

POWER QUALITY

(Elective-111)

(EX — 8301)

Time : Three Hours

Maximum Marks : 100

Minimum has Marks : 35

Note : Attempt any five questions. All questions carry equal marks.

1. (a) Explain the term Tower Quality'. Explain on the basis of utility and customer protection.
(b) Describe the power quality evaluation procedure. Draw the hierarchical approach.
2. (a) Define the terms sags and swells in terms of voltage stability.
(b) How the voltage sag performance can he estimated ? Define area of vulnerability.
3. (a) What could be possible approaches for voltage ride-through ?
(b) Explain the fundamental principles of overvoltage protection of load equipment.
- 4.(a) How can utilities deal with problems related to capacitor switching transients ? Explain.
(b) Describe the production of harmonics from commercial loads. How is it different from industrial loads ?
5. (a) Explain the components for limiting voltage distortion levels on overall utility system
(b) How harmonic sources can be modeled ? Explain. www.rgpvonline.com
6. (a) Describe the concept and working of active filters.
(b) What is flickerExplain the various sources of Flicker.
7. (a) Discuss the main power quality issues which affect distributed generation.
(b) What is meant by constant tolerance band control and variable tolerance band control ?
8. Write short notes on any two of the following :
 - (i) Effects of power quality disturbances.
 - (ii) Electro-magnetic compatibility
 - (iii)Passive input filter standards for harmonics