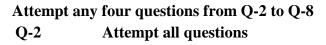
Eı	nrolln	nent No:	Exam Seat No:			
		C.U.SHAH U	NIVERSITY			
	Winter Examination-2019					
Su	•	Name: Switchgear and Protection Code: 4TE06SGP1 er: 6 Date: 09/09/2019	Branch: B.Tech (Electrica Time: 10:30 To 01:30	ıl) Marks: 70		
In	(2) (3)	ions: Use of Programmable calculator & any o Instructions written on main answer book Draw neat diagrams and figures (if neces Assume suitable data if needed.	are strictly to be obeyed.	ohibited.		
Q-1		Attempt the following questions:		(14)		
	1)	is used for the protection of electr	ical circuit.(Circuit Breaker/ Ba	attery)		
	2)					
	3)	The MCB is used for house hold electric (True/False)	circuit protection. The above s	tatement is		
	4)	The full form of MCB is Circuit E	Breaker (Miniature/Master)			
	5)	The ELCB is used for protection of	_ fault. (Earth/Open Circuit).			
	6)	State the type of any two circuit breaker				
	7)	State the function of Current Transforme	r in the protection of circuit.			
	8)	Thermal relay can be used to obtain over given statement is True or False.	load protection. Determine who	ether the		
	9)	Distance relay are mainly used for the pro- Line/Generator)	otection of(Transi	mission		
	10)	Restraining coil in Differential protectio (Internal/Through)	n is used for detection of	fault.		
	11)	Buchholz relay are mounted on	(Power Transformer/ A.C. Mo	otor)		
	12)	Relay operates when restraining torque is whether the given statement is True or Fa		Determine		
	13)	Give any two desirable qualities of relay.				



(14)



14) What is the basic difference between directional and non-directional relay?

	(a)	Which circuit breaker is used for house application? Write short note on its operation.	
	(b)	Why (1) fuse (2) relay (3) swtich is used in Electric Circuit? Explain.	07
Q-3		Attempt all questions	
	(a)	With neat sketch describe the arc extinction process in air break circuit breaker.	07
	(b)	Draw the neat sketch of single pressure puffer type SF_6 circuit breaker and explain the process of arc extinction.	07
Q-4		Attempt all questions	
	(a)	State the name of differnt types of fuse. Explain any one of them.	07
	(b)	Explain the principle of core balance CT for earth fault protection.	07
Q-5		Attempt all questions	
	(a)	Draw the sketch and explain the working principle of the below relays.	07
		i) Attracted Armature Type Relay ii) Balanced Beam Relay	
	(b)	Write short notes on Bulk oil circuit breaker.	07
Q-6	(a)	Attempt all questions Draw the over current protection connection with three over current relays and	
		explain its principle of operation.	
	(b)	Draw and explain the principle of circulating current Differential (MERZ-PRIZE) protection.	
Q-7	(a)	Attempt all questions Draw the R-X diagram of plain impedance relay and explain its characterisites on	(14) 07
		R-X plane.	
	(b)	Draw the structure of Buchholz relay and explain its principle of operation.	07
Q-8	(a)	Attempt all questions Explain how overload protection is achieved for induction motor.	
	(b)	Draw the neat sketch of differential protection for busbars and explain its operating principle.	07

