

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2022****Subject Code:3161919****Date:10/06/2022****Subject Name:Energy Conservation and Management****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) Discuss pre -audit phase activities.	03
	(b) Briefly explain various schemes relating to Bureau of Energy Efficiency (BEE) for designated consumers, State designated agencies.	04
	(c) Define energy security. Enlist different strategies to achieve it and discuss role of energy conservation to achieve energy security.	07
Q.2	(a) Compare Net Present Value and Internal Rate of Return	03
	(b) What is energy security? Explain how it can be achieved?	04
	(c) Explain Simple pay back method with its advantage & limitation	07
	OR	
	(c) Write note on 'Indian Energy scenario'.	07
Q.3	(a) Explain Sensitivity Analysis.	03
	(b) Discuss the role of Energy Service Companies for financial management.	04
	(c) Explain briefly the various elements of a monitoring and targeting system.	07
	OR	
Q.3	(a) Explain need for energy audit	03
	(b) Distinguish between energy conservation and energy Management.	04
	(c) Classify the energy audit & Explain the three phases of detailed energy audit.	07
Q.4	(a) Define the following terms: Dew Point temperature, HCV, Latent heat of fusion	03
	(b) Explain techniques of energy conservation in refrigerated cold storage plants.	04
	(c) List application, advantages of Thermic fluid heaters and super critical boilers from energy conservation point of view.	07
	OR	
Q.4	(a) Mention the various source of waste heat recovery	03
	(b) List advantages and applications of cogeneration.	04
	(c) Write brief note on ECBC code for Building construction.	07
Q.5	(a) Give tips for energy saving for future.	03
	(b) Explain energy conservation Act 2001 and its features, notifications under the Act.	04

- (c) Explain the importance of CUSUM chart and its procedure to analyze the case with help of diagrams. **07**

OR

- Q.5** (a) List the various key instruments for carrying out energy audit **03**
(b) How to make lighting system of your college campus more efficient? **04**
(c) Explain the terms in detail: Sustainable development, Kyoto Protocol. **07**
