Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – VI EXAMINATION – WINTER 2015			
	•	Code:160803 Date:08/12/ 2015 Name: Switch Gear & Protection	
Ti	•	:30pm to 5:00pm Total Marks: 70	
		Attempt all questions. Make suitable assumptions wherever necessary.	
Q.1	(a) (b)	Explain minimum oil circuit breaker, with its advantages and disadvantages. Define the following terms. (1) Recovery voltage (2) RRRV (3) Current chopping	07 07
Q.2	(a) (b)	Explain construction, working principle of SF ₆ circuit Breaker. Explain the types of arc interruption phenomena in circuit breaker. OR	07 07
	(b)	Explain construction, working principle of Vacuum circuit Breaker.	07
Q.3	(a) (b)	Explain the CT- Saturation characteristic with necessary circuit diagram. Explain the construction and torque equation of induction cup type relay. OR	07 07
Q.3	(a) (b)		07 07
Q.4	(a)	Draw the block diagram of static relay and explain advantages and	07
	(b)	disadvantages of static relays. Explain percentage differential protection scheme for transformer. OR	07
Q.4	(a) (b)	Explain the construction, working principle and characteristic of HRC fuse. Explain Impedance, Reactance and Mho characteristic of distance relay.	07 07
Q.5	(a) (b)	Explain protection against lightening over voltages. Explain different type's faults in generator.	07 07

Q.5 (a) Explain methods of neutral grounding.(b) Explain bus-bar protection in detail.

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