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BIEE-025

B.Tech. – VIEP – ELECTRICAL ENGINEERING (BTELVI)

Term-End Examination

00183

December, 2018

BIEE-025 : POWER SYSTEM PLANNING AND LOAD FORECASTING

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt any **five** questions. Each questions carries equal marks. Use of scientific calculator is permitted.*

1. (a) What is forecasting in power system planning ? Discuss the need and the current status of forecasting in India. 7

(b) What is peak load forecasting ? What are the factors affecting accuracy in peak load forecasting of a power system ? 7

2. (a) How is long-term forecasting different from short-term forecasting ? Explain with suitable example. 7

(b) Explain the spatial load forecasting technique used for long-term forecasting for electricity industry. 7

3. (a) Discuss the role of forecasting in power system planning. What are the differences between individual forecasting methods and group forecasting methods ? *10*

(b) How does pattern of data affect the accuracy of forecasting methods ? *4*

4. (a) Explain the day ahead forecasting technique for short-term forecasting used in power trading. Also enlist its advantages. *7*

(b) Explain the time horizon effect on forecasting methods for power system planning in detail. *7*

5. (a) What is generation planning ? Explain the fundamental economic analysis for generation planning. *7*

(b) How does generation planning affect the distribution and transmission system planning. *7*

6. What are the different categories of generating units ? Discuss the influence on optimization of generation planning according to different categories of generating units. Suitably assume the number of different generating units. *14*

7. Write short notes on any ***two*** of the following : *2×7=14*

(a) Regression method of forecasting in power system

(b) Multivariate procedure for long-term forecasting

(c) Effect of wrong forecasting on power system planning