Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER–II • EXAMINATION – SUMMER - 2017

Subject Code: 2722913 **Date: 30/05/2017**

Subject Name: Electrical Energy Conservation & Management

Time: 02:30 PM To 05:00 PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	What is electrical energy audit? Explain ten steps methodology for detailed energy audit.	**07**
	(b)	Write a short note on Tariff system.	**07**
Q.2	**(a)**	Explain factors affecting the motor performance.	**07**
	(b)	Explain tools for electrical energy audit.	**07**
		OR	
	(b)	What is energy management? Explain its need.	**07**
Q.3	**(a)**	Explain electrical energy conservation in A/C.	**07**
	(b)	Which criteria are required for motor selection?	**07**
		OR	
Q.3	**(a)**	Explain electrical energy conservation in refrigeration.	**07**
	(b)	Classify different types of VFD and explain any one.	**07**
Q.4	**(a)**	What is DSM? Explain its importance.	**07**
	(b)	Explain the choice of lighting for electrical energy conservation.	**07**
		OR	
Q.4	**(a)**	Explain virtues of DSM.	**07**
	(b)	Write a short note on control of lighting system.	**07**
Q.5	**(a)**	Explain advantages, disadvantages and application of DG plants.	**07**
	(b)	Explain barriers for energy efficiency and DSM.	**07**
		OR	
Q.5	**(a)**	Explain PF improvement and parallel operation in industrial DG Sets.	**07**
	(b)	Explain waste heat recovery in industrial DG sets.	**07**

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