

**GUJARAT TECHNOLOGICAL UNIVERSITY****ME - SEMESTER I - EXAMINATION – SUMMER 2017****Subject Code:2713901****Date:11/05/2017****Subject Name: Energy Resources Economics and Environment****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) Explain payback period method and return on Investment method for financial Analysis. **07**
- (b) Write a short note on Energy conservation and Energy security. **07**
- Q.2** (a) Define sustainable development and how to achieve sustainable development in EIA. **07**
- (b) Define the environment attribute. Which type of information is required for describing Attributes? **07**
- OR**
- (b) As a decision maker would you like to conduct EIA? Justify. **07**
- Q.3** (a) Explain cut-in and cut-out speed for wind turbine. Compare horizontal and vertical axis wind turbine. **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) Write a short note on solar photovoltaic technology. **07**
- (b) Explain in detail the points to be considered for site selection of thermal power plant. **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) Write a short note on tidal energy for power generation. **07**
- Q.5** (a) Explain biomass power generation with its benefits and barriers. **07**
- (b) Write a short note on Electricity act 2003 and its features. **07**
- OR**
- Q.5** (a) Write a short note on Kyoto protocol and its Kyoto mechanisms. **07**
- (b) Explain in detail Greenhouse Gases and its effect. **07**

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