



**Term Evaluation (Even) Semester Examination March 2025**

Roll no.....

Name of the Course: B.Tech CE

Semester: VIII

Name of the Paper: Non-Conventional Energy Resources

Paper Code: TOE 803

Time: 1.5 hour

**Maximum Marks: 50**

**Note:**

- (i) Answer all the questions by choosing any one of the sub-questions
- (ii) Each question carries 10 marks.

Q1. CO 1 (10 Marks)

- a. What are non-conventional energy resources? Discuss their importance in modern energy production.
- OR
- b. Explain the need for alternative energy sources in the context of energy security and climate change.

Q2. CO 1 (10 Marks)

- a. What are the major challenges in implementing non-conventional energy resources on a large scale?
- OR
- b. Compare non-conventional energy sources with conventional energy sources based on their merits and demerits.

Q3. CO 2 (10 Marks)

- a. Explain the working principle of solar cells with a neat diagram.
- OR
- b. What is solar radiation? Explain the factors affecting the efficiency of solar energy collection.

Q4. CO 2 (10 Marks)

- a. Discuss the different types of solar cell materials and compare their efficiency and applications.
- OR
- b. Compare flat plate collectors and focusing collectors in terms of working, applications, and efficiency.

Q5. CO 1&2 (10 Marks)

- a. Discuss the future prospects of non-conventional energy sources and the latest advancements in this field.
- OR
- b. Explain the working principle of a solar thermal power plant with a neat diagram.