

[illegible]

**Total No. of Questions : 09**

## ELECTRIC POWER UTILIZATION

**M.Code : 74090**

**Max. Marks : 60**

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 :**
- Define regenerative braking in an electric drive.
  - Which electric motor is suitable for rolling mills and why?
  - What are the advantages of a fly wheel arrangement in a drive?
  - What is a traction system?
  - What is a dropper in an electric catenary system?
  - What is radiant efficiency?
  - What is colour rendering property in a lighting system?
  - What is electrolysis?
  - Why it is necessary to maintain constant voltage supply for a refrigerator?
  - For a high frequency induction furnace which size (small or large) of metal pieces shall be melt easily and why?

## SECTION-B

2. How the starting torque of an induction motor can be increased?
3. Enumerate advantages and disadvantages of electric traction system.
4. Discuss various methods of controlling the temperature in an Induction furnace.
5. Explain working principle of dielectric heating.
6. Discuss various factors considered for design of a lighting scheme.

## SECTION-C

7. What are main differences in the construction and working of a refrigerator, water cooler and an air conditioner? Explain in detail.
8. What are various types of welding? Explain any one of them in detail.
9. Write short notes on **any two** of following :
  - a. Various sources of artificial lighting
  - b. Starting characteristics of various DC motors
  - c. Laws of electrolysis and efficiency improvement in electrolysis process

**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.**