

**CERTIFICATE IN ENERGY
TECHNOLOGY AND MANAGEMENT
(CETM)
Term-End Examination
June, 2026**

**OHEY-002 : RENEWABLE ENERGY
TECHNOLOGIES AND THEIR USES**

Time : 3 Hours

Maximum Marks : 70

Note : (i) Attempt any **five** questions.

(ii) All questions carry equal marks.

1. (a) Discuss the factors affecting the amount of solar radiation reaching a surface. 7
- (b) Describe the materials used in constructing solar cookers and their thermal properties. 7
2. (a) Explain the construction and working of any solar water heater with a neat schematic diagram. 7
- (b) What is the function of transparent covers in solar water heater ? Also explain how efficiency of solar water heater may be enhanced ? 7

3. Describe the construction and working principle of solar still with proper schematic diagram. Also discuss the factors influencing the efficiency of solar still. 14
4. (a) Explain the following with reference to biomass conversion : 7
 - (i) Biological processes
 - (ii) Thermochemical processes
- (b) Explain the construction and working of floating drum biogas plant. 7
5. (a) Analyze the impact of net metering on the adoption of residential solar photovoltaic systems. 7
- (b) Evaluate the role of thermal mass in passive solar heating. Also discuss the challenges of existing buildings with solar heating and cooling systems. 7
6. Write short notes on any *two* of the following : 2×7=14
 - (a) Natural and forced circulation dryers
 - (b) Green buildings
 - (c) Day lighting and its applications

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