GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI- EXAMINATION - SUMMER 2016

Subject Code:161904 Date:17/0			5/2016	
Ti	me: 1 tructi 1 2	t Name:Alternate Energy Sources 10:30 AM to 01:00 PM Total Marks: ons: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	70	
Q.1	(a) (b)	Explain factors affecting biogas generation in brief. Define different seven solar angles.	07 07	
Q.2	(a) (b)	Explain low temperature power generation cycle using solar pond. Explain open cycle MHD with neat sketch. OR	07 07	
	(b)	Explain liquid dominated geothermal power plant with neat sketch.	07	
Q.3	(a) (b)	Write short note on solar cell. What is solar cell module, panel, and array. Explain open cycle OTEC system and closed cycle OTEC system with neat sketch.	07 07	
		OR		
Q.3	(a) (b)	Explain different types of energy audit. Explain construction and working of pyranometer with neat sketch.	07 07	
Q.4	(a)	Show that maximum power obtained from wind mill is 0.593 times power available in the wind.	07	
	(b)	Explain combined steam and gas turbine power plant with neat sketch. OR	07	
Q.4	(a) (b)	Derive expression for the average tidal power in single basin system. Name the different types of solar collector. Explain paraboloidal dish collector with neat sketch.	07 07	
Q.5	(a) (b)	Explain construction and working of KVIC biogas plant with neat sketch. Explain Tidal power plant with double basin system. OR	07 07	
Q.5	(a) (b)	Explain solar still with neat sketch. Explain construction of horizontal axis wind mill and give functions of different components.	07 07	
