



--	--	--	--	--	--	--	--	--	--

10EE761

Seventh Semester B.E. Degree Examination, Dec.2019/Jan.2020

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 is Power System Planning? What are the planning tools? (07 Marks)
b. Write step – by – step procedure for strategic planning. (05 Marks)
c. What is Load Forecasting? Explain any one technique of load forecasting in power system. (08 Marks)
- 2 a. What is Co-generation? Describe two co-generation techniques. (10 Marks)
b. Write a note on transmission and distribution planning. (10 Marks)
- 3 a. Mention the objectives of consumer tariff and explain cost based and market based tariff. (10 Marks)
b. Explain Private participation with respect to ownership and modes of participation. (10 Marks)
- 4 a. Mention the choice of technology in order to minimize emissions. (06 Marks)
b. Explain the method of post combustion clean – up process to reduce gaseous pollutants. (06 Marks)
c. Define Wheeling in power system and list the typical objectives of wheeling. (08 Marks)

PART – B

- 5 a. What do you understand by power system reliability? Discuss the system adequacy and system security as applied to power system reliability. (10 Marks)
b. With the help of schematic diagram, explain various means of load management. (10 Marks)
- 6 a. What do you mean by state estimation? With the help of neat diagram, explain functioning of state estimation. (10 Marks)
b. What is Power System simulator? Explain its functions using block diagram. (10 Marks)
- 7 a. Explain the methodology to be adopted for optimal expansion planning of power system. (10 Marks)
b. Explain Mathematical development of generation expansion planning considering objective functions and constraints. (10 Marks)
- 8 a. Discuss Least cost optimization problem for thermal power plants. (10 Marks)
b. Describe any two mathematical optimization techniques for solution. (10 Marks)

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.