Enrolment No./Seat No_____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI EXAMINATION – SUMMER 2025

Subject Code: 3160916 Date: 28-05-2025

Subject Name: Energy Conservation

Time: 10:30 AM TO 01:00 PM Total Marks:70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

		MARKS
Q.1	**(a)** What is the importance of energy audit?	**03**
	(b) Enlist the classification of furnaces.	**04**
	(c) Explain the guidelines for writing energy audit report.	**07**
Q. 2	**(a)** List out the applications and advantages of blowers	**03**
	(b) Short note on general principles of Energy Management.	**04**
	(c) Explain the performance of pumps in parallel and series operation.	**07**
	OR	
	(c) Explain in detail various methods of Energy Conservation in Compressors.	**07**
Q.3	**(a)** Explain types of pumps.	**03**
	(b) Which are the various applications of blowers?	**04**
	(c) Describe various methods of Energy Conservation in Pumps.	**07**
	OR	
Q.3	**(a)** What is FBC Boilers?	**03**
	(b) Explain the general principal of energy management and skill required for energy management.	**04**
	(c) Write short notes on water loss in cooling tower.	**07**
Q.4	**(a)** Explain Demand Side Management in detail.	**03**
	(b) What are the causes of high transmission and distribution losses?	**04**
	(c) Explain various instruments used for energy audit and monitoring of energy saving.	**07**
	OR	
Q.4	**(a)** Explain the steps to reduce transmission and distribution losses.	**03**
	(b) Explain the procedure to save the energy of a lighting system.	**04**
	(c) How variable frequency drive is useful in energy conservation?	**07**
Q.5	**(a)** What is automatic power controller? Explain in details.	**03**
	(b) What are the characteristics of energy efficient motors? Explain in details.	**04**
	(c) What is significant of soft starter? How it is saving energy?	**07**
	OR	
Q.5	**(a)** Explain various methods of energy conservation in house.	**03**
	(b) What is waste heat recovery system? State its advantages and disadvantages.	**04**
	(c) Explain energy saving in cooling towers.	**07**

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