GUJARAT TECHNOLOGICAL UNIVERSITY
ME SEMESTER II EXAMINATION – SUMMER 2017

Subject Code: 2720725   **Date: 31/05/2017**
Subject Name: Economics of Energy Generation & Supply
Time:02:30 PM to 05:00 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)**	What is the objective of Economic Dispatch? Also explain Incremental cost method with equation.	**07**
	(b)	With diagram explain Screening Curve method for investment decisions in the power sector.	**07**
Q.2	**(a)**	With diagram explain three-stage decision-making process.	**07**
	(b)	Write a short note on consumer demand for energy: Utility maximization problem.	**07**
		OR	
	(b)	With diagram explain issues related to energy intensity.	**07**
Q.3	**(a)**	Explain Econometric Approach to energy demand forecasting.	**07**
	(b)	Explain analysis of changes in energy intensity.	**07**
		OR	
Q.3	**(a)**	Explain Artificial Neural Networks techniques to energy demand forecasting.	**07**
	(b)	Explain different Load management options.	**07**
Q.4	**(a)**	What is DSM? Explain evolution and justification for DSM.	**07**
	(b)	Explain typical production profile of a petroleum reservoir.	**07**
		OR	
Q.4	**(a)**	By McKelvy diagram explain deterministic classification of resources.	**07**
	(b)	Give the summary of different tests for DSM effectiveness as per following parameter. Measures, Costs, Benefits and Selection criteria	**07**
Q.5	**(a)**	Define energy security and its indicators	**07**
	(b)	Explain main elements of costs to be considered in the case of electricity supply technologies.	**07**
		OR	
Q.5	**(a)**	Write short note on Support Mechanisms for economics of renewable energy supply.	**07**
	(b)	Explain cost minimization problem of the producer	**07**

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