

**EE-8003(1) (CBGS)**  
**B.E. VIII Semester Examination, June 2020**  
**Choice Based Grading System (CBGS)**  
**Renewable Energy Sources**  
**Time : Three Hours**

**Maximum Marks : 70**

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

ii) All questions carry equal marks.

1. a) What is meant by Renewable energy sources? Explain in brief these energy sources with special reference to Indian context.  
b) Compare conventional and non conventional sources.
2. a) What is Energy management? Write the importance of energy planning in energy management.  
b) Discuss the significance of renewable sources and their exploitation.
3. Write a short note
  - i) Factor influencing wind
  - ii) Wind speed monitoring and Blitz limits
4. a) Describe with a neat sketch the working of a wind energy conversion and its components.  
b) Explain grid independent wind diesel system.
5. a) Explain types of solar cells and its fabrication.  
b) Write down the approach for thermal electric system from solar energy.
6. a) Explain the principle of OTEC.  
b) Write the merits, demerits and applications of Geothermal energy.
7. a) What are the various measuring devices used for energy management?  
b) Write a short note on energy efficient motors.
8. Explain the following (any two):
  - a) Biomass engine driven generators
  - b) Characteristics of PV panels under varying insolation
  - c) Biomass energy and their characteristics
  - d) Magneto hydro generated energy

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