Roll No. | | | | | | | | | | | | |

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech.(EE) (2013 Batch Elective-IV) (Sem.–3)

POWER SYSTEM PLANNING

Subject Code : MTEE-302B

M.Code : 72227

Time : 3 Hrs. Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

Ql. (a) What are key indices of power system reliability?

(b) Enumerate importance of power system Planning.

(c) Explain optimal scheduling of generation.

(d) What are major factors in cost analysis of generation system?

Q2. Show the linkages between reliability and capacity planning of power system. Illustrate with an example.

Q3. What are the methods involved in automated transmission system expansion planning? Explain with suitable diagram with hardware and software involved if any.

Q4. What is meant power loss compensation in a power distribution system? Explain important methods for ensuring voltage and power factor improvement.

Q5. Write down the important factors involved in evaluating the cost associated with an expansion plan. Explain the effect of each one of them on overall expansion cost.

Q6. What are components involved in sub transmission line and distribution line design? Illustrate with suitable example.

Q7. Two turbo-alternators rated for 110MW and 210MW have governor drop characteristics of 5% from no load to full load .They are connected in parallel to share a load of 250MW. Determine the load shared by each machine assuming free governor action.

Q8. Write short notes on :

(a) Automatic Transmission Planning

(b) Role of capacitor in distribution system

(c) Voltage Regulation

(d) Unit Commitment

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.