

- Q.25 Name the various traction system in practice in our country.
- Q.26 Write a reason, why dc series motor is ideally suited for traction purposes.
- Q.27 Draw the neat diagram of current collector pantograph.
- Q.28 Write the advantages of Electric Drives over other types of Drive.
- Q.29 Explain the different types of electric braking commonly used for all motors.
- Q.30 State, giving reason, what types of motor you suggest for Textile mill drive.
- Q.31 Write a short note on induction heating.
- Q.32 Classified the various electric heating methods.
- Q.33 Compare ac and dc welding
- Q.34 Explain Resistance welding and its applications.
- Q.35 Give some applications of induction heating.

#### **SECTION-D**

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

- Q.36 With the help of circuit diagram, explain the working of a water cooler.
- Q.37 Draw and explain the speed-time curve for an electric train movement and explain
- a) acceleration      b) free running
  - c) coasting            d) retardation
- Q.38 Explain the construction, working of Arc furnace.

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#### **6th Sem / Elect, Power Station Engg, Elect & Eltx Engg. Subject:- Utilization of Electrical Energy**

Time : 3Hrs.

M.M. : 100

#### **SECTION-A**

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

- Q.1 Candela is the unit of which?
- a) Wavelength      b) Luminous intensity
  - c) Luminous flux    d) Frequency
- Q.2 Solid angle is expressed in terms of
- a) LED
  - b) Fluorescent
  - c) Incandescent
  - d) High pressure sodium vapour
- Q.3 Direct core type furnace heat transfer from which method
- a) Conduction      b) Radiation
  - c) Convection      d) All of above
- Q.4 Type of resistance Welding
- a) spot welding      b) Seam welding
  - c) Both(a) and (b)    d) None of the above

- Q.5 Which motor is comfortably within the Crane  
 a) DC series motor      b) DC Shunt motor  
 c) Synchronous motor    d) Single Phase motor
- Q.6 In Dc track electrification system operating voltage is  
 a) 415V                  b) 600V  
 c) 1500V to 3000V      d) Both (b) and (c)
- Q.7 Area inside of the speed time curve is represent that  
 a) Time taken by the train  
 b) Acceleration of time taken by the train  
 c) Distance travelled by the train  
 d) Crest speed
- Q.8 The laws governing the electrolytic processes are  
 a) Lenz's law              b) Ohm's law  
 c) Both (a) and (b)      d) None of the above
- Q.9 In electrolysis process for refining of gold, pure gold is deposited on the  
 a) Anode                  b) Cathode  
 c) Electrolyte            d) Any of the above
- Q.10 The partical unit of refrigeration is  
 a) Kw                      b) Tonne  
 c) Ampere                d) volt

## SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Meter candle is the unit of illumination. (True/False)
- Q.12 Laws of illumination are faradays law. (True/False)
- Q.13 High voltage neon lighting used in advertising, sign board. (True/False)
- Q.14 In direct lighting scheme less than 50% of total light flux is made to fall directly on the working plane. (True/False)
- Q.15 \_\_\_\_\_ discharge lamp is used for street lighting purpose.
- Q.16 Resistance heating is based upon the \_\_\_\_\_ effect.
- Q.17 Operating efficiency of AC welding is \_\_\_\_\_.
- Q.18 \_\_\_\_\_ quadrant operations of a electric motor during driving a hoist load.
- Q.19 In DC system of track electrification \_\_\_\_\_ motor are used.
- Q.20 The temperature of water cooler is controlled with the help of thermostatic switch. (True/False)

## SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 State and explain Laws of illumination.
- Q.22 Explain point to point method of lighting calculation.
- Q.23 Explain, what is the need of electro-deposition.
- Q.24 Write the Principle of galvanizing.