

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER- VIII EXAMINATION-SUMMER 2023****Subject Code: 2181916****Date: 27/06/2023****Subject Name: Energy Conservation and 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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Classify: Energy Sources.	03
	(b) Define: Energy management. List its benefits.	04
	(c) Write a short note on “Indian Energy Scenario”.	07
Q.2	(a) State functions of BEE.	03
	(b) Explain the role of Energy Service Companies (ESCOs.)	04
	(c) Explain the role of BEE in implementing Energy Conservation.	07
	OR	
	(c) Explain the scheme of BEE including designated consumers.	07
Q.3	(a) List the waste heat recovery devices.	03
	(b) Explain the energy conservation in compressors.	04
	(c) What do you mean by co-generation? Explain with neat diagram the co-generation plant.	07
	OR	
Q.3	(a) What is boiler blow down?	03
	(b) Explain the energy conservation in Refrigeration and air conditioning plant.	04
	(c) Explain the indirect method to calculate the boiler plant efficiency.	07
Q.4	(a) List the types of Refractory.	03
	(b) Explain the working principle of Vapor absorption refrigeration system:	04
	(c) Explain with neat labeled sketch any one heat exchanger.	07
	OR	
Q.4	(a) List the types of Air conditioning systems.	03
	(b) Explain the heat distribution, temperature control and draft control in Furnaces.	04
	(c) Write a short note on: The Clean Development Mechanism (CDM)	07
Q.5	(a) Define the terms: Energy Monitoring and Targeting.	03
	(b) List the energy audit instruments.	04
	(c) Discuss in brief the types of energy audits.	07
	OR	
Q.5	(a) List the features of Energy conservation Act 2001.	03
	(b) Explain: Energy Management Information Systems (EMIS).	04
	(c) Discuss the following financial terms: payback period, return on investment, net present value, and internal rate of return.	07
