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**6th Sem. / Elect., PSE, EEE**

**Subject : Utilization of Elect. Energy**

Time : 3 Hrs.

M.M. : 100

**SECTION-A**

**Note:** Very Short Answer type questions. Attempt any 15 parts.  $(15 \times 2 = 30)$

- Q.1 a) Name motor used in small domestic appliance.  
b) What is indirect arc heating.  
c) What is the wave length of light.  
d) State applications of galvanizing.  
e) Which method of welding produce continuous line of joint.  
f) Define carbon arc.  
g) Full form of EMU.

- h) Name two eco friendly refrigerant.  
i) What is LUX.  
j) What is the function of choke in fluorescent lamp.  
k) Illumination is measured in \_\_\_\_\_.  
l) What is electrolysis.  
m) What is inverse square law.  
n) Why AC supply is not used in electroplating.  
o) Define anodizing.  
p) Define butt welding.  
q) Define electrodes.  
r) What is the purpose of reflectors.

**SECTION-B**

**Note:** Short answer type questions. Attempt any ten parts  $10 \times 4 = 40$

- Q.2 i) Explain working of CFL.

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- ii) Compare AC & DC Arc welding.
- iii) Discuss qualities of good lighting system.
- iv) Discuss characteristics of DC series motor.
- v) Draw block diag. of electric locomotive.
- vi) Discuss characteristics of different types of mechanical loads.
- vii) What is electric braking. State advantages.
- viii) Explain direct resistance heating with application.
- ix) Explain fractional kilo watt motor.
- x) State characteristics of drive for textile.
- xi) State specifications of DC series motor for traction.
- xii) What are cause of failure of heating element.
- xiii) Draw electric circuit of domestic refrigerator.

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- xiv) What are the advantages of coated electrode.
- xv) Explain why it is not advisable to put very hot things in fridge.

## **SECTION-C**

**Note:** Long answer type questions. Attempt any three questions.  $3 \times 10 = 30$

- Q.3 Explain dielectric heating in detail. Also explain its application & advantages.
- Q.4 Discuss in detail different power transfer methods in drive.
- Q.5 Explain with neat diag. basic principle of refrigeration cycle.
- Q.6 Draw circuit diag. of mercury vapour camp. Explain its working also.
- Q.7 Write short note on
  - a) Laws of illumination.
  - b) Compare CFL and LED.

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