Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER-1 (NEW) EXAMINATION – WINTER 2016

Subject Code: 2713901 **Date:06/01/2017**

Subject Name: Energy Resources, Economics & Environment

Time: 2:30 pm to 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)**	Write a short note on Kyoto protocol and its Kyoto mechanisms.	**07**
	(b)	Explain in detail Greenhouse Gases and its effect.	**07**
Q.2	**(a)**	Explain payback period method and return on Investment method for financial Analysis.	**07**
	(b)	Explain in detail with neat sketch gas based power generation.	**07**
		OR	
	(b)	Write a short note on solar photovoltaic technology.	**07**
Q.3	**(a)**	Explain in detail the points to be considered for site selection of thermal power plant.	**07**
	(b)	Write a short note on recent developments of Hydro Electricity power generation in India. Also mention the advantages and limitation of Hydro Electricity power generation.	**07**
		OR	
Q.3	**(a)**	Define role of EIA in sustainable development.	**07**
	(b)	Write a brief note on need of EIA for developing countries .	**07**
Q.4	**(a)**	Write a short note on Scope of development of renewable energy sources in India.	**07**
	(b)	Explain carbon credits and emission trading with its advantages and limitations.	**07**
		OR	
Q.4	**(a)**	Write a short note on benefits and barriers of wind energy.	**07**
	(b)	Explain biomass power generation with its benefits and barriers.	**07**
Q.5	**(a)**	Explain the salient features of energy conservation act 2001 in detail.	**07**
	(b)	Write a short note on Electricity act 2003 and its features.	**07**
		OR	
Q.5	**(a)**	Write a short note on tidal energy for power generation.	**07**
	(b)	Explain cut-in and cut-out speed for wind turbine. Compare horizontal and vertical axis wind turbine.	**07**

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