

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022
Power System Planning

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast 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 of flow chart. (10 Marks)
- 2 a. What are the basic processes of cogeneration? Explain. (10 Marks)
- b. Explain the strategy for transmission expansion in a power system. (10 Marks)
- 3 a. Discuss in brief the basic tariff making philosophy. (10 Marks)
- b. Write a note on rural electrification investment. (05 Marks)
- c. Discuss in brief private participation in power sector. (05 Marks)
- 4 a. Define wheeling in power system and list the typical objectives of wheeling. (06 Marks)
- b. Write an explanatory note on the method of post combustion clean-up process to reduce gaseous pollutants. (06 Marks)
- c. Discuss the impact of power generation on environment. What are the measures to be taken for minimizing environmental effects? (08 Marks)

PART – B

- 5 a. With the help of incremental reliability characteristics, explain the reliability planning of the power system. (10 Marks)
- b. Explain the aid of schematic diagram, the various means of load management. (10 Marks)
- 6 a. Explain reactive power balance power system. (06 Marks)
- b. With help of schematic diagram, explain power system simulator. (06 Marks)
- c. With the help of block diagram, explain computerized management of power system. (08 Marks)
- 7 a. Explain optimal power system expansion planning methodology. (10 Marks)
- b. Explain least cost optimization problem. (10 Marks)
- 8 a. Explain in brief any two optimization techniques. (10 Marks)
- b. Discuss the constraints observed during optimization process of power system expansion 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.