

No. of Printed Pages : 4  
Roll No. ....

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**5th Sem / Elect**  
**Subject:-Utilization of Electrical Energy**

Time : 3Hrs.

M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The method of heating used in an electric room convector is (CO1)  
a) Resistance heating    b) Induction heating  
c) Dielectric heating    d) Arc heating
- Q.2 Which of the following is not an applications of electroplating? (CO3)  
a) Decorative purposes    b) Coating of metal  
c) Metal protection    d) Corrosion prevention
- Q.3 On main line railways, more importance is given to (CO6)  
a) Acceleration    b) Braking  
c) Speed    d) Retardation
- Q.4 The lightning system of almost all the earlier coaches and all the newly manufactured coaches have (CO6)  
a) 50V    b) 110V  
c) 220V    d) 420V

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- Q.5 For the transmission of heat from one body to other (CO1)  
a) Temperature of two bodies must be different  
b) Both bodies must be solid  
c) Both bodies must be in contact  
d) Both bodies must be placed apart
- Q.6 The system of traction employed for suburban railway is (CO6)  
a) DC    b) AC  
c) Composite    d) 3 phase AC
- Q.7 Seam welding is not used for (CO2)  
a) Welding in tanks    b) Welding in T/F  
c) Welding in aircraft    d) Welding alloys of CU
- Q.8 Suitable motor for electric traction with 25KV, 50KV ac supply is (CO6)  
a) DC series motor  
b) DC shunt motor  
c) 3 phase Induction motor  
d) all of these
- Q.9 The metal which can be extracted from its ore by the method of electrolysis is (CO3)  
a) Zinc    b) Al  
c) Cu    d) all of these
- Q.10 The electrodes used for projection welding are  
a) Flat and smaller in diameter  
b) Flat and larger in diameter  
c) Round and smaller in diameter  
d) Round and larger in diameter

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### SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Radiant heating is used for\_\_\_\_\_ (CO1)  
Q.12 A\_\_\_\_\_ system is more close to electric traction. (CO6)  
Q.13 Electrodeposition is obtained on\_\_\_\_\_ electrode. (CO1)  
Q.14 Define refrigeration. (CO4)  
Q.15 Define electric heating. (CO1)  
Q.16 Deposition of one metal over another metal electrically is called (CO3)  
Q.17 Name a ecofriendly refrigerant (CO4)  
Q.18 TIG stands for (CO2)  
Q.19 The motor used in traction motor is (CO6)  
Q.20 Induction furnaces can only Work on \_\_\_\_\_ supply (CO2)

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 What are the factors affecting schedule speed. (CO6)  
Q.22 Explain electroplating process. (CO3)  
Q.23 Describe various current collectors and describe the pantograph (CO6)  
Q.24 Write short note on (Co3)  
a) Extraction of metal b) Refining of metal  
Q.25 What are the applications of refrigeration cycle. (CO1)

- Q.26 Explain vapour compression refrigeration cycle. (CO4)  
Q.27 What are the categories of railways service. (CO6)  
Q.28 Explain the function of flywheel in drive system. (CO5)  
Q.29 Give any three application of microwave heating. (CO1)  
Q.30 Compare resistance and arc welding. (CO2)  
Q.31 What is chain drive? Compare belt and chain drive. (CO5)  
Q.32 Explain the factor affecting electrodeposition. (CO1)  
Q.33 What is braking? Explain plugging. (CO6)  
Q.34 Enlist the five characteristics of an ideal refrigerant. (CO4)  
Q.35 Describe about the process of galvanization. (CO3)

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain speed time characteristics for different services used in traction system of India. (CO6)  
Q.37 Describe the construction operation and application of electric arc furnace. (CO1)  
Q.38 Describe the selection criteria of electric drive. (Co5)