Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII EXAMINATION - SUMMER 2016

	•	t Code:170505 Date:05/05/20	16	
Subject Name: Energy Technology (Department Elective-I) Time: 02:30 PM to 05:00 PM Instructions:		2:30 PM to 05:00 PM Total Marks:	Total Marks: 70	
	2.	Attempt all questions.Make suitable assumptions wherever necessary.Figures to the right indicate full marks.		
Q.1	(a) (b)	Discuss gasification and liquefaction of solid fuels. What is meant by renewable energy sources? Explain in brief these energy sources with special reference to Indian context.	07 07	
Q.2	(a)(b)	List out various applications of solar energy. Describe absorption air Conditioning in detail. Write a brief note on types, analysis and properties of coal. OR	07	
	(b)	Describe solar pond briefly. What are the main applications of a solar pond?	07	
Q.3	(a) (b)	Classify WEC systems and explain its working with neat sketch. Enlist different geothermal resources and explain heat extraction from hot dry rocks.	07 07	
		OR		
Q.3	(a)	Describe working of vapor dominated power plant from geothermal energy source.	07	
	(b)	Discuss different biomass conversion technologies in detail.	07	
Q.4	(a) (b)	Define and classify fuel-cell. Explain any one in detail with applications. State properties of hydrogen and discuss the methods of hydrogen production. OR	07 07	
Q.4	(a) (b)	Write a note on methods of utilizing tidal energy and its storage. Explain working of boiling water nuclear reactor power plant in detail.	07 07	
Q.5	(a)	Explain the phases involved in generation of biogas from biomass and factors affecting the same.	07	
	(b)	Discuss working principle and advantages of "closed cycle" OTEC system. OR	07	
Q.5	(a)	What is nuclear fission and fusion? Explain the components of nuclear reactor with neat figure.	07	
	(b)	Explain working of MHD system and discuss its advantages and disadvantages.	07	
