

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-IV Examination June- 2010

Subject code: 140904

Subject Name: ENERGY SYSTEMS

Date: 21 /06 /2010

Time: 10.30 am – 01.00 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 Schematic arrangement of Steam Power station with neat sketch. 07
Give merits of the steam power station.
- (b) Draw neat sketch of schematic arrangement of Diesel Power station. Give its advantages. 07
- Q.2** (a) Explain Nuclear Power Station with neat sketch. 07
- (b) Discuss: choice of the site for Hydro Electric Power station. 07
- OR**
- (b) Explain the Schematic arrangement of Gas Turbine Power Plant. Give its advantages. 07
- Q.3** (a) Explain working principle of Wind Energy System. Discuss effects of wind speed on grid conditions briefly. 07
- (b) List applications and limitations of wind energy system. 07
- OR**
- Q.3** (a) List merits and limitations of solar energy conversation and utilization. 07
- (b) Write field of applications of solar energy. Prepare a note on solar swimming system. 07
- Q.4** (a) Define and classify Solar radiation. Explain flat plate type solar collector. 07
- (b) Explain solar refrigeration and solar air conditioning with necessary figure. 07
- OR**
- Q.4** (a) List types of fuel cells. Explain any one in details. 07
- (b) Write importance of Bio fuel technology. Explain biomass conversion process. 07
- Q.5** (a) Discuss: site selection for steam power station. 07
- (b) List merits and demerits of Nuclear Power station. 07
- OR**
- Q.5** (a) Explain briefly: Photo voltaic system for power generation. 07
- (b) Explain principle of Ocean Thermal Energy Conversion. Discuss resources for power plant based on Ocean energy in India. 07
