Total No. of Questions :8] *[Total No. of Printed Pages :2*

Roll No .....

MEPE-203

M.E./M.Tech. II Semester

Examination, June 2017

Power Electronics Applications To Power Systems

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. What is the necessity of conducting load flow study. Mention the different categories into which the buses of a power system are classified to solve a power flow problem. 14

2. Why we need for the compensation? Distinguish between series and shunt compensation in detail. 14

3. a) Establish a general sensitivity relations applicable in power system operation. 7
   b) Explain the meaning of pre contingency and post contingency connective rescheduling. 7

4. a) Explain voltage stability? Give the causes of voltage instability. 7
   b) Analyse the voltage stability by Jacobian method in matrix form. 7

5. What is flexible A.C. transmission system? Describe briefly various devices used in this system. Hence classify the various facts controller with proper circuit diagram. 14

6. Explain with neat diagrams the operation of a basic TCR and derive expression for the control law of the basic TCR and explain the control law. 14

7. Explain the working of TCSC with different mode of operation. Also analyse the variable reactance model and transient stability model TCSC. 14

8. Write short notes any two of the following : 7 each
   a) Fast decoupled load flow method
   b) FACTS devices
   c) Generation shift distribution factor
   d) Bus admittance matrix

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