M.E. Second Semester (Electrical Engineering (Electrical Power System))

13575 : Electrical Machine Analysis & Control : EP 2202

P. Pages : 1 | AW - 3595

Time : Three Hours | Max. Marks : 80

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Notes : 1. Answer **three** question from Section A and **three** question from Section B.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Illustrate your answer necessary with the help of neat sketches.
5. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION – A

1.	a)	Draw and explain basic two pole machines of synchronous machine.	7
	b)	What are the considerations to be made while designing rotating electrical machines.	7
		OR	
2.	a)	State and explain the essential features of rotating electrical machines.	7
	b)	Derive the voltage equations for Kron's primitive machines.	7
3.	a)	Explain the physical concept of Park's transformation.	6
	b)	Define the term "Linear transformation". Explain in detail.	7
		OR	
4.	a)	Summarize the constructional features of D.C. machines with its neat sketch.	7
	b)	Deduce the transformation from a displaced brush axis.	6
5.	a)	Enlist the advantages of polyphase machines with single phase machines.	7
	b)	Explain any one transformation method of three phase induction motor.	6
		OR	
6.		Draw and explain the equivalent circuit of three phase induction motors & write the meaning of each parameters used in circuit.	13

SECTION – B

7.	State and explain the various types of rotors used in alternators.	13
	OR	
8.	Summarize the concept of space vector in synchronous motor in detail.	13
9.	Explain in detail working principal of permanent magnet synchronous motor.	14
	OR	
10.	Summarize the control methods for SRM (Switched reluctance motor) drives.	14
11.	Explain in detail symmetrical & asymmetrical short circuit analysis.	13
	OR	
12.	Explain the method in detail to determine various types of reactance.	13

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