

Roll No. :



Galgotias College of Engineering and Technology, Greater Noida

Pre University Test (PUT) : Odd Semester 2024 - 25

Course/Branch : B.Tech Semester : VII
Subject Name : Energy conversion & Auditing Max. Marks : 100
Subject Code : KEE-071 Time : 180 min

CO-1 : Identify and assess the energy conservation/saving opportunities in different electric system and understand related legislations.

CO-2 : Identify and assess the energy saving behavior of utilities through implementation of DSM and EMIS.

CO-3 : Explain energy audit & management and to prepare energy audit report for different energy conservation instances.

CO-4 : Illustrate the energy audit for Mechanical Utilities.

CO-5 : Describe cost-effective measures towards improving energy efficiency and energy conservation by implementation of energy efficient technologies.

Section – A # 20 Marks (Short Answer Type Questions)

Attempt ALL the questions. Each Question is of 2 marks (10 x 2 = 20 marks)

Q. No.	CO	Question Description # Attempt ALL the questions. Each Question is of 2 marks
1	a	CO1 Explain the role of energy manager. (K1).
	b	CO1 What are the needs of energy planning and audit? (K2).
	c	CO2 Write a short note on Demand side Management. (K2).
	d	CO2 What is UDAY scheme by Govt Of india? (K2).
	e	CO3 Explain different energy management terms in energy conservation program. (K2).
	f	CO3 Write down the format of energy audit report. (K2).
	g	CO4 Compare Blowers performance in series & parallel operation. (K1).
	h	CO4 Explain how water is lost in cooling towers? (K1).
	i	CO5 What is the need for energy efficient devices? (K2).
	j	CO5 What are different motor efficiency testing standards? (K2).

Section – B # 30 Marks (Long / Medium Answer Type Questions)

Attempt ALL the questions. Each Question is of 6 marks (5 x 6 = 30 marks)

Q.2: Explain the characteristics of solid, liquid and gaseous fuels from energy point of view. (K1)

OR

What is BEE? Also write the function of Bureau of energy efficiency.(K2)

Q.3: Explain the customer acceptance & its implementation issues for Demand Side Management. (K2)

OR

Discuss the tariff structures which promote DSM. (K1)

Q.4: List the various equipment required for energy audit. Explain each one in detail. (K3)

OR

Discuss in detail the various types of energy audit (K2)

Q.5: Compare parallel and series operating pump performance and explain Energy Saving in Pumps & Pumping Systems. (K3)

OR

What do you understand by specific power consumption? (K3)

Q.6 :Explain the Importance of Automatic power factor controllers with examples. (K1)

OR

Explain different losses and loss reduction techniques in motors (K1)

Section – C # 50 Marks (Medium / Long Answer Type Questions)

Attempt ALL the questions. Each Question is of 10 marks.

Q.7: Attempt any ONE question. Each question is of 10 marks.

- a. Classify Energy Storage Systems. Explain any one in detail. (K1)
- b. Which fuel option is better for the storage and transportation? Describe each reason (K3)

Q.8: Attempt any ONE question. Each question is of 10 marks.

- a. Explain the evolution of Demand Side Management, also explain the national and international experiences with DSM. (K3)
- b. Explain various energy management information systems (EMIS). (K2)

Q.9: Attempt any ONE question. Each question is of 10 marks.

- a. What are the needs of energy planning and audit? (K3)
- b. Explain various instruments for energy audit and give their economic Analysis. (K2)

Q.10: Attempt any ONE question. Each question is of 10 marks.

- a. Analyze the methods of motor efficiency testing. (K3)
- b. Explain the energy audit and its analysis for Air Conditioning System. (K2)

Q.11: Attempt any ONE question. Each question is of 10 marks.

- a. Explain Energy efficient motors & motor losses reduction techniques, and comparing motor efficiencies. (K2)
- b. Compare different types of lighting sources based on consumption of energy, and explain role of voltage on the efficiency of lighting system. (K1)

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