Roll No. _____

7E7041

B.Tech. VII Sem. (Main/Back) Examination, Nov. - 2019
Electrical Engineering.
7EE1A Power System Planning
Common for EE, EX

Time : 3 Hours

ersahilkagyan.com

Maximum Marks : 80
Min. Passing Marks : 26

Instructions to Candidates:

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly). Units of quantities used/calculated must be stated clearly.

Unit - I

1. a) Explain the power system planning and planning process. (8)

    b) Explain the difference between national and regional planning. (8)

OR

1. Explain electricity forecasting schemes and write the disadvantages of long term forecasting. Discuss various planning tools. (16)

Unit - II

2. a) Explain the integrated resources planning with respect to power generation planning. (8)

    b) Explain the term generation planning. Explain the different method of cogeneration. (8)

OR

2. a) Describe various components of rural electrification planning in India. (8)

    b) Explain the concept of financial planning. Explain power trading and power pooling. (8)

Unit - III

a) Explain system adequacy and security of power system reliability. (8)

b) Explain the function of power system simulator with block diagram. (8)

[Contd....

(1)

OR

3. a) Explain various methods of load management. (8)

b) Explain the term state estimation and function of state estimation with the help of neat diagram. (8)

Unit - IV

4. a) Explain the term computer aided planning. (8)

b) Explain the system architecture of CAPP with its advantages over manual experience based process planning. (8)

OR

4. a) Define wheeling in power system and list typical objectives of wheeling. (8)

b) What are the technological impacts of green house effect? (8)

Unit - V

5. a) Explain optimal power system expansion planning. Summarize main step of optimal power system planning. (8)

b) Discuss the formulation of least cost optimization problem with block diagram. (8)

OR

5. a) Write short notes on operating and maintenance cost of any candidate plant. (8)

b) Describe minimum assured reliability constraints by using optimization method by programming. (8)