

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – II • EXAMINATION – WINTER • 2013****Subject code: 1722104****Date: 04-01-2014****Subject Name: Energy Conservation and Management****Time: 10.30 am – 01.00 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) Discuss the current energy scenario of India. **07**
(b) Explain the principles of energy conservation. **07**
- Q.2** (a) What are the potentially available resources of energy? **07**
(b) Explain the mechanism of fluidized bed combustion (F.B.C.) **07**
- OR**
- (b) What is the necessity of energy storage? **07**
- Q.3** (a) What are the different methods of energy storage? **07**
(b) What are the economic impacts of energy conservation? **07**
- OR**
- Q.3** (a) Explain the role of Energy information system. **07**
(b) Write a note on energy efficient machines. **07**
- Q.4** (a) What are the factors influencing energy management program? **07**
(b) How energy and power management is done in industry? **07**
- OR**
- Q.4** (a) How is annual heating and cooling load factors calculated? **07**
(b) Discuss the energy consumption pattern. **07**
- Q.5** (a) Write note on any two:- **14**
1. Internal rate of return.
2. Life cycle costing.
3. Demand management.
4. Energy Audit.
