



C14-EE-404

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BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—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. Write the full names of :
(a) DPDTIC (b) PVC (c) TRS
2. Write merits and demerits of concealed conduit wiring system.
3. Define following terms :
(a) Rated current (b) Fusing current (c) Fusing factor
4. What are the IE rules considered for making number of sub-circuits for light loads, socket outlets and power sockets in domestic wiring?
5. What are the factors to be considered while selecting a system of wiring?
6. List the important accessories used in wiring service mains.
7. Calculate the number of various insulators needed for erection of 490m, 3-φ, and 11kV OH line without any turnings by taking a span of 70m.

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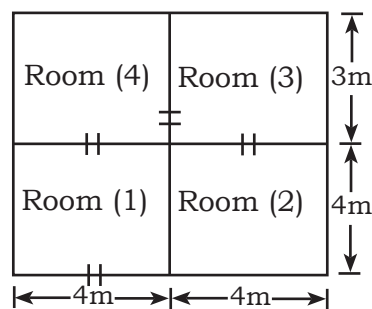
8. Draw the neat sketch of stay wire and label the parts.
9. What are the important tests to be conducted before energising a domestic wiring installation?
10. State any two IE rules on industrial safety.

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 are the content but not the length of the answer.

11. Explain briefly the working of different types of fuses.
12. Estimate the quantity of materials required for CTS wiring system for a building, the plan of which is shown below. Assume the remaining data. The building is provided with a 60W bulb, 80W fan, 100W light socket and 40W tube light in each room.



13. Estimate the materials required for an irrigation pump set of 7.5kW to be installed at a distance of 20m from a 3-φ, 415V distribution line. Assume pump set dimensions (5m × 3m × 3m).
14. (a) Write the general IE rules for wiring of power loads.
 (b) Draw the wiring layout with 6 no. of power points for an electrical workshop in polytechnic.

- 15.** (a) State the main components of OH line of distribution and mention their functions.
- (b) Write short notes on selection of insulators for distribution line.
- 16.** Write the different materials used in earth pit surrounding the earth electrode in any common electrical earthing system.
- 17.** Estimate the quantity of materials required for erecting 11kV distribution line of 5km long. Assume two cut points, three 90 degree angle points and one road line (100m width) crossing. Assume missing data.
- 18.** What are departmental procedure steps to be followed to obtain domestic service connection?

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