

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Civil Engg./Computer Science and Engg.) (Sem.-6)

INDUSTRIAL ELECTRICAL SYSTEMS

Subject Code : OEE-202-18

M.Code : 79323

Date of Examination : 18-07-22

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 :

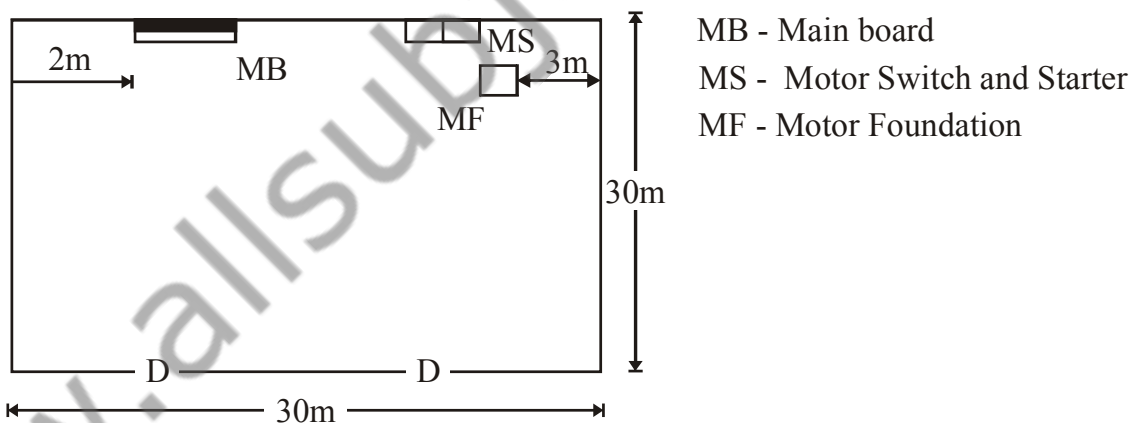
- a) Define the function of ELCB.
- b) Indicate the symbol of any four components used in single line diagram of the electrical system
- c) Explain any two applications of contactors
- d) How we do the load calculation in commercial electrical system?
- e) Explain the function of distribution board in residential electrical systems.
- f) Explain the difference between CFL and LED in illumination system.
- g) Define the candle power of illumination system.
- h) Define the specification of LT breakers
- i) Enlist any four differences between MCB and fuse.
- j) Write the function of any four components of industrial substation.

SECTION-B

2. What do you mean by single line diagram of the wiring system? Draw the single line diagram of the distribution power network.
3. State and explain the law of illumination. What is primary purpose of lighting (a) residential (b) commercial premise.
4. Explain the selection parameters used to select the transformer for the industrial applications.
5. Explain the general rules and guidelines used for the installation of the commercial wiring systems.
6. Explain the application of the isolator used in power sector for the purpose of protection.

SECTION-C

7. A large factory shed consists of 300 fluorescent lamps each of rating 80 W. Calculate the power in kW and the total load current of the circuit if the supply is 240 V single phase.
8. In a workshop, one 20 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.



9. Write short notes on the following :
 - a. Lightning Protection
 - b. PCC 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.