

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

**NON-CONVENTIONAL SOURCES OF ENERGY**  
**6<sup>th</sup> Exam/Elect/8528/Nov'24**  
**(For 2018 Batch Onwards)**

**Duration: 3Hrs.**

**M.Marks:75**

**SECTION-A**

**Q1. Give answer in one line.**

**15x1=15**

- a. What are primary sources of energy?
- b. What is solar energy?
- c. How much temperature can be attained by focusing type collector?
- d. What is Greenhouse effect?
- e. What is insolation?
- f. What is the function of spillway?
- g. What is the full form of MHD?
- h. Classify small hydro power plants according to their capacity.
- i. What is pyrolysis?
- j. Write full form of WECS.
- k. What is anemometer?
- l. What do you mean by geothermal energy?
- m. Write full form of OTEC?
- n. Name different types of losses in fuel cell.
- o. What is Figure of Merit?

**SECTION-B**

**Q2. Attempt any six questions.**

**6x5=30**

- i. Write differences between conventional and non-conventional type energy sources.
- ii. What are the applications of solar air heaters?
- iii. Explain the principle of conversion of solar energy into heat.
- iv. What are the advantages of small scale hydroelectric plants?
- v. What are the methods of obtaining energy from biomass?
- vi. What are the characteristics of Savonius rotor?
- vii. What are the basic components of WECS?
- viii. Explain the concept of power generation using gasifiers.
- ix. Explain the working principle of tidal power plant.
- x. Explain the working of thermoelectric power plant.

**SECTION-C**

**Q3. Attempt any three questions.**

**3x10=30**

- a. Explain in detail working of open cycle MHD generator.
- b. What are the factors to be considered for site selection of Wind energy conversion system?
- c. Explain in detail the factors affecting Bio digestion.
- d. Write a note on open cycle OTEC.
- e. Write working principle, advantages and disadvantages of Fuel Cell.
- f. Explain briefly various components of hydroelectric power plant.

P.S.B.T.E.&I.T.

