Exam.Code:1017
Sub. Code: 7783

1129

M.E. Electrical Engineering (Power System)
First Semester
EE-8105: Power Quality

Time allowed: 3 Hours **Max. Marks: 50**

***NOTE**: Attempt any five questions. The Symbols have their usual meanings in context with the subject. Assume suitably and state, additional data required, if any.*

x-x-x

I. Define power quality. Explain the reasons for increased concern in power quality. (3,7)

II. Explain briefly about the international standards of power quality. (5,5)

III. What is the impact of transient in power quality? Classify the transient that occurs in power system. (5,5)

IV. Briefly explain the sources of voltage sag and interruptions. Also, discuss the methodology of estimating voltage sag performance. (5,5)

V. What are the voltage sag mitigation techniques? Briefly explain any two voltage sag mitigation techniques with necessary circuit diagram and waveforms. (5,5)

VI. Explain effects of harmonics in electrical system. What are devices used for controlling harmonic distortion? (5,5)

VII. Define D-STATCOM. What is the important role of D-STATCOM in improving the voltage regulation? Explain with neat diagram. (2,8)

VIII. List the major electric power quality issues. Explain how dynamic voltage restorer can be used for harmonic elimination? (3,7)

x-x-x