Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. - SEMESTER - VI • EXAMINATION - WINTER 2012

Subject code: 160803		code: 160803 Date: 04/01/2	Date: 04/01/2013	
Subj	ect l	Name: Switch Gear & Protection		
Time	e: 02	3.30 pm - 05.00 pm Total Marks	: 70	
Instructions:				
	2.	Attempt any five questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	Explain arc quenching properties of SF6 gas suitable in SF6 circuit breakers	07	
	(b)	Derive the necessary formula of Rate of Rise of Restriking Voltage. (RRRV)	07	
Q.2	(a)	Explain electromagnetic induction relays with necessary mathematical equations.	07	
	(b)	1	07	
		OR		
	(b)	Explain minimum oil circuit breaker, with its advantages and disadvantages	07	
Q.3	(a)	Explain the construction and working principle of Air blast circuit breaker.	07	
	(b)	Explain the CT- Saturation characteristic with necessary circuit diagram.	07	
		OR		
Q.3	(a) (b)		07 07	
Q.4	(a)	Explain the construction, working principle and characteristic of HRC fuse.	07	
	(b)	Why neutral grounding is required? Explain any one method of neutral grounding.	07	
Q.4	(a)	OR Explain the phenomena of generation of over-voltage in power system	07	
Q	(b)		07	
Q.5	(a) (b)	Explain Buchholtz relay protection. Explain bus-bar protection in detail.	07 07	
Q.5	(a) (b)	OR Explain differential protection and biased differential protection. Explain Translay relay with necessary diagram.	07 07	
