

**Roll No.**

**Total No. of Pages : 02**

**Total No. of Questions : 09**

**B.Tech. (CSE) (Sem.-6)**

## INDUSTRIAL ELECTRICAL SYSTEMS

**Subject Code : OEE-202-18**

**M.Code : 79323**

**Date of Examination : 02-01-2023**

**Time : 3 Hrs.**

**Max. Marks : 60**

### INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

## SECTION-A

- 1. Write briefly :**
- a) Enlist the name of any four protection components.
  - b) Explain the working principle of the fuse.
  - c) Enlist any two application of contactor.
  - d) How the rating of main switch is decided in residential electrical system?
  - e) Define the earthing of commercial installation.
  - f) Define lumen of illumination system.
  - g) How energy saving in illumination system is possible? Explain with one example.
  - h) What are the types of compensation used in industrial electrical systems?
  - i) Explain the application of any three industrial loads.
  - j) Enlist any four differences between MCB and fuse.

## SECTION-B

2. Explain the points to be considered in LT system wiring.
3. State and explain the law of illumination. What is primary purpose of lighting
  - (a) in an office
  - (b) flood lighting?
4. Explain any two methods of power factor correction used in industrial applications.
5. Explain the general rules and guidelines used for the installation of the residential wiring systems.
6. Explain the working principle of the isolator. How it works in electrical circuit used in power sector give an example?

## SECTION-C

7. A large factory shed consists of 300 fluorescent lamps each of rating 70 W. Calculate the power in kW and the total load current of the circuit if the supply is 230 V single phase.
8. In a workshop, one 15 hp (metric) 420 volts, three phase 50 Hz motor is to be installed. Prepare the estimate of the quantity of material required and its cost with a layout of the wiring. The plan of the workshop is shown in figure-1.

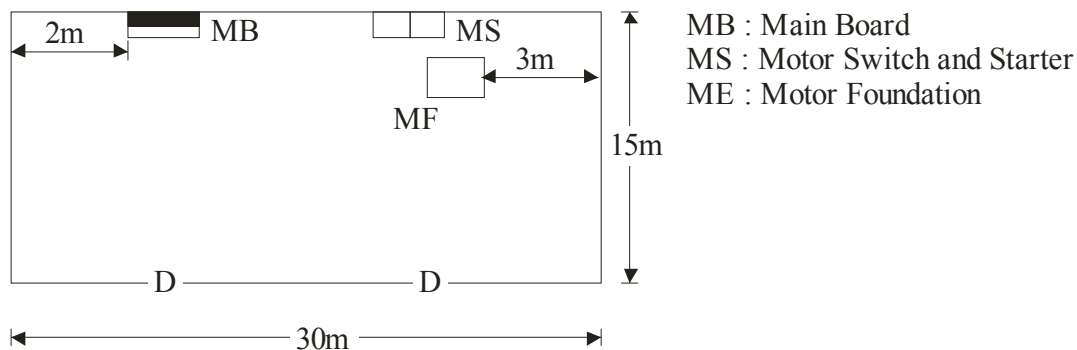


Fig.1

9. **Write short notes on the following :**
  - (a) Circuit breaker
  - (b) MCC panel

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**