Q.30 Explain the Factors affecting electro-deposition.

Q.31 Explain the principle of induction heating. Give any three applications.

Q.32 Differentiate AC and DC electric welding.

Q.33 Compares the group and individual drive.

Q.34 Explain the working of sodium lamp.

Q.35 Explain the types of mechanical loads.

Section D

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

Q.36 Explain the urban, sub-urban and main line services along with their speed-time curves.

Q.37 Explain the selection criteria of an electric drive.

Q.38 Explain the Principle, construction and working of Air conditioner.

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Time : 3 Hrs. **M.M. : 100**

SECTION-A

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

Q.1 Which braking generally used in rolling mills.

a) Dynamic b) Plugging
c) Regenerative d) All of the above

Q.2 Motor is used in toys.

a) Universal
b) AC series
c) Shaded pole
d) Capacitor start induction Run

Q.3 The capacity of air conditioner is expressed in.

a) KWH b) Ton
c) Watt d) None of the above

Q.4 During the _____period the power supply to the motor is cut off and train is allowed to run due to its own momentum.

a) Free running b) Notching up
c) Coasting d) Breaking

Q.5 The speed time curve for the sub urban service has no

a) Coasting period b) Free running Period
c) Acceleration Period d) Breaking Period

Q.6 Carbon arc lamps are commonly used in.
a) Domestic lighting b) Street lighting
c) Cinema Projector d) Photography

Q.7 The unit of luminous intensity is
a) Steradian b) Candela
c) Lumen d) Lux

Q.8 The power required for electro-deposition is
a) DC and very low voltage
b) DC and high voltage
d) AC and very low voltage
d) AC and high voltage

Q.9 Which material is not used for making non-consumable electrodes
a) Carbon b) Tungsten
c) Graphite d) Sodium

Q.10 In refrigeration cycle, the flow of refrigerant is controlled by
a) Compressor b) Expansion valve
c) Condenser d) Evaporator

Section B

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

Q.11 Supply frequency in 25KV single-phase system is _____.

Q.12 LUX is the unit of _____.

Q.13 TIG stands for _____.

Q.14 In electrolysis process, the electrical energy is converted into _____ energy.

Q.15 _____supply is used in atomic hydrogen.

Q.16 _____ heating is used drying of woods.

Q.17 Define depreciations factor.

Q.18 Give any one application of neon lamp.

Q.19 Draw torque speed characteristics of DC series motor.

Q.20 Give any one demerit of electric traction.

Section C

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

Q.21 Give the comparison between CFL and LED lamps.

Q.22 Explain the main requirement of proper lighting.

Q.23 Explain the laws of illuminations.

Q.24 Enlist the five Advantages and disadvantages of electric drives.

Q.25 Explain the factors affecting the schedule speed of the train.

Q.26 Draw the block diagram of EMU.

Q.27 Enlists the desired features of a coolant.

Q.28 Explain the rheostat breaking.

Q.29 Explain MIG welding along with its applications.