Seat No.:		Enrolment No	
		GUJARAT TECHNOLOGICAL UNIVERSITY	
	BE - SEMESTER-IV(OLD) • EXAMINATION – WINTER 2016		
Subject Code:140904 Date:24/1		116	
	•	Name:Energy Systems	
Time: 02:30 PM to 05:00 PM Total Marks: 7			
Ins	tructio		
	2.	Attempt all questions.  Make suitable assumptions wherever necessary.	
	3.	<del>-</del>	
Q.1	(a) (b)	Draw and explain the schematic arrangement of thermal power plant. List the advantages and disadvantages of hydroelectric power plant.	07 07
Q.2	(a) (b)	Draw and explain the schematic arrangement of Diesel power plant.  Explain the working principle and construction of a closed cycle gas turbine power plant.  OR	07 07
	<b>(b)</b>	Explain the working of different parts of a hydro power plant in detail.	07
Q.3	(a) (b)	Compare horizontal axis wind turbine with vertical axis wind turbine. Explain the working principle of wind energy systems. Also list its advantages and disadvantages.	07 07
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Q.3	(a) (b)	Write technical note on: Solar PV cells Explain the principle of solar concentrating collectors and classify its types.	07 07
Q.4	(a) (b)	Write technical note on: Solar dryer Explain the construction and working of a solar pond with necessary diagram.  OR	07 07
Q.4	(a)	Explain principle and working of Ocean thermal energy conversion systems (OTEC).	07
	<b>(b)</b>	List the advantages and disadvantages of biogas plant.	07
Q.5	(a) (b)	Explain the working and construction of a fuel cell.  Draw and explain tidal power plant.  OR	07 07
Q.5	(a) (b)	Explain the hydrogen storage systems.  Explain parts of nuclear reactor in detail. List hazards of nuclear power plant.	07 07

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