

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VIII (New) EXAMINATION – WINTER 2019****Subject Code: 2182407****Date: 29/11/2019****Subject Name: Switch Gear & Protection****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Assume suitable data if necessary.

		MARKS
Q.1	(a) Explain basic principle of arc interruption with respect to circuit breaker.	03
	(b) Discuss possible causes of short circuits and its effects.	04
	(c) Describe working of Air Blast Circuit breaker with neat diagram.	07
Q.2	(a) What is RRRV? Explain.	03
	(b) Discuss function of Trip circuit.	04
	(c) Explain working principle of SF6 circuit breaker with its diagram.	07
	OR	
	(c) Write a brief note on Vacuum circuit breaker and compare its advantage over oil circuit breaker.	07
Q.3	(a) Discuss basic principle of Distance relay.	03
	(b) Explain characteristics of Over current protection relays in brief.	04
	(c) Discuss about the construction and working principle of Differential relay.	07
	OR	
Q.3	(a) Explain Restriking voltage.	03
	(b) Compare Induction disc and Induction cup type relays.	04
	(c) Discuss about the protection of Bus bar in power system.	07
Q.4	(a) Explain current chopping.	03
	(b) Discuss about rotor earth fault protection for generator.	04
	(c) Explain the construction and working principle of Buchholz relay.	07
	OR	
Q.4	(a) What are static relays?	03
	(b) Write advantages and disadvantages of HRC fuse.	04
	(c) Explain neutral grounding using reactor with its merits and demerits.	07
Q.5	(a) What is making current for circuit breaker? Explain.	03
	(b) Compare static relay and electromagnetic relay in all respect.	04
	(c) Explain Inter turn fault protection scheme for generator.	07
	OR	
Q.5	(a) Explain necessity of neutral grounding.	03
	(b) Discuss single line to ground fault.	04
	(c) Discuss about the construction and working principle of Zinc Oxide lightning arrester.	07
