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**5th Sem., Branch : Elect
Subject : Utilization of Electrical Energy**

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type 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

Q.5 Current flow through an electrolyte is due to movement of (COE1)

- a) Ions b) Ions & Holes
- c) Holes d) None of above

Q.6 Size of domestic refrigerator is given n (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 in 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 _____ (COE2)

Q.13 MIG stands for _____. (COE5)

- 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. (CO4)
- Q.17 Butt welding is used for welding _____. (CO2)
- Q.18 Radient heating is used for _____. (CO1)
- Q.19 Electroplating is eletctrodeposition (True/ False) (COE3)
- Q.20 In railway _____ is used as return conductor. (COE6)

Section-C

Note: Short answer type Question. 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. (COE5)
- Q.24 What is chain drive. Compare belt and chain drive. (COE5)
- Q.25 State desirable properties of resistance heating element. (COE1)
- Q.26 Differntiate Tig and Mig welding. (COE3)
- 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. (COE6)
- 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 questions. Attempt any two question 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)