

Exam.Code:1018
Sub. Code: 7464

2063

M.E. Electrical Engineering (Power System)
Second Semester
EE-8210(a): Fast Transient in Power Systems

Time allowed: 3 Hours

Max. Marks: 50

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

x-x-x

1. With necessary diagrams, describe the mechanism of lightning discharges and also the characteristics of lightning strokes.
2. Write the formula for tower footing resistance. With a neat diagram, explain the protection offered by ground wire.
3. Briefly explain about normal and abnormal switching transients. Write a short note on current chopping
4. Describe in detail about the causes of over voltages induced by various faults occurring in a power system.
5. Describe the transient response of systems with series and shunt distributed parameters.
6. What are the causes of transients on closing and reclosing of transmission lines? Explain the behaviour of travelling waves at line terminations for open circuited and short circuited line.
7. Explain the meaning of Insulation Coordination. Illustrate with the help of a graph how volt-time characteristics are used in coordinating between a protecting device and a device to be protected.
8. What are the air clearances that must be considered in the design of outdoor insulation? What are the main influencing factors that are required in calculating the creepage distances?

x-x-x