

15151

**B. Tech 5th Semester Examination**  
**Non-Conventional Energy Resources (OS)**

EEE-5001

**Time : 3 Hours**

**Max. Marks : 100**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Attempt five questions in all. selecting one question each from sections A, B, C and D and the entire Section E. All question carry equal marks.

**SECTION - A**

1. Describe in detail the India's annual production and reserves of oil and natural gas. (20)
2. Explain in detail the contribution of non-conventional energy sources. (20)

**SECTION - B**

3. What are the sources of energy available in developing countries? Give examples. (20)
4. Explain the India's scenario in hydro-power in detail. (20)

**SECTION - C**

5. How solar energy can be used as air heater? Describe its performance analysis. (20)
6. Describe the process of bio-gas generation in detail. Give its various applications. (20)

**SECTION - D**

7. Explain the development of geothermal power in India. (20)
8. Explain the principle, working and efficiency of Ocean Thermal energy conversion. (20)

**SECTION - E**

9. Short note on the following:
  - (a) Pyheliometer and its usage.
  - (b) Give full form of TCE and 1TCE is equal to....
  - (c) Define reflected radiation.
  - (d) What is side loss coefficient?
  - (e) Explain briefly the pyrolytic gasification.
  - (f) Write short note on geothermal power.
  - (g) Describe the CdS-CdTe based solar cell and give its maximum achievable efficiency.
  - (h) Describe the solar pond in brief.
  - (i) Name the potential renewable energy sources in India.
  - (j) Write short note on breeder nuclear reactor. (2×10=20)