DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD – 402 103
Winter Semester Examination – December– 2018

Branch: M. Tech. (Electrical Power System)   **Semester: II**
Subject with Subject Code: - Power System Dynamics and Control (MTEPS201)
Date: 26/12/2018   **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.

                                                                    (Marks)

Q.1. Define Power system stability and explain in detail different types of stability.   **(12)**

Q.2. Why park's transformation is required? Apply it to transform electrical and mechanical equations of synchronous machine.   **(12)**

Q.3. Why the excitation control is required for an alternator? Show the inclusion of additional variables in the mathematical model of a synchronous machine and discuss about its final state space model.   **(12)**

Q.4. Explain the small signal stability of single machine infinite bus system. Develop the block diagram of SMIB using Classical Generator Model for small signal stability analysis.   **(12)**

Q.5. With the help of block diagram give structure of PSS. Explain function of each component giving its design criteria.   **(12)**

Q.6. Explain operation of delta - omega and delta - P – omega stabilizers in detail and compare them.   **(12)**

<p align="center">OR</p>

Q.6 Explain excitation control design and phase lead compensation in detail.   **(12)**

<p align="center">*** End***</p>