

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014

Subject code: 1723902

Date: 03-12-2014

Subject Name: Energy Audit and Energy Management

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)** List down the objectives of Energy Management. **07**
(b) State and explain the functions of Instruments used for Energy Audit. **07**
- Q.2 (a)** Explain general principles of Energy Management. **07**
(b) Write short note on Energy Efficient Lighting. **07**
OR
(b) Write short note on Energy Efficient Motor. **07**
- Q.3 (a)** Explain energy audit of Boiler in detail. **07**
(b) Write short note on Automatic Power Factor Controller. **07**
OR
- Q.3 (a)** What are the types of lamps used in lighting system? Write down their features with typical applications. **07**
(b) Give check list of energy conservation in refrigeration. **07**
- Q.4 (a)** Enlist the types of steam trappers and explain anyone of them with a neat sketch. **07**
(b) Explain the concept of cogeneration with a neat sketch. **07**
OR
- Q.4 (a)** What are different types of motors? Explain in detail the energy efficiency improvements in energy efficient motors. **07**
Q.4 (b) Enlist and discuss the energy saving methods for the pumping system. **07**
- Q.5 (a)** State any seven energy saving opportunities in compressed air system. **07**
(b) How to conduct a detailed energy audit? **07**
OR
- Q.5 (a)** Discuss the following terms for the efficient operation of compressed air system: **07**
1. Quality of air
2. Capacity control of compressor
3. Piping layout
- (b)** What are the benefits of waste heat recovery? **07**
