

APJ Abdul Kalam Technological University
Second Semester M. Tech Degree Examination, May 2016

Cluster: **Kollam**

Branch: **EEE**

Specialisation: **POWER SYSTEMS**

Subject: **02EE6222**

POWER SYSTEM AND DYNAMICS AND CONTROL

Time: 3 Hrs

Max. Marks: 60

PART A

(Answer All Questions)

1. What is meant by park transformation?
2. Explain the mathematical modeling of governor for hydraulic turbine
3. Briefly explain the single-machine infinite bus (SMIB) configuration.
4. Draw and explain the block diagram representation with exciter and AVR

(4 x 9=36)

PART B

(Answer Any Two from each question)

5 (a) What is AGC?

(b) Define area control error

(c) How is speed governor mechanism modelled? Explain its operations with the speed load characteristics?

6.(a) Explain the operation of static VAR compensator and state its advantages over other methods of voltage control

(b) Discuss the relation between voltage and reactive power at a node

(c) What is a static VAR compensator

(2 x 12=24)
