

(Duration: 3 Hours)

Total Marks: 80

NOTE:

1. **Question No.1 is Compulsory.**
2. Answer any three out of remaining five questions.
3. Assume any suitable data wherever required but justified the same.
4. Illustrate answer with sketches wherever required.

Q 1 Answer the following Questions. **[20]**

- A. Why electrical drawings and plans are prepared
- B. Why motor control centre are developed
- C. Discuss the battery selection criterion for UPS application
- D. Discuss the application of cumulative sum method application in industry

Q 2 a Explain how BLDC fans and energy efficient motors are energy efficient. **[10]**

Q 2 b How will you carry out energy auditing of variable speed drives. **[10]**

Q 3 a Discuss how benchmarking is an auditing tool. **[10]**

Q 3 b Discuss the sizing of bus bar and DG set. **[10]**

Q 4 a Discuss cable management and installation system. **[10]**

Q 4 b Discuss how the sizing of transformer is done for a given set of loads. **[10]**

Q 5 a Discuss the designing of electrical earthing system. **[10]**

Q 5 b Discuss the sizing and location of capacitors for power factor correction. **[10]**

Q 6 a Discuss how maximum demand controller is a tool for monitoring and targeting. **[10]**

Q 6 b Discuss the implementation of energy management system. **[10]**
