



C16/C16S-EE-404

5657

BOARD DIPLOMA EXAMINATION, (C-16/C-16S)

NOVEMBER - 2019

DEEE - IV 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) Answer should be brief and straight to the point.

- 1/ Classify the cables according to voltage grading.
- 2/ What are the points to be considered before selecting the type of wirings.
- 3/ What is a service connection ? Also mention the methods of overhead service connection.
- 4/ How the size of the cable is decided for wiring of motors in a workshop ?
- 5/ What are the main components of overhead lines ?
- 6/ What are factors that affect earth resistance ?
- 7/ What are the various tests to be conducted before energizing a domestic wiring installation ?
- 8/ State the different tests for measuring insulation resistance.
- 9/ What are the types of plant maintenance ?
- 10/ What are the steps to be taken in daily and monthly maintenance of a power transformer ?

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[Contd...

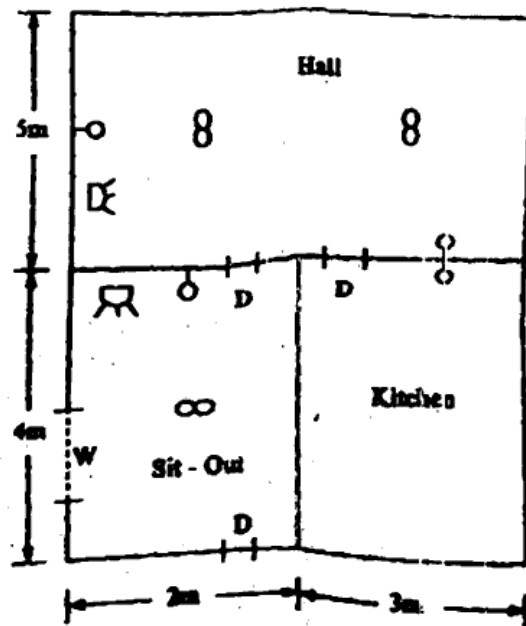
PART - B

10×5=50

Instructions :

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

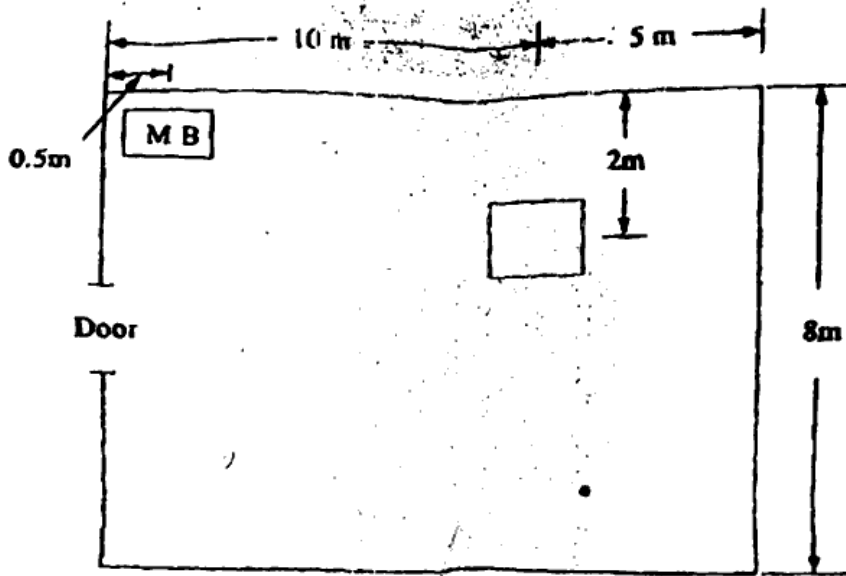
- 11 (a) Explain with a neat sketch the construction and working of HRC fuse. 5
- (b) Describe the different types of electrical hazards. 5
- 12 Estimate the quantity of materials required and their cost to make the surface conduit wiring for a building the plan is shown in figure. Assume any missing data.



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- 13 A 10 h.p. (metric), 415V, 3-phase, 50hz squirrel cage induction motor is to be installed in a floor mill, the plan of which is shown in figure. Show the layout of wiring diagram and estimate the quantity of materials required and their approximate cost. Assume any missing data.



- 14 Estimate the quantity of materials required with the help of wiring diagram for a submersible irrigation pumpset of 10 H.P. 3-Phase, 400V, 50Hz motor positioned at a depth of 38 m in a tube well from the ground well. The distance between the nearest L.T. pole and switch control room and tube well is 3m.
- 15 Estimate the quantity of material required for a 11kV, 3-phase, overhead line, with 6/1*2.59 mm ACSR conductor for 1 km long on 8m PSCC poles. The span between two poles is 75 m.

16 Explain how pipe earthing is done with a neat sketch

17 A pole mounted 63 kVA, 11 kV/400V sub station has to be erected for giving electrical supply to a technical institution. Make a list of materials required with specifications and sketch the diagram.

- 18 (a) Write short notes on Rural electrification and load survey 3+3=6
(b) State new I.E. rules relating to electrical safety. 4

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