[5562]-224

M.E. (Electrical Power System)
POWER SYSTEM PLANNING & RELIABILITY
(2017Course) (Semester-II) (503208)

Time : 3 Hours]   *[Max. Marks : 50*

Instructions to the candidates:

1) Attempt Q.No.1 or Q.No.2, & Q.No.3 or Q.No.4 & Q.No.5 or Q.No.6.

2) Assume suitable data wherever necessary.

3) Figures to the right in Bold indicate maximum marks.

4) Use of non-programmable scientific calculator is permitted.

5) Neat figures must be drawn wherever necessary.

Q1) a) Classify load forecasting methods, explain any two methods of load forecasting. **[9]**

b) Elaborate Regression analysis pertaining to reliability calculations. **[9]**

OR

Q2) a) Elaborate mathematical expectation probability concept pertaining to reliability calculations. **[9]**

b) The investment of a generating station is 50 million rupees with operational life of 50 years. The annual cost is 1million rupees. What is the net present value if the annual profit is 7 million and discounted rate is 10%. **[9]**

Q3) a) What are the objectives of transmission planning? Explain the concept and application of state selection. **[8]**

b) Explain generation integrated system and factors affecting interconnection under emergency assistance. **[8]**

OR

Q4) a) What are the different long term transmission planning methods, explain any one method in detail. **[8]**

b) Elaborate on inter-regional transmission planning in India. **[8]**

P.T.O.

Q5) a) Elaborate the various factors to be considered in distribution system planning. **[8]**

b) Describe additional interruption indices in distribution system reliability evaluation. **[8]**

OR

Q6) a) Explain in detail basic reliability evaluation techniques for parallel and meshed distribution network. **[8]**

b) Elaborate the effects of protection failure and effect of transferring load in distribution system. **[8]**

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