

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV • EXAMINATION – WINTER • 2014****Subject Code: 140904****Date: 02-01-2015****Subject Name: Energy System****Time: 02:30 pm - 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 the function of following equipment with respect to thermal power plant (1) Economizer (2) Air preheater (3) Electro static precipitator (4) Condense **07**
(b) Discuss the essential factors to be considered for the site selection of Hydro electric power plant. **07**
- Q.2** (a) Discuss the working of a gas turbine power plant with help of schematic diagram. Also state its advantages and disadvantages. **07**
(b) Discuss the applications of Diesel power plant. **07**
- OR**
- (b) Draw the neat sketch of a nuclear reactor and explain function of each part. **07**
- Q.3** (a) Discuss the Grid connected wind energy conversion system with help of necessary diagram. **07**
(b) What is solar collector? State their types and explain any one in detail. **07**
- OR**
- Q.3** (a) Discuss the methods of site selection for locating the wind mill. **07**
(b) Explain solar drying system. **07**
- Q.4** (a) Explain solar photovoltaic system and also explain its use in solar pumping. **07**
(b) Classify fuel cell in different basis. **07**
- OR**
- Q.4** (a) State applications of hydrogen energy. **07**
(b) State advantages of OTEC. **07**
- Q.5** (a) Explain Anderson cycle ocean thermal energy conversion system. **07**
(b) Explain floating drum type bio gas plant. **07**
- OR**
- Q.5** (a) Explain double basing type tidal power plant. **07**
(b) Write short note on biomass energy conversion. **07**
