

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (NEW) EXAMINATION – WINTER 2018

Subject Code: 2181916

Date: 15/11/2018

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.

		MARKS
Q.1	(a) State functions of BEE.	03
	(b) Define the terms: Return On Investment, Net Present Value, Internal Rate of Return, Time value of money	04
	(c) Classified various energy and explain in brief.	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) State the basic principles and benefits of 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) Give tips for energy saving in Refrigeration and Air Conditioning plant.	04
	(c) Define boiler efficiency and evaporation ratio. Write step wise procedure to calculate Boiler efficiency.	07
	OR	
Q.4	(a) Mention the various source of waste heat recovery.	03
	(b) List advantages and applications of cogeneration.	04
	(c) Explain topping cycle co-generation plant with sketch.	07
Q.5	(a) Give tips for energy saving in furnace.	03
	(b) What are the features of Energy Conservation act – 2011.	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 key instruments for energy audit.	03
	(b) How to make lighting system of your college campus more efficient?	04
	(c) Explain Prototype Carbon Fund (PCF).	07
