

ASSIGNMENT: 3 DESIGN OF SYNCHRONOUS MACHINE

1. What is SCR? Discuss its effects on performance of synchronous machine regards
a) Voltage Regulation b) stability of machine c) Parallel operation d) Short circuit current e) Self Excitation .Give its range.
2. Discuss the design of field winding of salient pole synchronous machine.
3. What is the role of damper winding in (i) synchronous generator and
(ii) synchronous motor? Derive the equation of MMF of damper winding.
4. Write the steps and necessary equations for rotor design of an synchronous machine.
5. Explain the factors to be considered while selecting number of armature slots in the design of a synchronous machine.