

1128

M.E. Electrical Engineering(Power System)

First Semester

EE-8105: Power Quality

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt any five questions.

x-x-x

- I. What are the issues faced by power systems, which can be termed as power quality problems? Explain about it. (10)
- II. a) Define Voltage sag.
b) How do you classify the voltage sag?
c) What are the usual causes for producing voltage sag? (1,4,5)
- III. What are the different sources of transient over voltages? Discuss the Capacitor switching transient. (5,5)
- IV. Define lightning? Discuss in detail about the over voltages due to lightning and the problems associated with it. (3,7)
- V. What are the general causes of harmonics in power system? What are the two important harmonic indices used in power system? Explain about it briefly. (4,6)
- VI. Explain briefly about the phenomena of how current distortion affects the voltage distortion under the presence of harmonics. (10)
- VII. With neat sketches compare the operation of series and shunt compensator.
- VIII. Explain how unified power quality conditioners (UPQC) is used to improve the voltage regulation with neat diagrams. (10)

x-x-x