

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD – 402 103
Winter Semester Examination – Dec – 2019**

Branch: M.Tech. EPS
Subject:- Power System Dynamics and control (MTEPS201)
Date:- 11/12/2019

Semester: II
Marks: 60
Time:3 Hrs.

Instructions to the Students

1. Each question carries 12 marks.
2. Attempt any five questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.

(Marks)

Q.1. Explain Classical Methods of Synchronous Generator Connected To Infinite Bus System model. (12)

Q.2. Attempt any two of the following (12)

- a) Explain applications of Routh-Hurwitz criterion.
- b) State & Explain analysis of synchronizing and damping torque of machine .
- c) Explain of dynamics of load and SVC.

Q.3. Attempt any two of the following (12)

- a) Explain step of PSS design and give any design application.
- b) Explain Basic concepts of control signals in PSS.
- c) Explain Future trends of PSS.

Q.4. Attempt any two of the following (12)

- a) State & Explain Statespace representation.
- b) Explain Effect of field flux variation on system stability.
- c) Explain Rotor angle stability.

Q.5. Attempt any two of the following

(12)

- a) Draw & Explain Simple thyristor excitation system.
- b) Explain Analysis of effect of AVR on synchronizing and damping components.
- c) Explain Block diagram of PSS with description.

Q.6. Attempt any two of the following

(12)

- a) Explain Digital Stabilizer – Excitation control design.
- b) Explain Exciter gain – Phase lead compensation.
- d) Explain Stabilizing signal washout stabilizer gain.

Paper End
