Seat No.:	Enrolment No
-----------	--------------

Subject Code: 170505

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION - SUMMER • 2015

Date: 06/05/2015

Tir	ne: 02 tructi	Attempt all questions.Make suitable assumptions wherever necessary.	
Q.1	(a)	What are the conventional & non- conventional energy sources? Describe	07
	(b)	briefly What is solar collector? List various types of Focusing type Concentrator and Explain any one	07
Q.2	(a) (b)	What is washing of coal? Describe washability curve in detail Enlist various domestic and industrial applications of solar energy OR	07 07
	(b)	Write a note on proximate and ultimate analysis of fuel	07
Q.3	(a)	Describe with neat sketch the working of a wind energy system with main components	07
	(b)	Define calorific value, gross calorific value, net calorific value, caking & coking of coal	07
		OR	
Q.3	(a) (b)	Write a note on site selection for wind energy farm. Explain advantages and disadvantages of fuel cell.	07 07
Q.4	(a) (b)	List the various methods of production of Hydrogen from different Sources What are the factors affecting biogas generation?	07 07
Q.4	(a)	OR Describe an MHD open cycle system. What are the main advantages of an MHD power generation?	07
	(b)	What are the main conditions for thermonuclear fusion? Explain in brief.	07
Q.5	(a)	Explain the constructional detail & working of KVIC digester.	07
	(b)	What is fuel cell? Discuss about hydrogen oxygen fuel cell with neat sketch? OR	07
Q.5	(a)	Discuss the basic steps involved in biogas generation from biomass.	07
	(b)	Explain the principle involved in MHD power generation and With following specifications for MHD generator, calculate the open circuit voltage and maximum power output.Plate area: 0.25 m²,Distance between the plates: 0.5 m,Flux density: 2 Wb/ m²,Average gas velocity: 1000 m/sec,Gaseous conductivity: 10mho/m	07
