Learning Outcomes in Module Report

Module Code	SPC08
Module Name	Power Generation

Learning Outcomes

Code	Name	Hours	Description
8.0	Power Generation	6	After completion of this module and associated workbook, the participant should be able to understand the following concepts and apply them to his day-do-day work activities: The generator's function: energy conversion. Features of generator construction. Stator winding, rotor winding. Static exciter, collector rings, rotating exciter. Open cycle air cooling. Closed cycle air cooling. Advantages of hydrogen cooling. Hydrogen pressure control, leakage compensation. Hydrogen seals, seal oil system. Hydrogen explosive range. Procedures for purging. Fundamentals of AC generation. Relationship between frequency, speed, and number of poles. Single phase and 3-phase generation. 3-phase system. Required conditions for synchronising. Controlling generator power output. Combined operation of governors. Load sharing between parallel generators. Static excitation system. Brushless excitation system. Effect of changing excitation current. Control of voltage and MVAR output. System demand for MVARs. Generator MVA output. Power factor. Generator capability curve.

Count: 1