Time: 3 Hours **Total Marks: 80**

N.B. 1) Question No.1 is Compulsory.
2) Attempt any three questions from remaining five questions.
3) Figures to right indicate full marks.

1. Attempt the Following;-
(a)Explain the properties of SF 6 gas that make it suitable for arc quenching. (5)
(b)Explain loss of Excitation in case of transformer. (5)
(c) Where and why isolators, contactors and circuit breaker are used in power system. (5)
(d)Explain the different types of fault occur in transformer. (5)

2.a) What are the protection provided for rotor of an alternator. (10)
b) Draw and explain a scheme for motor against single phasing. (10)

3. a)Explain restricted earth fault protection of alternator. How 100% winding is protected? (10)
b) Explain construction & working principle of Vacuum circuit breaker. (10)

4. a) what are the different types of fuse available .explain the constructional detail of HRC fuse with its advantages over other types. (10)
b) Explain the differential protection given to delta star power transformer. (10)

5. Write a short note on.
a) Electromagnetic relay (5)
b) DC relay (5)
c) power swing (5)
d) Frequency relay (5)

6. a) what type of protection provided for induction motor. (10)
b) Explain protection provided for different types of bus zones. (10)

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