BIEE-025

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

00655 **Term-End Examination**

June, 2019

BIEE-025 : POWER SYSTEM PLANNING AND LOAD FORECASTING

Time : 3 hours　　　　　　　*Maximum Marks : 70*

Note : Attempt any five questions. All questions carry equal marks. Use of scientific calculator is permitted.

1. (a) Elaborate various difficulties, need and role of forecasting in present day power system. 7

   (b) Define load forecasting. State the purpose of load forecasting. Also state its classification and importance. 7

2. (a) What are the different factors which influence the accuracy of forecasting technique ? 7

   (b) Classify various types of load forecasting according to different time horizons. 7

3. (a) What do you understand by the term Power System Planning ? Why is it necessary to do power system planning. What are the areas where planning is necessary ?   *7*

(b) What are the constraints observed during optimization process in power system expansion planning ?   *7*

4. (a) What is the need for private participation in generation planning ? How can it improve the power situation in India ?   *7*

(b) Write a note on distribution system planning.   *7*

5. (a) Discuss the different power system planning tools.   *7*

(b) Explain the forecasting of load by least square method.   *7*

6. Identify the uncertainty features associated with transmission expansion planning. Justify the consideration of distributed generation technology in transmission expansion planning. Write the main factors which are considered in formulation of objective function for transmission expansion planning in deregulated power system.   *14*

7. Explain any *two* of the following :   *2×7=14*

    (a)   Peak load forecasting

    (b)   Regression methods

    (c)   Box-Jenkins time series method

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