Total No. of Questions :5] *[Total No. of Printed Pages :2*

Roll No .

EE-403

B.E. IV Semester

Examination, June 2016

Power System

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What are the types of dc links?
   b) What is convertor station?
   c) What are the applications of HVDC transmission system?
   d) Compare EHVAC and HVDC transmission.

   OR

   Explain the planning for HVDC transmission system.

2. a) Define Kelvin's law.
   b) Explain voltage regulators.
   c) Explain the effect of change in voltage on the conductor volume in distribution.
   d) Explain the various elements in a typical distribution system with a neat sketch.

   OR

   State and explain modified 'Kelvin' law and its limitation along with its application.

3. a) Explain the classification of transmission line.
   b) What are the bundle conductors?
   c) Explain the regulation and efficiency of short transmission line.
   d) Derive an expression for inductance of single phase line.

   OR

   Discuss the advantages and disadvantages for different types of compensating equipment for transmission system.

4. a) Explain string efficiency.
   b) What are the different types of line support in general?
   c) Write a short note on sag-tension relationship.
   d) What are the various tests performed on insulator? Explain the significance of each test.

   OR

   Derive approximate expression for sag and tension.

5. a) Write the different types of cables.
   b) Explain insulation resistance of cables.
   c) What do you understand by grading of cables?
   d) Draw the cross section of a 3 core belted cable and discuss the function of each unit.

   OR

   Compare inters heath grading with capacitance grading. Which is better and why?

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