Sea	ıt No.:	Enrolment No	_
		GUJARAT TECHNOLOGICAL UNIVERSITY	
		M. E SEMESTER - II • EXAMINATION - SUMMER • 2014	
Su	biect	code: 1724505 Date: 23-06-2014	
	•	Name: Power Quality	
	•	2:30 pm - 05:00 pm Total Marks: 70	
	tructi	<u> </u>	
1113		Attempt all questions.	
		Make suitable assumptions wherever necessary.	
		Figures to the right indicate full marks.	
Q.1	(a)	Explain following terminology	07
		1. Sag	
		2. Swell	
		3. Flickers	
		4. DC offset	
		5. Interruption	
		6. Noise	
		7. Inter harmonics	
	<b>(b)</b>	Explain reason for grounding & problem associated with poor grounding.	07
Q.2	(a)	Discuss various causes of voltage flicker and their effects also suggest various means to reduce flickers.	07
	<b>(b)</b>		07
	<b>(b)</b>	Enlist and Explain any two devices used for voltage regulation.  OR	U
	<b>(b)</b>	What are transient over voltages? Explain the different types of transient over voltages.	07
Q.3	(a)	Explain the various causes and effects of voltage sags.	07
	(b)	Discuss about the computer Business Equipment Manufactures Associations	07
	(0)	(CBEMA).	07
		OR	
Q.3	(a)	Explain UPS and SMEs Device.	07
	(b)	Explain Area of vulnerability.	07
0.4		•	
Q.4	(a)	Explain the harmonic effects on power system equipments briefly.	07
	<b>(b)</b>	Explain series and parallel active filter.	07
0.4	(a)	OR  How will you find the harmonic courses from point of common counting? Cive	05
Q.4	(a)	How will you find the harmonic sources from point of common coupling? Give	07
	<b>(b)</b>	the identification procedure on the basis of voltage indices.  Explain the power system response characteristics under the presence of	07
	<b>(b)</b>	harmonics.	U/
		narmonics.	
Q.5	(a)	What are the objectives of power quality monitoring?	07
	<b>(b)</b>	Explain different type of Potential transformer used as a transducer in power	07
		quality monitoring.	
		OR	
Q.5	(a)	Explain the steps involved in power quality monitoring. What is the	07
		Information from monitoring site surveys?	
	<b>(b)</b>	Explain in short harmonic analyzer, flicker meter, disturbance analyzer.	07
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