

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2016

Subject Code:2160911

Date:17/05/2016

Subject Name: Computer Aided Analysis and Design for Electrical Engg.

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.

- Q.1** (a) Write all steps for general design procedure. **07**
(b) Explain lowest cost and significance of “Kg/KVA”. **07**

- Q.2** (a) What are the different applications of FEM in engineering field? **07**
(b) Write a computer program for DC Shunt motor starter design. **07**

OR

- (b) Explain advantages and disadvantages of Higher Specific Magnetic Loadings. **07**

- Q.3** (a) Draw flowchart for computer-aided optimal design of DC machine. **07**
(b) Draw flowchart for computer-aided design of choke coil. **07**

OR

- Q.3** (a) Write a computer program for main dimensions of DC Generator. **07**
(b) Draw flowchart for computer-aided armature winding design of DC Motor. **07**

- Q.4** (a) What is the importance of enclosure in rotating machine? Which are the types of enclosures for rotating machine? **07**
(b) Draw flowchart for computer-aided optimal design of transformer. **07**

OR

- Q.4** (a) Write a computer program for window dimensions of 3- phase transformer. **07**
(b) Give steps for design of each part of 3-phase transformer. **07**

- Q.5** (a) What is FEM? What are the advantages of FEM? **07**
(b) Explain shape function. **07**

OR

- Q.5** (a) List out input data to be fed in to the program. **07**
(b) What are the required properties of good insulating material? **07**
