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**

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