

S.B. Roll No.....

**UTILIZATION OF ELECTRICAL ENERGY**  
**6<sup>th</sup>/Elect/EEE/5224/2652/6921/May'16**

**Duration: 3 Hrs**

**M. Marks=75**

**SECTION A**

**Q1 Fill in the blanks with suitable word:**

**10x1.5=15**

- I. Light wave travel with a velocity of \_\_\_\_\_
- II. Candela is a unit of \_\_\_\_\_
- III. The electrodes used in arc furnace are of \_\_\_\_\_
- IV. Thermal conductivity is measured in \_\_\_\_\_
- V. TIG welding is \_\_\_\_\_ welding.
- VI. Butt welding is used for welding \_\_\_\_\_
- VII. The transformer used in a welding set is \_\_\_\_\_ transformer.
- VIII. In electrolytic process the electrical energy is converted into \_\_\_\_\_
- IX. The sizes of the room air conditioner is given in \_\_\_\_\_
- X. The starting torque of a dc series motor is \_\_\_\_\_

**SECTION B**

**Q.2. Attempt any FIVE questions:**

**5x6=30**

- a. Write short note on 1. CFL 2. LED
- b. Explain Dielectric heating.
- c. Explain Resistance welding and its application.
- d. Describe with neat diagram electrolytic process.
- e. Discuss the various advantages of electric drive over mechanical drive.
- f. Why are D.C. series motors preferred for use on electric traction?
- g. Discuss the electric circuit of domestic refrigerator with neat diagram.

**SECTION C**

**Q.3. Attempt any THREE questions:**

**3x10=30**

- I. Name different method of electric heating and explain ajax wyatt core furnace with neat diagram
- II. (A) Justify your answer with reasons which motor is selected for the following drives?  
(i) Paper mill (ii) Lifts (iii) Electric traction (iv) Mine  
(B) What do you mean by drive? Discuss various types of electric drives.
- III. Explain the working of various parts of vapor compression refrigeration system
- IV. Discuss the concept of plugging and regenerative braking. Describe the criteria for selection of motor for particular work