Sl. No.

21PHY3E2CL

M.Sc. III Semester Degree Examination, April/May - 2023
PHYSICS
Renewable Energy Physics
(CBCS)

Time : 3 Hours   Maximum Marks : 70

Note :   *Answer **any five** of the following questions with question no. **1 compulsory**, each question carries **equal** marks.*

1. Give an estimated reserve of conventional energy sources. Briefly discuss the problems and the solutions of solar energy utilization. **14**

2. Describe in detail, hydroelectric power generation. **14**

3. Explain Photovoltaic effect. Give the fabrication and working of hetero junction solar cell. **14**

4. (a) Give the wind energy scenario of India. **5+9**
    (b) Discuss the construction and working of horizontal axis wind mill.

5. Describe in detail the production of ethanol from biomass. **14**

6. (a) How energy can be obtained from geothermal methods ? **7+7**
    (b) Justify the need of concentrating solar collectors.

7. (a) Give the basic principles of wind energy conversion. **7+7**
    (b) Explain clearly photosynthesis process.

8. (a) Give an account of fossil fuels. **5+5+4**
    (b) Write a short note on solar water pumping system.
    (c) Discuss briefly the criteria for wind site selection.

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