Code No: I5604/R16

Time: 3 Hours   **Max. Marks: 60**

Answer any FIVE Questions
All Questions Carry Equal Marks

1.		Explain the method of phase balancing and power factor correction of unsymmetrical loads.	12M
2.	a	Explain in detail about the types of compensation.	6 M
	b	Explain the switched shunt reactor compensation for uncompensated transmission line.	6 M
3.	a	Explain the effect of TCR during a voltage depression and during a voltage rise at the midpoint bus of a symmetrical line.	6 M
	b	What are the main objectives of series compensation?	6 M
4.	a	Discuss the causes and effects of under and over frequencies.	6 M
	b	Explain in detail the concepts of: a) Effects of harmonica and how to compensate it. b) Effect of electromagnetic interferences.	6 M
5.	a	Explain the concept of quality of power supply with reactive power coordination.	6 M
	b	List and explain briefly the basic methods of load shaping in demand side.	6 M
6.	a	Explain the various System losses and the loss reduction methods used in Demand side management.	6 M
	b	Explain about : a) Retrofitting of capacitor banks b) Deciding factors	6 M
7.		What is the purpose of using capacitors on user side reactive power management and also explain in detail the types of available capacitors with their characteristics and limitations?	12 M
8.	a	Draw typical layouts of Ac traction systems and explain its operation.	6 M
	b	Explain how the harmonics are produced in an electric arc furnace.	6 M

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