

**BACHELOR OF TECHNOLOGY (C.B.C.S.) (2020 COURSE)**  
**B.Tech.Sem - III ELECTRICAL : : SUMMER - 2022**  
**SUBJECT : DESIGN OF ELECTRICAL INSTALLATIONS**

Day : Wednesday  
Date : 01-06-2022

**S-24542-2022**

Time : 02:30 PM-05:30 PM  
Max. Marks : 60

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Assume suitable data if necessary.

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- Q.1** a) Explain protection against electric shocks and fires. [05]  
b) Explain low voltage distribution networks. [05]

**OR**

- Q.1** a) How LV distribution is done? [05]  
b) Explain conductor sizing and protection. [05]

- Q.2** a) Describe underground service connection with neat diagram. [05]  
b) Differentiate between overhead and underground service connection. [05]

**OR**

- Q.2** a) Describe overhead service connection with neat diagram. [05]  
b) What is electrical panel design? Describe in brief. [05]

- Q.3** a) List general accessories required in domestic installation. [05]  
b) Explain earthing in commercial installation. [05]

**OR**

- Q.3** a) Explain procedure for designing the circuits in commercial installation. [05]  
b) Prepare estimation and costing chart for commercial installation. (general requirement) [05]

- Q.4** a) How to determine size of conductor in industrial installation? [05]  
b) How to calculate input current of the motor in industrial installation? [05]

**OR**

- Q.4** a) How to determine rating of fuse in industrial installation? [05]  
b) Explain sequence to follow to prepare installation in industry. [05]

- Q.5** a) What is LT and HT power distribution system? [05]  
b) Explain winding resistance test of a transformer. [05]

**OR**

- Q.5** a) Explain BDV test of a transformer. [05]  
b) What are different tests to measure IR value of transformer? [05]

- Q.6** a) What are different types of contracts? [05]  
b) What is role of electrical inspector in design and installation? [05]

**OR**

- Q.6** a) Describe tender notice. Give sample example. [05]  
b) What are requirements of good contractor? [05]

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