Seventh Semester B.E. Degree Examination, Dec.2018/Jan.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. Explain with the help of flow chart the least-cost utility planning. **(10 Marks)**
   b. Explain the different tools for power system planning. List out the constraints in planning all energy system. **(10 Marks)**

2   a. With help of block diagram, explain distributed power generation planning, listing plan options, and uncertainties of attributes. **(10 Marks)**
   b. What is co-generation? Describe two co-generation techniques. **(10 Marks)**

3   a. Write a note on Rural electrification investment. **(06 Marks)**
   b. Write a note on private participation in power sector. **(08 Marks)**
   c. Discuss in brief rational tariff. **(06 Marks)**

4   a. Mention the choice of technology in order to minimize emissions. Explain the method of post-combustion clean up process to reduce gaseous pollutants. **(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. What do you understand by power system reliability? Discuss the terms system adequacy and system security as applied to power system reliability. **(10 Marks)**
   b. Explain in brief following real time operations : (i) State estimation   (ii) AGC (iii) Economics load dispatch   (iv) Stability **(10 Marks)**

6   a. With help of schematic diagram, explain load management technique. **(06 Marks)**
   b. Explain reactive power balance power system. **(06 Marks)**
   c. With the help of block diagram, explain computerized management of power system. **(08 Marks)**

7   a. Explain the methodology to be adopted for optimal expansion planning of power system . **(10 Marks)**
   b. Discuss reactive power balance planning clearly indicating the constraints for optimization. **(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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