

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: M. Tech (Energy Technology)
BRANCH: Mechanical**

**SEMESTER : II
SESSION : SP/22**

SUBJECT: ME554-Energy Management and Auditing

TIME: 2:00 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 15 questions each of 5 marks.
 2. Attempt any 10 questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data handbook/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1 How would you explain Energy Management? [5]
- Q.2 Evaluate the basic principles and benefits of Energy Management. [5]
- Q.3 Describe the basic concepts of Energy Conservation Act and its features. [5]
- Q.4 Explain any five energy conservation measures to be adopted in any housing system. [5]
- Q.5 Describe in brief the need of awareness and training programmes for energy management in Rural areas. [5]
- Q.6 Discuss duties and responsibilities of energy managers. [5]
- Q.7 What is an energy audit? Explain its need. [5]
- Q.8 Briefly explain the difference between preliminary and detailed energy audits [5]
- Q.9 List down the important energy audit instruments used in energy audit. Explain any two of them [5]
- Q.10 Draw the energy flow chart of any process related to energy audit [5]
- Q.11 State the need of energy conservation in India with reference to our present energy scenario. [5]
- Q.12 What is the effect of Ozone layer depletion on the environment and what are the control measures? [5]
- Q.13 What are the major causes for the generation of carbon dioxide in the atmosphere? [5]
- Q.14 Write about the various sources of e-wastes and issues associated with its disposal. [5]
- Q.15 A house is fitted with 10 lamps, rated 100 W each, four fans each consuming 0.5 A, an electric kettle of resistance 100 Ω and an electric iron of resistance 121 Ω . If the energy is supplied at 200 V and cost Rs. 6/- per kWh, calculate the bill for running the appliances for six hours in a day for the month of April 2022. [5]

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