

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

Term-End Examination

June, 2026

**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.

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1. Define the following : 5×2=10
 - (a) Convection
 - (b) Power factor
 - (c) Internal Energy
 - (d) Alkalinity
 - (e) High Grade Energy
 2. Describe a water pumping wind mill along with its advantages and limitations. 10

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3. Explain the construction and working of a fuel cell along with its components. 10
4. How is bio-gas produced ? Describe various components of a bio-gas production plant. 10
5. Define Charcoal and enlist its main characteristics. 10
6. Write about the environmental impacts of nuclear energy and hydroelectric power plant. 10
7. Discuss the effect of organic loading rate and pH value of feed on bio-gas production. 10
8. (a) Discuss the laws of thermodynamics. 6
(b) What are the characteristics of coke ? 4
9. Write short notes on the following : 5+5
(a) Geothermal Energy
(b) Animal Power

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