

\*3476\*

C09-EE-404

**3476**

**BOARD DIPLOMA EXAMINATION, (C-09)  
OCTOBER/NOVEMBER-2018  
DEEE - FOURTH SEMESTER EXAMINATION**

**ELECTRICAL INSTALLATION AND ESTIMATION**

Time : 3 Hours ]

[ Total Marks: 80

---

**PART-A**

3X10=30

**Instructions :**

1. Answer **All** questions.
2. Each question carries **three** marks.
3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. Draw the wiring diagram to control one lamp from two different locations.
2. Draw a neat sketch of incandescent lamp and name the parts.
3. Write the important materials used in installation of power loads.
- \* 4. Write the main components of over – head transmission line.
5. State the materials required for erecting the 100 KVA, 11KV/400 volts distribution transformer
6. State the factors on which earth resistance depends.
7. What are the important tests to be conducted before energizing a domestic wiring installation?
8. Explain load survey and state its uses in REC scheme.
9. What is the importance of plain maintenance?
10. State the causes for failure of power transformer due to structural defects.

\*

## PART-B

10X5=50

**Instructions** :

1. Answer any **Five** questions.
2. Each question carries **ten** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer

11. Estimate the quantity of materials to be required to make the surface type conduit wiring for a building, the plan of which is shown in fig. assume any missing data

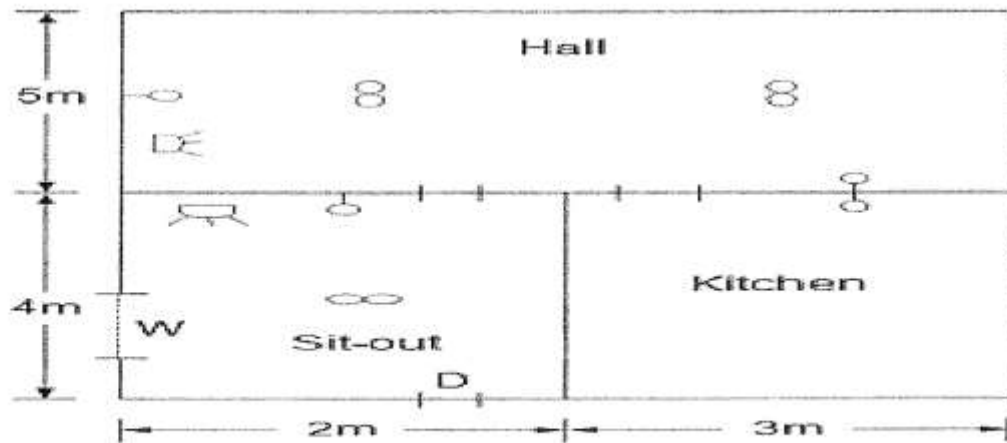


Fig. Plan of a building

- \* 12. Prepare the quantity of materials for an agricultural pump set of 5.5 KW, 3-  $\phi$ , 400V squirrel cage induction motor. The distance between the L.T. pole and pump-set shed (5x3x3m) is 10 meters. Assume missing data if any.
13. Draw wiring layout for big office building with necessary latest facilities like air conditioner, LCD projector, meeting hall with PA system etc.
14. Draw a neat sketch of pole mounted substation and name the parts.
15. Estimate the quantity of materials required for a 11KV overhead line for a length of 3.5Km with as assumption of 60m span, with 7/2.59 sq.mm ACSR conductor and 2 cut points in the line.
16. State the electrical act 2003 and rules regarding procedure to be adopted during execution of domestic electric installation.

\*

17. (a) List the materials required for pipe earthing with a diagram
- (b) Calculate the KVA rating of a distribution transformer needed in a village having following <sup>\*</sup> load.
- a. 20 No's domestic loads of 500W each.
  - b. Two flour mills each of 10 H.P. capacity.
  - c. No's agricultural load each of 15 H.P. capacity
18. (a) State the scheduled maintenance of different rated transformers in substations
- (b) State the function of brushes and their requirements.

\*\*\*\*\*

\*

\*