M.E. Second Semester (Electrical (Electronics & Power) Engineering) (New-CGS)

12324 : Elective-I : Power Systems Planning & Reliability : 2 EEPME 4

P. Pages : 1
Time : Three Hours

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AW - 3586
Max. Marks : 80

Notes :
1. All question carry equal marks.
2. Answer **Two** question from Section A and **Two** question from Section B.
3. Due credit will be given to neatness and adequate dimensions.
4. Assume suitable data wherever necessary.
5. Illustrate your answer necessary with the help of neat sketches.
6. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION – A

1. a) Explain the different tools for power system planning. List out constraints in planning an energy system. **10**

   b) What is load forecasting? Discuss the methods and classification of load forecasting. **10**

2. a) What are the challenges and applications of various load forecasting method. Explain with suitable examples. **10**

   b) Explain econometric model of long term load forecasting in restructured power system. **10**

3. a) What do you understand by power system Reliability? Discuss the term system adequacy and system security as applied for power system reliability. **10**

   b) Explain in details effects of failures on power system reliability and planning. **10**

SECTION – B

4. a) Explain in details how power system reliability indices are evaluated. **10**

   b) Write short notes on:- **5+5**
   i) Random processes method and
   ii) Markov models related to reliability measurement of power system.

5. a) How capacity outage calculation assessed the reliability of Generation systems. **10**

   b) How reliability of generation system can be assess using optimal reserve management? Explain. **10**

6. a) How substation configurations are analysed and evaluated for reliability assessment? Explain. **10**

   b) Explain in details the technical and economical assessment of Electricity transmission system. **10**

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