

	(a) Discuss the effect of natural frequency and power factor on transient recovery voltage (TRV)	07
	(b) Explain the high resistance methods for arc interruption in circuit breakers.	07
Q-3	Attempt all questions	(14)
	(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	(14)
	(a) Draw the cross section of vacuum interruption and explain the function of each parts.	07
	Explain the principle of core balance CT for earth fault protection.	07
Q-5	Attempt all questions	(14)
	(a) Draw the sketch and explain the working principle of the below relays. i) Attracted Armature Type Relay ii) Balanced Beam Relay	07
	(b) With neat sketch, explain the principle of arc quenching process in Bulk Oil Circuit Breaker.	07
Q-6	Attempt all questions	(14)
	(a) Draw the over current protection connection with three over current relays and explain its principle of operation.	07
	(b) Draw and explain the principle of circulating current Differential (MERZ-PRIZE) protection.	07
Q-7	Attempt all questions	(14)
	(a) Draw the R-X diagram of plain impedance relay and explain its characteristics on R-X plane.	07
	(b) Draw the structure of Buchholz relay and explain its principle of operation.	07
Q-8	Attempt all questions	(14)
	(a) Explain how overload protection is achieved for induction motor.	07
	(b) Draw the neat sketch of differential protection for busbars and explain its operating principle.	07

