



C09-EE-404

3476

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2014

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.

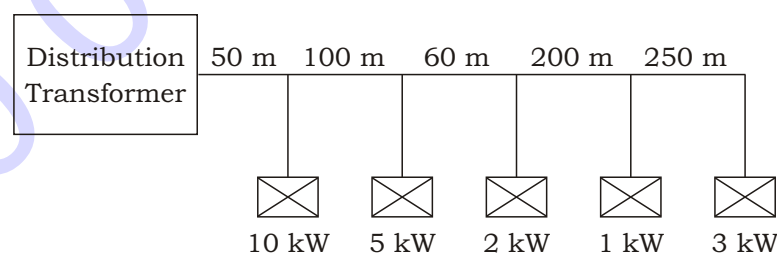
1. Draw the wiring diagram for godown wiring.
2. Write the important materials used in installation of power loads.
3. Draw a neat sketch of service line and irrigation pump-set with approximate dimensions and name the important parts.
4. What is the purpose of earthing?
5. Write the number of poles and cross arms for 11 kV, 1 km distribution line with a span of 70 m.
6. State the main components required of pipe earthing.
7. State any two IE rules for earthing metal supports of overhead distribution line.
8. Specify the value of earth resistance to be maintained for a given electrical installation (a) large power station, (b) major substation and (c) small substation.
9. Briefly write the cause for overheating of power transformer.
10. Write a short note on breakdown maintenance.

PART—B

10×5=50

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

11. Draw a neat circuit incorporating main switch, energy meter, fuse cutout and distribution board.
12. Explain the construction and working of sodium vapour lamp with a neat sketch.
13. Draw the wiring layout of a big hotel with four-storeyed building and with lift arrangement.
14. Explain the important materials and their purpose of a plinth-mounted substation with a neat sketch.
15. An LT system runs a distance of 5 km span is 40 m. Estimate the scheduled materials required for erecting the line. Transformer at substation is 100 kVA.
16. Calculate the regulation of a distribution line with 7/2·11 mm ACSR conductor which is emanating from distribution transformer, the load particulars with distance are shown in the figure below :



17. (a) Estimate the list of material required for a plinth mounted 50 kVA, 11 kV/400 V substation.
- (b) Write the test procedure for continuity of wiring in an electrical installation with a neat sketch.
18. State the importance of plant maintenance and its different types.
