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180955

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

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Dielectric loss depends upon (COE1)
a) Voltage
b) Frequency
c) Voltage and frequency
d) Electrode material
- Q.2 Core less induction furnace requires (COE1)
a) Low frequency b) High frequency
c) High power d) Low power
- Q.3 Which of the following heating method has max Power factor (COE1)
a) Arc heating b) Induction heating
c) Dielectric heating d) Resistance heating
- Q.4 Tig welding is suited for welding (COE2)
a) Stainless steel b) Carbon steel
c) Aluminium d) None of the above
- Q.5 In electrolysis salt solution is ionized into (COE3)
a) Ions b) Cathode
c) Holes d) Anode

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- Q.6 Size of AC is given in (COE4)
a) Liter
b) Tones
c) Length of conditioner
d) Watt
- Q.7 Best suited motor for the traction work is (COE6)
a) Slip ring IM b) DC shunt motor
c) DC series motor d) Synchronous motor
- Q.8 Tractive effort can be increased (COE6)
a) By increasing supply voltage
b) By using KW motors
c) Increasing dead weight
d) Both A & C
- Q.9 Induction furnace work only on (COE1)
a) Ac b) Dc
c) Ac Dc both d) None of these
- Q.10 Braking used in locomotive is (COE6)
a) Regenerative braking
b) Plugging
c) Rheostat braking
d) None

SECTION-B

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

- Q.11 Induction furnace works on the production of _____ Current. (COE1)

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- Q.12 Infra red heating is also called _____. (COE1)
heating.
- Q.13 EMU stands for _____. (COE6)
- Q.14 Motor used for textile industry is _____. (COE5)
- Q.15 Motor used in domestic refrigerator is _____. (COE5)
- Q.16 Size of the air conditioner is given in _____. (COE4)
- Q.17 Non consumable electrode _____ is used in TIG welding. (COE2)
- Q.18 Most common used current collector is _____. (COE6)
- Q.19 The negatively charged ions are called _____. (COE3)
- Q.20 Define refrigerant. (COE4)

SECTION-C

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

- Q.21 What are refrigerants? What are the desirable properties of refrigerants? (COE4)
- Q.22 What is schedule speed. What are the factors affecting schedule speed. (COE6)
- Q.23 What are the desirable characteristics required in traction motor. (COE6)
- Q.24 State merits of electric braking over mechanical braking. (COE6)
- Q.25 Explain principle of dielectric heating. Give three Applications. (COE1)
- Q.26 What are the advantages of using coated electrodes. (COE2)

- Q.27 Define electro deposition process. Write factors affecting electro deposition. (COE3)
- Q.28 Differentiate AC and DC electric welding. (COE2)
- Q.29 Enlist specifications of commonly used motors. (COE5)
- Q.30 Explain characteristics of different kind of mechanical load. (COE5)
- Q.31 Draw the electric circuit used in air conditioner. (COE4)
- Q.32 Explain in brief Galvanizing and its applications. (COE3)
- Q.33 What are the different types of resistance electric welding. (COE2)
- Q.34 Explain why the supply used for an arc furnace is low voltage high current type. (COE1)
- Q.35 Explain in brief solar heating. (COE1)

SECTION-D

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

- Q.36 What is electric heating. Explain core type and coreless type induction heating. (COE1)
- Q.37 With the help of neat diagram, explain the working of various parts of electric locomotive. (COE6)
- Q.38 How do you select a motor for the particular job. Also explain method of power transfer using chain drive and belt drive. (COE5)