

- Q.25 Explain the applications of electrolysis. (CO4)  
 Q.26 Describe about anodizing. (CO4)  
 Q.27 Explain TIG welding. Enlist its any five applications. (CO3)  
 Q.28 Differentiate AC and DC welding. (CO3)  
 Q.29 Give any three application of dielectric heating.

(Co2)

- Q.30 Draw the electrical circuit for Air Conditioner.(CO5)  
 Q.31 Explain the need of flywheel in drives system. (Co6)  
 Q.32 Explain the supply arrangement required for electrolysis. (CO5)  
 Q.33 Enlist the five advantages of electric traction. (CO7)  
 Q.34 Define group drives. Also tells its merits over other types of individual drives. (CO6)  
 Q.35 Explain the types of electric breaking. (CO6)

#### SECTION-D

**Note:** Long Answer type question. Attempt any two questions. (2x10=20)

- Q.36 Explain construction and working of indirect arc furnace. (CO2)  
 Q.37 Draw the block diagram of EMU and explain all equipments and accessories used in EMU. (CO7)  
 Q.38 Explain different type mechanical load. Draw there characteristics. (CO6)

**Note :** Course Outcome (CO) mentioned in the question paper is for official purpose only.

No. of Printed Pages : 4

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### 4th Sem / Electrical Engg. Subject : Utilization of Electrical Engg.

**Time : 3 Hrs.**

**M.M. : 100**

#### SECTION-A

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

- Q.1 A good heating element should have (CO2)  
 a) High resistivity and low melting point.  
 b) Low resistivity and high melting point.  
 c) High resistivity and high melting pont.  
 d) Low resistivity and low melting point.
- Q.2 the coolant widely used in domestic refrigerators is (CO5)  
 a) Ammonia b) Carbon dioxide  
 c) Sulphur dioxide d) R-12
- Q.3 An electric drive comprises. (CO6)  
 a) Source b) Motor  
 c) Control unit d) All of above
- Q.4 The coated electrode is used in order to (CO3)  
 A) Improve bead metal  
 b) Cleanse the base metal.  
 c) Provide shielding to weld pool.  
 d) Prevent atmospheric contamination

- Q.5 The return circuit for traction is through. (CO7)  
 a) Common earthing b) Neutral wire  
 c) Rail d) A & B both
- Q.6 Direct arc furnaces have which of the following power factors? (CO2)  
 a) Unity b) Low, Lagging  
 c) Low, leading d) Any of the above
- Q.7 Supply frequency in 25KV single phase system is (CO7)  
 a) 60HZ b) 50HZ  
 c) 25HZ d) 16HZ
- Q.8 The preferred braking systems used in the electric traction is \_\_\_\_\_. (CO7)  
 a) Regenerative braking  
 b) Plugging  
 c) Rheostat braking  
 d) None
- Q.9 The voltage - Current characteristics of the arc welding must be (CO3)  
 a) Exponentially rising b) Drooping  
 c) Straight line d) None of above
- Q.10 \_\_\_\_\_ welding is used for welding of car body. (CO3)  
 a) Gas b) Spot  
 c) Carbon-arc d) Atomic hydrogen

### SECTION-B

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

- Q.11 The electrodes used in arc furnace are made of \_\_\_\_\_. (CO2)
- Q.12 Electric motor used for the lift is \_\_\_\_\_. (CO6)
- Q.13 Resistance welding can be employed for production works (T/F) (CO3)
- Q.14 Expand EMU \_\_\_\_\_. (CO7)
- Q.15 In a centrifugal pump, the mechanical load is \_\_\_\_\_. (CO6)
- Q.16 Motor used in Electric locomotive is \_\_\_\_\_. (CO7)
- Q.17 The solution used for electrolysis is known as \_\_\_\_\_. (CO4)
- Q.18 MIG stands for \_\_\_\_\_. (CO5)
- Q.19 Air conditioners are rated in \_\_\_\_\_. (CO5)
- Q.20 Schrage motor is also known as brush shifting motor (T/F) (CO6)

### SECTION-C

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

- Q.21 Explain the principle and application of microwave heating in domestic use. (CO2)
- Q.22 Explain need of eco friendly refrigerant. (CO5)
- Q.23 Give the advantages of Electric drives over mechanical drives. (CO6)
- Q.24 Draw the speed time curve of sub urban train. (CO7)