

8E4109**8E4109**

B.Tech. VIII Semester (Main/Back) Examination - 2013
Electrical Engineering
8EE1 EHV AC/DC Transmission
(Common for 8EE1, 8EX1)

Time : 3 Hours

Maximum Marks : 80
Min. Passing Marks : 24

Instructions to Candidates:

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used / calculated must be stated clearly.)

Unit - I

1. a) Give the reasons in detail for using bundled conductors in EHV AC transmission. Briefly explain the properties of the bundled conductors. (5+3)
- b) Describe in brief the Surge impedance loading of a transmission line. (8)

OR

1. a) Explain in detail the problems associated with EHV transmission. (8)
- b) Describe the following in short :
 - i) Corona loss.
 - ii) Power handling capacity of EHV lines. (4+4)

Unit - II

2. a) Explain in detail the load sharing by parallel generators with the help of drooping governor characteristics. (8)
- b) A power system has a total load of 1,260 MW at 50 Hz. The load varies 1.5% for every 1% change in frequency with damping constant $D = 1.5$. Find the steady state frequency deviation when a 60MW load is suddenly tripped, if there is no speed control. (8)

OR

2. a) With the help of Block diagram explain the working of Automatic Generation Control (AGC) (8)
- b) Explain the two-area load frequency control with the help of block diagrams. (8)