Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY

## **BE - SEMESTER-V • EXAMINATION - SUMMER 2014**

•		ode: 150905 Date: 26-06-	201
Time: Instruct	10:30 ions:	0 am to 01:00 pm Total Marks: 70	)
2	2. M	ttempt all questions.  Take suitable assumptions wherever necessary.  Egures to the right indicate full marks.	
Q.1	(a) (b)	Explain the D.C. Circuit Breakers.  Differentiate:-  (i) Circuit breaker and Fuse  (ii) Circuit breaker and isolators.	07 07
Q.2	(a) (b)	Discuss the chemical, physical and dielectric properties of SF6 gas.  Discuss the process of arc initiation in Circuit Breaker. Describe properties of arc and arc extinction.	07 07
	(L)	OR Short Note on Vacuum Circuit Breaker.	07
	(b)		07
Q.3	(a)	Discuss the principle of arc extinction in an oil circuit breaker. Describe the phenomenon of pre-arcing.	U /
	<b>(b)</b>	Write a short note on factors affecting performance of air blast circuit breaker.	07
		OR	
Q.3	(a)	Explain the modification of Circuit Breaker duty by shunt resistors and series resistors.	07
	<b>(b)</b>	Discuss the energy balance theory of arc interruption in circuit breaker.	07
Q.4	(a)	Explain the construction, working principle, merits and demerits of Air Break Circuit Breakers.	07
	(b)	Explain current chopping in circuit breaker.	07
Q.4	(a)	(i) Problem associated with the interruption of Small inductive currents.	07
	(b)	(ii) Effect of Power Factor on TRV. Short note on MOCB.	07
Q.5	(a)	Explain resistance switching.	07
Ų.	(b)		07
Q.5	(a)	of them.	07
	(b)	Discuss the performance of circuit breaker when capacitive current are interrupted.	07

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