

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

**Term-End Examination**

**February, 2021**

**OEY-003 : ENERGY MANAGEMENT :  
AUDIT AND CONSERVATION**

*Time : 3 hours*

*Maximum Marks : 70*

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**Note :** *Attempt any **seven** questions. All questions carry equal marks.*

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1. Explain various temperature measuring instruments. 10
  
2. What is evaporative cooling ? Explain the reasons for lowering of temperature by evaporation. 10
  
3. What is energy conservation ? Why is it needed ? 10
  
4. What are the principal components of energy balance for the boiler ? Illustrate heat balance for boiler while generating steam. 10

5. Distinguish between the following 5+5=10
- (a) Commercial and Non-commercial energy sources.
  - (b) Medium term and Long term energy conservation measures.
6. Explain the energy audit of Vanaspati Industry in detail. 10
7. What is Life Cycle Cost ? How is it calculated by considering present worth and future worth ? 10
8. What are the alternatives available for Chulha ? Explain their relative advantages and limitations. 10
9. Write short notes on any **four** of the following :  $4 \times 2 \frac{1}{2} = 10$
- (a) Loading of Motors
  - (b) Air Conditioning Unit
  - (c) PV – Biogas and Biogas Based Generation
  - (d) Wind Energy System
  - (e) Animal Power
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