

SUBJECT CODE NO:- P-8080
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E.(Electrical Power System) Examination MAY/JUNE-2016
Power System Dynamics & Stability (PSDS)
(Revised)

[Time:Three Hours]

[Max Marks:80]

“Please check whether you have got the right question paper.”

- N.B
- i) Assume suitable data wherever necessary.
 - ii) Solve any two questions from each section.

Section A

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|-----|---|----|
| Q.1 | a) Explain the effect of an impact of power system components. | 10 |
| | b) Discuss the effects of small signal disturbances on power system. | 10 |
| Q.2 | a) Explain the power angle curve and also explain how it will get modified for the different stages in fault. | 10 |
| | b) Explain the normalized torque equations of synchronous machine. | 10 |
| Q.3 | a) Explain classical model of single machine infinite bus system in detail. | 10 |
| | b) Explain determination of synchronous machine parameters from manufacture's data. | 10 |

Section B

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|-----|---|----|
| Q.4 | a) Explain the exciter voltage build-up. | 10 |
| | b) Explain mitigation of instability problem using power system stabilizer. | 10 |
| Q.5 | a) Explain supplementary modulation control FACTS devices. | 10 |
| | b) What is transient stability? Explain digital simulation method for transient stability analysis. | 10 |
| Q.6 | a) Explain transient stability controllers. | 10 |
| | b) Explain excitations system with basic block diagram. | 10 |