

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VIII (NEW) EXAMINATION – WINTER 2020****Subject Code:2180910****Date:19/01/2021****Subject Name:Energy Conservation, and Audit****Time:02:00 PM TO 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain the need of energy audit. **03**
(b) Write a technical note on : Energy Conservation Act. **04**
(c) Write a technical note on : Energy efficient motors. **07**
- Q.2** (a) Explain the sample questionnaire for energy audit. **03**
(b) What is energy management? Explain its objectives. **04**
(c) Write a technical note on: T&D losses. **07**
- Q.3** (a) Explain factors for selection of a steam boiler. **03**
(b) Explain waste heat recovery options in thermal systems. **04**
(c) Explain detailed classification of energy audit. **07**
- Q.4** (a) Explain the limitations of energy optimization projects. **03**
(b) Explain any two instruments used for energy audit in detail. **04**
(c) Explain advances in boiler technologies. **07**
- Q.5** (a) Explain industrial application of pumps. **03**
(b) Explain any four steps for energy saving in air compressors. **04**
(c) Write a technical note on : Demand side management (DSM). **07**
- Q.6** (a) Explain need of fans and blowers. **03**
(b) Write a technical note on : Requirement of load management. **04**
(c) Explain energy saving in cooling towers. **07**
- Q.7** (a) Explain series operating pump performance. **03**
(b) Explain steps for energy saving in blowers. **04**
(c) Write a technical note on : Thermic fluid heaters. **07**
- Q.8** (a) Explain concept of economic thickness of insulators. **03**
(b) Explain the need of water treatment in boilers. **04**
(c) Explain a case study of energy audit in any industry. **07**
