

Code: **EEPC1T5C**

**I M.Tech-I Semester-Regular/Supplementary Examinations  
January 2017**

**POWER QUALITY  
(POWER SYSTEM CONTROL AND AUTOMATION)**

Duration: 3 hours

Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. a) Define power quality. Explain the reasons for increased concern in power quality. 4 M  
  
b) What are the major power quality issues? Explain in detail. 10 M
2. a) What are Transients? How are they classified? 4 M  
  
b) Explain with a neat sketch, causes of transients and their effects. 10 M
3. What are the different voltage sag mitigation techniques? Explain in detail. 14 M
4. a) Explain evaluation of economics of different Ride-through alternatives. 10 M

- b) Discuss about motor starting sags. 4 M
5. Explain the harmonic distortion evaluation process. 14 M
6. a) Discuss about various distributed generation technologies. 7 M
- b) Explain the operating conflicts in distribution systems that cause power quality issues. 7 M
7. a) Explain briefly various interconnection standards. 4 M
- b) What are solutions to wiring and grounding problems. 10 M
8. a) Write short notes on power quality measurement system. 6 M
- b) What are the characteristics of power measurement equipments? 8 M