

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

**CLASS : MTECH/MSC  
BRANCH: ALL**

**SEMESTER : III/I  
SESSION : MO/2024**

**SUBJECT: ME684 ENERGY MANAGEMENT & AUDITING**

**TIME: 3 Hours**

**FULL MARKS: 50**

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
  2. Attempt all 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 hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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Q.1(a)	Discuss the main features of various types of renewable and non- renewable energy sources and explain the importance of non-conventional energy sources in the context of global warming.	[5] 01	L
Q.1(b)	Describe the basic concepts of Energy Conservation Act and its features.	[5] 01	L,M
Q.2(a)	How would you explain Energy management? Evaluate the basic principles and benefits of energy management.	[5] 02	L
Q.2(b)	How would you generate a plan to bring awareness on energy management program? Discuss duties and responsibilities of energy managers.	[5] 02	L,M
Q.3(a)	Explain briefly the difference between preliminary and detailed energy audits	[5] 03	L
Q.3(b)	How would you clarify the meaning "Measurements are an essential part of energy audit". Also name various electrical and mechanical instruments used in energy audit.	[5] 03	L,M
Q.4(a)	State the need of energy conservation in India with reference to our present energy scenario.	[5] 04	L,M
Q.4(b)	How would you explain the major problem associated with global warming and ozone depletion? What are the major causes for the generation of carbon dioxide in the atmosphere?	[5] 04	M
Q.5(a)	Write notes on electronic wastes. Write about the various sources of e-wastes and issues associated with its disposal.	[5] 05	M
Q.5(b)	What actions would you take to perform energy conservation for boilers, Refrigeration and air conditioning? Discuss briefly	[5] 05	M,H

:::19/11/2024:::E