

S. B. Roll. No.....

**UTILIZATION OF ELECTRICAL ENERGY**  
**6<sup>th</sup> Exam/Elect/8526/Nov'24**  
**(For 2018 Batch Onwards)**

**Duration: 3Hrs.**

**M.Marks:75**

**SECTION-A**

**Q1. Fill in the blanks.**

**15x1=15**

- a. Dielectric heating is used for heating \_\_\_\_\_
- b. Angstrom is the unit of \_\_\_\_\_
- c. For traction work, the best suited motor is \_\_\_\_\_
- d. The positively charged ions are called \_\_\_\_\_
- e. The size of room air conditioner is measured in \_\_\_\_\_
- f. DC shunt motor is a \_\_\_\_\_ motor.
- g. Human eye is most sensitive to a wavelength of \_\_\_\_\_
- h. The unit of brightness is \_\_\_\_\_
- i. The voltage used in electric traction for main line service is \_\_\_\_\_
- j. The gas used as refrigerant in a refrigerator is \_\_\_\_\_
- k. In electrolytic process, the electric energy is converted into \_\_\_\_\_ energy.
- l. In kendo system of track electrification, single-phase ac is converted into \_\_\_\_\_
- m. The electrode connected to positive terminal is called \_\_\_\_\_
- n. The sodium vapour lamp produces \_\_\_\_\_ light.
- o. The unit of illumination is \_\_\_\_\_

**SECTION-B**

**Q2. Attempt any six questions.**

**6x5=30**

- i. Explain the laws of illumination.
- ii. What desirable properties should the filament of a lamp have?
- iii. What are the advantages of electric traction?
- iv. Explain TIG welding.
- v. Discuss the ward - Leonard method of speed control of dc motors.
- vi. What is electro plating?
- vii. Give the advantages of coated electrodes.
- viii. What is pinch effect?
- ix. What are the advantages of electric heating?

**SECTION-C**

**Q3. Attempt any three questions.**

**3x10=30**

- a. Explain the block diagram of A.C. Locomotive in detail.
- b. Explain electric circuit of a domestic refrigerator.
- c. Explain working of fluorescent tube with circuit diagram.
- d. Explain Dielectric heating in detail.
- e. Discuss the concept of plugging and regenerative braking. Describe the criteria for selection of motor for particular work.