

**CERTIFICATE IN ENERGY
TECHNOLOGY AND MANAGEMENT
(CETM)**

Term-End Examination

December, 2024

**OEY-001 : ENERGY RESOURCES AND
CONVERSION PROCESSES**

Time : 3 Hours

Maximum Marks : 70

Note : (i) Answer any **seven** questions.

(ii) All questions carry equal marks.

(iii) Use of calculator is permitted.

1. Define the following : 5×2=10

- (a) Energy Carrier
- (b) Geothermal Energy
- (c) Biochemical Oxygen Demand
- (d) Specific Heat
- (e) Hydraulic Retention Time

2. Describe in detail any *two* conventional energy sources. 10
3. Give a detailed description of classification of biomass resources. 10
4. Name and describe the *two* different types of wind machines generally used for power generation. 10
5. Describe the construction and working of a photovoltaic (PV) solar cell. Mention some materials used as semiconductors in PV cells. 10
6. Discuss wind solar hybrid systems mentioning their advantages and economic viability. 10
7. What is Solar Collector ? Differentiate between low, medium and high temperature solar collectors. 10
8. List down various renewable energy sources and give their advantages and disadvantages. 10
9. Write short notes on the following : 5+5=10
 - (a) Nuclear Energy
 - (b) Tidal Energy

x x x x x x x