

EX - 8301(NGS)
B.E. VIII Semester Examination, June 2014
Power Quality
Time : Three Hours

Maximum Marks : 70

Note: Attempt any two parts from each question. All questions carry equal marks.

1. a) Define power quality. Explain the reasons for increased concern in power quality.
b) What are the major power quality issues? Explain.
c) Discuss the short duration variations characteristics of power quality events.
2. a) What is the need of estimating sag performance?
b) Describe the various causes of voltage sags.
c) Explain the different methods of estimating sag performance.
3. a) Explain the different types of transient over voltages.
b) What is the need for protection against over voltages? What are the basic principles of over voltages protection of load equipments?
c) What are the equipments required to satisfy the customer to mitigate harmonic distortion and interruption?
4. a) Give the various types of harmonic filtering devices and suggest the most applicable one.
b) Explain the power system response characteristics under the presence of harmonics.
c) What are the devices for controlling harmonic distortion? Explain the operation of any one of them.
5. Write short notes on any two of the following:
 - a) Electro - magnetic compatibility
 - b) Discontinuous current control
 - c) Constant frequency control.
