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**4th Sem./ Electrical**

**Subject : Utilization of Electrical Energy**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Space Height ratio should ideally be equal to (CO1)

- a) 2                                      b) 1
- c) 0.5                                    d) 3

Q.2 The transformer used for the AV Welding Set is (CO3)

- a) Booster type
- b) Step up Transformer
- c) Step down transformer
- d) None of these

Q.3 The deposit will be coarse when \_\_\_\_\_ current density is Employed (CO4)

- a) Intermittant                      b) Continuous
- c) Low                                      d) High

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Q.4 Size of Air Conditioner is given in (CO3)

- a) Litters                                      b) Tonnes
- c) Length of Pipe                      d) All of these

Q.5 On the main line Service, More importance is given to (CO5)

- a) Acceleration                      b) Braking
- c) Speed                                      d) Retardation

Q.6 Modern Electrification of Track is being done for \_\_\_\_\_ system. (CO5)

- a) DC                                      b) AC
- c) Composite                              d) None of these

**SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define Lux. (CO1)

Q.8 Insulating materials can be heated only by \_\_\_\_\_ (CO2)

Q.9 Define Galvanization process. (CO3)

Q.10 Starting Torque of Squirrel Cage Motor is \_\_\_\_\_ (CO4)

Q.11 Expand EMU (CO5)

Q.12 Expand HVAC

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## SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain Lamberts cosine law of illumination. (CO1)

Q.14 State properties of resistance heating element. (CO2)

Q.15 Write short note on Tungsten Inert gas Welding. (CO2)

Q.16 State factor affecting process of electrodeposition. (CO3)

Q.17 Draw Electrical circuit of Air conditioner. (CO3)

Q.18 What are the factors affecting selection of motor for a particular load. (CO4)

Q.19 Explain composite system of Track electrification. (CO5)

Q.20 State advantages of electric traction system. (CO5)

Q.21 What are the Advantages of electric Braking system? (CO5)

Q.22 Define Glare, Shadow. (CO1)

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## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Draw Block diagram of electric locomotive. Explain function of various components of electric locomotive. (CO5)

Q.24 What is induction heating? Explain coreless type induction heating process with neat diagram. (CO2)

Q.25 Draw and explain Sodium vapour lamp. (CO1)

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