

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Winter Examination – 2022

Course: B. Tech. Branch : Electrical Engineering Semester :VII

Subject Code & Name: Energy Audit and Conservation BTEEE705B

Max Marks: 60

Date: 09-02-2023

Duration: 3 Hr.

Instructions to the Students:

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

(Level/CO) Marks

Q. 1 Solve Any Two of the following.	12
A) What are conventional and non-conventional energy sources?	6
B) What is kyoto protocol and what are its implications for developed and developing countries.	6
C) What is the ozone depletion, and how does it occur?	6
Q.2 Solve Any Two of the following.	12
A) State salient features of energy conservation Act-2001.	6
B) What are the different types of energy audit and explain in detail.	6
C) Explain the energy conservation & its importance.	6
Q. 3 Solve Any Two of the following.	12
A) Explain the boiler efficiency by direct method?	6
B) What is electric power supply system ? Draw a single line diagram of a typical a.c power supply scheme.	6
C) What are waste heat recovery boilers? Explain the need and benefits?	6
Q.4 Solve Any Two of the following.	12
A) What are the technical aspects of energy efficient motors?	6
B) Explain Demand side Management. Measures taken for Demand side management.	6
C) What is APFC? What are its advantages?	6

Q. 5 Solve Any Two of the following.

12

- A)** Calculate the Net present Value of the project 1 shown in the table for 10 year. The annual discount rate is 8%.

6

	Project 1
Capital Cost (Rs.)	30000
Year	Net Annual Saving (Rs.)
1	6600
2	6600
3	6300
4	6300
5	6000
6	6000
7	5700
8	5700
9	5400
10	5400

- B)** Explain Time Value of Money. Elaborate with example.

6

- C)** Explain with Return on Investment. Elaborate with Energy audit example.

6

***** End *****