

**BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)**  
**B.Tech.Sem - VII ELECTRICAL : WINTER- 2022**  
**SUBJECT : UTILIZATION OF ELECTRICAL ENERGY**

Day : Tuesday

Time : 02:30 PM-05:30 PM

Date : 13-12-2022

**W-13345-2022**

Max. Marks : 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the **RIGHT** indicate **FULL** marks.
  - 3) Assume suitable data, if necessary.
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- Q.1** a) Write a short note on 'High frequency eddy current heating'. (05)  
b) What do you mean by 'electric welding' which are the types of welding process? (05)

**OR**

- Q.1** a) Enlist the advantages of Electric heating over other types of heating process. (05)  
b) Write a short note on 'core type' induction heating. (05)

- Q.2** a) What are the effects of 'power factor' on the tariff charged? (05)  
b) Explain the sinking fund method to determine depreciation cost of power plant. (05)

**OR**

- Q.2** a) What are the factors that influence the economic choice of equipment's? (05)  
b) What are the various types of Tariffs? (05)

- Q.3** a) Write a short note on 'Laws of Illumination'. (05)  
b) What are the properties of a good lighting scheme? (05)

**OR**

- Q.3** a) Explain the principle and application of a simple photometer. (05)  
b) Explain Lumen or light flux method for lighting calculations. (05)

- Q.4** What do you mean by 'electrolysis'? Explain its process and application in detail. (10)

**OR**

- Q.4** a) Which are the factors governing electro-deposition? (05)  
b) Write a short note on 'anodizing'. (05)

- Q.5** Differentiate between steam engine drive, electric drive and diesel drive. (10)

**OR**

- Q.5** a) Which are the different accessories for track electrification? (05)  
b) Write a short note on 'Low frequency AC system' for track electrification. (05)

- Q.6** a) Write a short note on Linear Induction motor for electric traction. (05)  
b) Write a short note on shunt and bridge transition control technique. (05)

**OR**

- Q.6** a) What are the qualities of a good traction motor? (05)  
b) What is the 'coefficient of adhesion' in traction? (05)

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