Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME- SEMESTER II– EXAMINATION – SUMMER 2015

Subject Code: 2720725 **Date: 03/06/2015**

Subject Name: Economics of Energy Generation & Supply

Time: 2:30 PM – 5:00 PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain the descriptive analysis approach for energy demand analysis and its indicators.	**07**
	(b)	Explain the Econometric approach for energy demand forecasting and difficulties associated with it.	**07**
Q.2	**(a)**	What do you mean by End Use Method of forecasting? Explain its features.	**07**
	(b)	Explain three stage decision making process on energy demand.	**07**
		OR	
	(b)	Define energy security and its indicators.	**07**
Q.3	**(a)**	Define DSM. How it is justified?	**07**
	(b)	Define load management and explain load management options.	**07**
		OR	
Q.3	**(a)**	What do you mean by energy efficiency? How the energy can be saved in lighting, space heating and appliance efficiency and usage.	**07**
	(b)	Explain Participant Test and Rate Payer Impact Measure in concern with cost effectiveness of DSM.	**07**
Q.4	**(a)**	Define Diversity Factor, Load Factor, Capacity Factor and Load Curve. Give its importance with respect to economics of electricity supply.	**07**
	(b)	Explain Merit Order Dispatch and Incremental cost Method.	**07**
		OR	
Q.4	**(a)**	Define generation capacity reserve. Explain spinning reserve and quick start reserve.	**07**
	(b)	Explain Levelised Bus ï Bar cost method for meeting the future demand.	**07**
Q.5	**(a)**	Give the classification of Crude Oil, Natural Gas and Coal and explain the activities related with its production.	**07**
	(b)	What do you mean by supply forecasting in relation with Economics of fossil fuel supply.	**07**
		OR	
Q.5	**(a)**	Explain various technologies of Renewable Energy Generation.	**07**
	(b)	Discuss various drivers of Renewable Energy.	**07**

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