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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(EE) PT (Sem.-7)
ELECTRIC POWER UTILIZATION
Subject Code : BTEE-601

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. Write any four advantages of electric drive.
- b. State the different types of electric locomotive classes.
- c. Define the Arc welding.
- d. State the different law of illumination.
- e. Define the effective temperature of Air conditioning.
- f. Write any four differences between industrial and flood lighting.
- g. Write any four application of electrolysis.
- h. Define the Dielectric Heating.
- i. Define the load Equalization in electric drives.
- j. State the different types of artificial light sources.

SECTION-B

2. Write the essential parts of electrical drives. What are the functions of a power modulator?
3. What do you mean by electro deposition? Explain briefly the factors affecting the electro deposition.
4. Draw and explain the substation arrangement of electric traction.
5. Discuss the method of temperature control in resistance furnace.
6. Explain the working of Compact Florescent Lamp (CFL).

SECTION-C

7. Derive an expression for the total tractive effort for propulsion of a train.
8. It is required to flood light the front of a building $30\text{m} \times 30\text{m}$ to give a brightness of 30 lumens/m^2 . Co-efficient of reflection of building surface is 0.2 lamps of 500 watts having lumen output of 8000 each are used. Taking beam factor as 1.2 and maintenance factor as 0.8, calculate the number of lamp required.
9. Draw and explain the typical construction of electrical welding AC and DC set.

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.