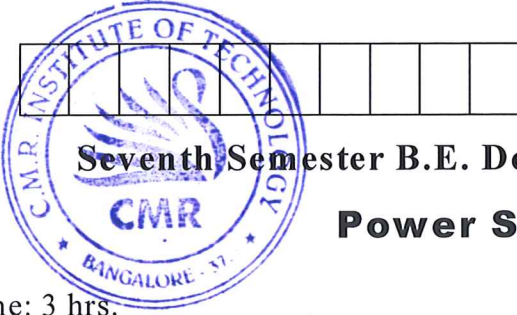


USN



10EE761

Seventh Semester B.E. Degree Examination, June/July 2019

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. What do you understand by planning process? Mention the step by step procedure for strategic planning. (10 Marks)
b. Explain the concept of least-cost utility planning with the aid the flow chart. (10 Marks)
- 2 a. What is cogeneration? What are its benefits? List the important factors in deciding on cogeneration? (10 Marks)
b. List out national action plan goals associated with generation planning in brief terms. (10 Marks)
- 3 a. Discuss in brief the basic tariff making philosophy. (10 Marks)
b. Explain private participation with respect to ownership options and modes of participation. (10 Marks)
- 4 a. Discuss the impact of power generation on environment. What are the measures to be taken for minimizing environmental effects? (10 Marks)
b. Explain with the help of V-T curve the need of insulation coordination in power system. (10 Marks)

PART - B

- 5 a. With the help of a schematic diagram, explain the various means of load management. (08 Marks)
b. Explain in brief the following real time operations:
i) State Estimation ii) AGC
iii) Economic Load Dispatch iv) Stability (12 Marks)
- 6 a. What is power system simulator? Explain its functions using a block diagram. (10 Marks)
b. With a figure, explain a centralized computing system for monitoring and controlling a power system. (10 Marks)
- 7 a. Develop mathematical objective function of power system expansion planning. (10 Marks)
b. Explain the methodology to be adopted for optimal expansion planning of power system. (10 Marks)
- 8 a. Explain least cost optimization problem. (10 Marks)
b. Explain in brief any two optimization techniques. (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.