

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

Examination, May 2018

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

- Note :** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) What is the Power quality? Explain in detail.
b) Explain the causes and effects of power quality disturbances.
2. a) What are the various causes of Harmonics in supply system? Illustrate effect of harmonics.
b) Explain in detail various types of power quality disturbances.
3. a) Explain converter configuration system. What is the effect arises due to this configuration system.
b) Explain Harmonic Distortion.
4. Discuss the classical approaches for the solution of harmonic problems.

[2]

5. a) Explain the active filters topology for suppressions of harmonics.
b) Explain working of PWM converter as voltage source active filter.
6. Explain the following terminology:
 - a) Passive input filter
 - b) Converter topology for power quality improvement
 - c) Design of Harmonic Filters
7. a) What do you understand by active wave shaping of input line current?
b) Explain various techniques of constant frequency control.
8. a) What are causes of conducted electromagnetic interference and how it can be minimized?
b) What are the EMI standards and its elimination methods?
