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06EE751

Seventh Semester B.E. Degree Examination, Dec.09/Jan.10
Power System Planning

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting
at least TWO questions from each part.**

PART – A

- 1 a. Explain power planning process with the flow chart. (08 Marks)
b. Briefly explain power system planning tools. (06 Marks)
c. Discuss the role of electricity regulations. (06 Marks)
- 2 a. What is captive power? Explain. Discuss the importance of captive power in power system planning. (08 Marks)
b. Discuss in detail power pooling process and its importance in the power system. (06 Marks)
c. Explain the role of renewable energy in power system planning. (06 Marks)
- 3 a. Explain in detail the integrated power system planning with respect to generation. (10 Marks)
b. Explain with line diagram the distribution systems for better reliability. (10 Marks)
- 4 a. Give the comparison between A.C. and D.C. transmission and distribution systems. (10 Marks)
b. Explain in detail the impact of conventional power plants on environment. (10 Marks)

PART – B

- 5 a. What is reliability? Explain reliability in power system. How reliability of the power system can be improved? (08 Marks)
b. What is uncertainty in power system? Explain the factors that are taken for uncertainty. (06 Marks)
c. Explain with the flow-chart, the load management technique. (06 Marks)
- 6 a. Explain the optimum reliability curve considering the total cost. (10 Marks)
b. Discuss in detail the computerized management technique for power system. (10 Marks)
- 7 a. What are the factors considered for optimum power system expansion planning? Explain. (10 Marks)
b. Explain the schematic diagram of simulator in power-system. (10 Marks)
- 8 a. Formulate least-cost optimization problem considering total cost for hydro power plant. (10 Marks)
b. Explain different optimization techniques for optimal power system planning. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.