Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (NEW) - EXAMINATION - SUMMER 2017

Su	biect	Code: 2180910 Date: 04/05/20	17
Subject Name: Energy Conservation, and Audit(Departmental Elective - III) Time: 10:30 AM to 01:00 PM Total Marks: 70			
Inst	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Explain general principles of Energy Management and Skills required for Energy Management.	07
Q.2	(b)(a)(b)	How losses are reduced in Transformer? State advantages of parallel operation. Write need of Energy Audit and explain Detailed Energy Audit. Explain Demand Side Management in detail.	07 07 07
	(b)	State functions and types of steam traps. Also write energy saving opportunities.	07
Q.3	(a) (b)	List various Energy Audit Instruments and explain any two. Explain Payback Period, ROI and NPV.	07 07
Q.3	(a) (b)	OR Discuss Water treatment and its impact on Boiler losses. List factors affecting furnace performance. Explain Direct method for performance of Furnace.	07 07
Q.4	(a) (b)	Give tips for energy savings in pumping systems and Cooling Towers. Explain need, principle of cogeneration. Explain Bottoming Cycle. OR	07 07
Q.4	(a) (b)	State types, characteristics and applications of fans. Explain Efficient Operation of Compressed Air Systems.	07 07
Q.5	(a) (b)	Discuss determination of Economic Thickness of Insulation. Explain Automatic Power Factor Controller. OR	07 07
Q.5	(a) (b)	Explain Electronic Lighting Ballasts and LED Lighting. Explain Soft Starters and Energy Saving by using it.	07 07
