

Roll No

MEPS - 203**M.E./M.Tech., II Semester**

Examination, July 2015

Power Quality And Conditioning*Time : Three Hours**Maximum Marks : 70*

- Note :** i) Attempt any five questions.
ii) All questions carry equal marks.
iii) Draw diagrams wherever necessary.

1. Explain the concept of power quality its significance and evaluation in the present scenario. Also discuss power quality indices in detail. 14
2. Explain in detail different types of power quality disturbances and their ill effects. 14
3. Discuss the major sources of harmonic currents and their effects on electrical equipments. 14
4. Discuss the classical approaches for the solution of harmonic problems. 14
5. a) Explain the role of active filters for harmonic elimination. 7
b) Discuss different control technique of active filters. 7

6. Discuss the concept of multipulse converter topologies for suppression of harmonics. 14
7. Discuss EMI standards and elimination techniques. 14
8. Write short notes any two of the following: 7×2=14
 - i) Effect of transformer connection on power converters.
 - ii) PWM converter as a voltage source active filter
 - iii) High power factor preregulator
 - iv) Active waveshaping of input line current
 - v) Constant frequency control
