.** Draw the working layout and list the materials required for a residential building with 2 bed room house. Assume missing data if any.
- 15.** Explain estimate materials required for plate earthing with neat sketch.

- 16.** An 11KV line is to be erected to give supply to a village 2KM from existing 11KV line. Prepare a schedule of materials required for the line. Assume an average span of 50m and 2 cut points in line.
- 17.** Draw a neat sketch of 400KVA, 11KV/440V, and 3- ϕ plinth mounted substation.
- 18.** Explain the following tests in details :
- (a) Continuity of wiring in an electrical installation.
 - (b) Insulation resistance between conductors.

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