

**B.Tech. - VIEP - ELECTRICAL ENGINEERING
(BTELVI)**

Term-End Examination

June, 2017

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**BIEE-025 : POWER SYSTEM PLANNING AND LOAD
FORECASTING**

Time : 3 hours

Maximum Marks : 70

*Note : Attempt any **five** questions. All questions carry equal marks.*

1. (a) Discuss the objectives of planning in power systems. 7
- (b) Describe long-term and short-term planning with suitable examples. 7
2. (a) What is the importance of transmission system planning on a long-term basis ? Describe its method of execution. 10
- (b) What are the methods of peak load forecasting? 4
3. (a) Describe the problems that the electricity industry is facing in context of load forecasting. 7
- (b) Compare isolated and inter-connected power systems. 7

4. (a) Elaborate the various performance indices that are used for the analysis of composite power systems. 10
- (b) Write fundamentals of qualitative forecasting. 4
5. (a) Explain the different techniques of long-term and short-term forecasting. 10
- (b) What do you mean by average interruption rate? 4
6. (a) What are different factors on which the accuracy of forecasting depends? Explain each factor in detail. 10
- (b) Describe the limitations of individual forecasting methods. 4
7. Write short notes on any *two* of the following: $2 \times 7 = 14$
- (a) Design of Distribution Substation
- (b) Transmission System Planning
- (c) Time Horizon Effects
- (d) Regression Methods
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