Roll No. ....

24319

B. Tech. (EEE) 6th Semester (Re-appear) Examination – October, 2020.

POWER SYSTEM - II

Paper : EE-312-F

Time : 1.45 Hours]　　　　　　[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *three* questions. All questions carry equal marks.

1. (a) Explain transients on a transmission line in brief.

   (b) What do you mean by recovery voltage ? Explain it.

   (c) Explain induction disc type relay in brief.

   (d) Draw block diagram of digital relay.

2. What is 3-φ Unsymmetrical fault ? Explain line to ground fault in detail.

3. A synchronous generator is rated 25MVA, 11KV. It is star connected with the neutral point solidly grounded. The generator is operating at no load at rated voltage. Its positive, negative and zero sequences reactance are 0.20, 0.20 and 0.08 p.u. respectably calculate the symmetrical subtransient line currents for double line foult.

4. (a) Describe the construction, principle of operation and application of a vacuum circuit breaker.

   (b) Explain the terms :

      (i) Symmetrical breaking current

      (ii) Asymmetrical breaking current

5. Write short note on :

   (a) Arc interruption theories

   (b) RRRV

6. (a) Explain the concept of unit and non-unit protection.

   (b) What do you mean by primary and back-up protection of power system ?

(c) Give the classification of over current relay based on the characteristics used.

7. (a) What do you mean by reach of the relay ? Explain overreach and under reach in distance relay.

(b) Explain Mertz-price differential protection scheme in detail.

8. (a) Explain the working of a generalized static relay.

(b) Discuss various merits and demerits of digital relays with reference to electromechanical and state relay.

9. Write short note on :

(a) Travelling wave relay

(b) Rectifier type relay

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