

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1721107

Date: 14/07/2012

Subject Name: Energy Conservation and Management (I.D.E.-II)

Time: 10:30 am – 13:00 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 importance and role of energy management. **07**

(b) Explain energy conservations in I. C. Engine. **07**

Q.2 (a) Explain principles of energy conservation. **07**

(b) Discuss opportunities of waste heat recovery in case of large capacity steam generator. **07**

OR

(b) Explain the factors that influence thermal performance of any building. **07**

Q.3 (a) Discuss use of insulating materials for hot as well as cold insulation. **07**

(b) Write short note on co-generation of process. **07**

OR

Q.3 (a) Discuss energy conservation opportunities in case of HVAC systems. **07**

(b) Discuss the need for electrical load management. **07**

Q.4 (a) Explain in detail about energy audit. **07**

(b) Discuss energy conservation opportunities in case of air compressors used in industry. **07**

OR

Q.4 (a) Explain any two methods for energy storage. **07**

(b) Explain energy management strategies for industry. **07**

Q.5 (a) How losses occurring in electrical power supply system can be reduced? **07**

(b) Explain the following: **07**

- (i)** Power factor
- (ii)** Payback period

OR

Q.5 (a) Explain energy conservation opportunities for D.G. sets used in industry. **07**

(b) Explain energy conservation opportunities in case of furnaces. **07**
