

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

Term-End Examination

June, 2016

00466

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

Time : 3 hours

Maximum Marks : 70

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

1. (a) What is the role of load forecasting in power system planning studies ? 7
- (b) What is the criteria of selecting forecasting methods ? 7
2. (a) Explain the Box Jenkins time series regression method. 7
- (b) What problems are being faced by electricity industries in India ? 7
3. (a) Explain spatial load forecasting. 7
- (b) Describe short-term load forecasting using time series analysis. 7

4. (a) Explain the time horizon perspective of a power system studies with a suitable diagram. 7
- (b) Explain the transmission system planning. 7
5. (a) Explain the effect of data pattern on the individual forecasting methods. 7
- (b) Describe the various issues associated with the power system planning process. 7
6. What is a generation expansion planning (GEP) problem? Give the mathematical model of linear programming based multibus GEP. 14
7. Write short notes on any *two* of the following : $2 \times 7 = 14$
- (a) Peak Load Forecasting
- (b) Loss Of Load Expectation (LOLE)
- (c) Forced Outage Rate (FOR)
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