

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Sem-I Regular Examination January / February 2011

Subject code: 711405N

Subject Name: Energy Management

Date: 04 /02 /2011

Time: 02.30 pm – 05.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain the need of energy strategies and energy planning. 07
(b) Discuss crucial issues in India's energy planning. 07
- Q.2** (a) Explain (1) Energy planning and economy. (2)Steps in supply side energy planning. 07
(b) Explain essential imperatives and steps in user side energy planning. 07
- OR**
- (b) Explain user end energy management and control system. 07
- Q.3** (a) What is meant by renewable energy sources? Explain in brief these energy sources with reference to Indian context. 07
(b) What are the advantages and limitations of renewable energy sources? 07
- OR**
- Q.3** (a) Discuss the world energy features and need of resources. 07
(b) Discuss the scope of solar and wind energy development in India. 07
- Q.4** (a) What are the main applications of a solar pond? Describe briefly (any one). 07
(b) Write short note on 07
(1) Maintenance of stable density gradient in a solar pond.
(2)Heat extraction from a solar pond.
- OR**
- Q.4** (a) Explain a solar pond electric power plant with cooling tower. Draw an illustrative diagram also. 07
(b) What are the advantages and disadvantages of photovoltaic solar energy conversion? 07
- Q.5** (a) What do you mean by greenhouse effect? Enumerate the main types of green houses. 07
(b) Describe the applications of solar energy (Any three). 07
- OR**
- Q.5** (a) Name three greenhouse gases. Which one of them produces the maximum green house effect? Explain. 07
(b) Explain: 07
1)Primary and secondary energy sources
2) Renewable and non renewable energy sources.
