TE - EE - SEM - VI (Rev)

17/12/14 PSE

QP Code :15227

[3 Hours] [Total Marks: 100

N.B. (1) Question no. **1** is **compulsory.**
(2) Attempt any **four** questions from remaining **six** question.
(3) Assume suitable **data** if **necessary** and justify the same.

1. Attempt the following:— **20**
   (a) Explain need of biasing in differential protection.
   (b) Explain resistance switching.
   (c) Discuss the different ratings of circuit breaker
   (d) Explain IDMT characteristic of relay.

2. (a) Explain with neat diagram short circuit testing of Circuit Breaker. **10**
   (b) For a 132kV system, the reactance and capacitance up to the location of the circuit breaker is 3 ohms and 0.0161 μF respectively. Calculate:— **10**
      (i) Frequency of transient oscillation.
      (ii) Maximum value of restriking voltage across the contact of circuit breaker.
      (iii) Maximum value of RRRV.

3. (a) What is HRC fuse? Explain the working and cut off characteristics of HRC fuse. **10**
   (b) Discuss various parameters of protective relay. **10**

4. (a) Explain with neat diagram the construction and working of SF6 Circuit Breaker. **10**
   (b) Explain capacitive current breaking in Circuit Breaker **10**

5. (a) Explain in detail the difference between impedance relay and reactance relay with the help of their characteristics. **10**
   (b) Explain different protection schemes for feeders **10**

6. (a) Explain the construction and working of Air Circuit Breaker. **10**
   (b) Explain the restricted earth fault protection for Alternator. **10**

7. (a) Compare static relays with electromagnetic relays **10**
   (b) Explain construction and working of Vacuum circuit breaker **10**

LM-Con.:11702-14.