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**5th Sem / Branch : Elect**  
**Sub. : Utilization of Electrical Energy**

Time : 3Hrs.

M.M. : 100

**SECTION-A**

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

- Q.1 For arc Heating electrodes are made of (COE1)  
a) Copper                      b) Aluminium  
c) Graphite                    d) Acsr
- Q.2 Ajax Wyatt furnace is used for melting (COE1)  
a) Ferrous material      b) Non ferrous material  
c) Steel                      d) Insulating material
- Q.3 For the transmission of heat from one body to other (COE1)  
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.4 Projection WELDING is (COE2)  
a) Multiple spot welding  
b) Continuous spot welding  
c) Used to form mesh  
d) All above

(1)

180955

- Q.5 Current flow through an electrolyte is due to movement of (COE3)  
a) Ions                              b) Ions & holes  
c) Holes                            d) None of above
- Q.6 Size of domestic refrigerator is given in (COE4)  
a) Liter                              b) Ton  
c) Watt                              d) Meter
- Q.7 Resistance of earth wire should be (COE5)  
a) Infinite                          b) Low  
c) High                              d) Very low
- Q.8 On the main line service importance is given to (COE6)  
a) Acceleration                  b) Braking  
c) Speed                            d) Retardation
- Q.9 Textile mill use (COE5)  
a) Schrage motor                  b) Slip ring I.M.  
c) DC Motor                        d) Universal Motor
- Q.10 Supply frequency is 25KV single phase system is (COE6)  
a) 60Hz                              b) 50Hz  
c) 25Hz                              d) 16Hz

**SECTION-B**

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

- Q.11 Insulated materials can be heated only by \_\_\_\_\_. (COE1)
- Q.12 Modes of heat transfer are \_\_\_\_\_. (COE1)
- Q.13 MIG stands for \_\_\_\_\_. (COE2)

(2)

180955

- Q.14 For small domestic appliances \_\_\_\_ Motor is used. (COE5)
- Q.15 Transformer used in welding is called \_\_\_\_.(COE2)
- Q.16 Desert cooler can function only during \_\_\_\_ season. (COE4)
- Q.17 Butt welding is used for welding. (COE2)
- Q.18 Radiant heating is used for \_\_\_\_\_. (COE1)
- Q.19 Electroplating is electro deposition (True/False) (COE3)
- Q.20 In railway, \_\_\_\_ is used as return conductor. (COE6)

### SECTION-C

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

- Q.21 Explain ECO friendly refrigerants. (COE4)
- Q.22 Write short note on kando system of electric traction. (COE6)
- Q.23 What is braking? Explain plugging. (COE6)
- Q.24 What is chain drive. Compare belt and chain drive. (COE5)
- Q.25 State desirable properties of resistance heating element. (COE1)
- Q.26 Differentiate TIG and MIG welding. (COE2)
- Q.27 What is galvanizing process. State its disadvantages. (COE3)
- Q.28 Explain the role of flywheel. Attached with electric drive. (COE6)

- Q.29 Explain faradays law of electrolysis. (COE3)
- Q.30 What are the factors affecting schedule speed. (COE6)
- Q.31 Draw the Electric circuit used in domestic refrigerator. (COE4)
- Q.32 What are the applications of dielectric heating in industry. (COE1)
- Q.33 What are the advantages of electric welding? (COE2)
- Q.34 Explain the term current efficiency and energy efficiency used in electrolytic process. (COE3)
- Q.35 Write short note on electric multiple unit. (EMU) trains. (COE6)

### SECTION-D

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

- Q.36 Describe the construction, operation and applications of electric arc furnace. (COE1)
- Q.37 Define electric braking. Explain plugging and regenerative, Braking with neat sketch. (COE6)
- Q.38 How do you select a motor for the particular job. Also explains method of power transfer using belt drive and chain drive? (COE5)