

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016

Subject Code: 2724510

Date: 02/06/2016

Subject Name: ENERGY EFFICIENT ELECTRICAL SYSTEMS

Time: 10:30 am to 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.**

Q1 (a) Discuss the Primary and Secondary Energy Source of Electrical Systems. **07**
(b) Give the difference between classical drive and variable speed drive. **07**

Q2 (a) Explain managerial functions involved in energy management? **07**
(b) Write short note on energy security. **07**

OR

Q2 (b) Explain the Renewable and Non-Renewable energy sources in detail. **07**

Q 3 (a) Define Contract Demand and Billing Demand. **07**
(b) Explain energy conservation opportunities in illumination and industrial sector. **07**

OR

Q 3 (a) Define the Domestic, Commercial & Industrial lighting systems. **07**
(b) Write short notes on Compact Fluorescent Lamp. **07**

Q 4 (a) Why variable torque loads offer greatest energy savings? Explain electronic Methods of speed controllers? **07**
(b) Give the Name and use of different energy audit instruments. **07**

OR

Q 4 (a) Briefly describe the principle of variable frequency drive. **07**
(b) Explain Energy Conservation method for a pumping system. **07**

Q 5 (a) Write Short Note on the soft-starters. **07**
(b) Discuss the loss of segregation method for determination of efficiency of a motor. **07**

OR

Q 5 (a) Explain the different power factor improvement method. **07**
(b) Give tips for energy saving in Energy efficient transformers. **07**
