

Total No. of Questions : 6]

SEAT No. :

P5366

[5562]-223

[Total No. of Pages : 1

**M.E. Electrical (Power Systems)
POWER SYSTEM DYNAMICS
(2017 Course) (503207) (Semester - II)**

Time : 3 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *Solve Total three questions. Answer any one from Q1 or Q2, Q3 or Q4, and Q5 or Q6 each.*
- 2) *Assume suitable data if necessary.*
- 3) *Write down all the assumptions made.*

Q1) Explain the concept of islanding. When it is needed to implement? How the system will behave if there is no facility of islanding? State various types of islanding methods. **[18]**

OR

Q2) Derive an expression for small signal analysis of multi-machine system considering simplified model of synchronous machine. State any assumption made. **[18]**

Q3) Derive stator voltage equations for synchronous generator by model 1.2. Draw suitable diagram and write assumptions involve in it. **[16]**

OR

Q4) Explain the SVC characteristics and its model. Also explain effect of its inclusion in the dynamics of SMIB. **[16]**

Q5) Derive the stator voltage expressions for the small signal analysis of single machine model with field circuit only. Write down assumptions involve in it. **[16]**

OR

Q6) Explain the concept of synchronizing and damping torque w.r.t power system analysis. Write down significance of it. **[16]**

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