7E7041
B. Tech. VII Sem. (Main/Back) Exam., Nov. – Dec. - 2017
Electrical & Electronics Engineering
7EX1A Power System Planning
EE, EX

Time: 3 Hours

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.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL _____   2. NIL _____

UNIT-I

Q.1 (a) Mention and Explain factors affecting the load of utility in forecasting modeling.   [8]

(b) Explain strategic planning, long term planning and short term planning?   [8]

OR

Q.1 (a) Explain Integrated Resource planning with respect to power generation planning.   [8]

(b) Explain the power system planning process. Enumerate the cyclical component of planning.   [8]

UNIT-II

Q.2 (a) Write a note on Reactive load forecast. [8]

(b) Explain the concept of dispatchability in power system planning. [8]

OR

Q.2 (a) Discuss in brief Rational Tariff [8]

(b) Explain the strategies for transmission system Expansion in India [8]

UNIT-III

Q.3 Write down short notes on:

(a) Computerized management [4]

(b) Load prediction [4]

(c) Reactive power balance [4]

(d) Load management [4]

OR

Q.3 Explain Quality of supply for power system planning. [16]

UNIT-IV

Q.4 Explain the green house effect and its technological Impacts. [16]

OR

Q.4 What is Insulation coordination? Explain the principles of Insulation coordination [16]

UNIT-V

Q.5 Explain the strategy for transmission. Expansion in a power system [16]

OR

Q.5 Write short notes on:

    (a)   Operating and maintenance cost of candidate plant [8]

    (b)   Least cost optimization problem for thermal plant [8]