

T.E. Electrical VI CBGS
Power System Analysis

23.11.16

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Q.P. Code : 584504

(3 Hours)

[Total Marks : 80

- N.B. :** (1) Question No 1 is **Compulsory**
(2) Attempt any **three** questions out of remaining **five** questions.
(3) Assume the suitable data in necessary and justify the same.

1. Solve the following questions.
- (a) What is power invariance in unsymmetrical fault analysis. 5
 - (b) Discuss the importance of insulation coordination. 5
 - (c) What is the electrical length of line. 5
 - (d) Discuss the term transient. 5
2. (a) Discuss the short circuit of synchronous machine at no load condition. 10
(b) Discuss the formation of transients on transmission line. 10
3. (a) Derive the equation for fault current for LL fault. 10
(b) Discuss the sequence network for transmission lines. 10
4. (a) Discuss the phenomenon of capacitance switching 10
(b) Discuss the terms protective characteristics, dynamic voltage rise, arrester rating. 10
5. (a) Discuss the phenomenon of traveling wave on case of termination of line as open circuit. 10
(b) Explain the terms with reference to corona disruptive critical voltage, visual critical voltage Power loss 10
6. (a) Discuss the maximum power transfer and stability consideration in transmission line. 10
(b) Discuss the various factors to be considered while constructing the sequence network of power system. 10