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SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: | | | | | | | | | | | | | Total number of pages:[4]

Total number of questions: 05

## M.Tech. || EE || 3rd Sem

# Power System Planning

## Subject Code: MELE1-372

**Paper ID:** (for office use)

**Time allowed: 3 Hrs** **Max Marks: 60**

**Important Instructions:**

- Attempt all questions
- Each question carries equal marks

| | | |
|---|---|---|
| Q. 1. | Discuss the importance of load forecasting in power system planning. Give salient features of various forecasting techniques. Which method of load forecasting would you suggest for long term and why? Discuss in detail. | CO1&CO2 |
| | OR | |
| | a) How to design sub transmission lines and distribution lines. Discuss in detail. | CO1&CO2 |
| | b) Write short note on Unit Maintenance Schedules | |
| Q. 2. | Formulate least cost optimization problem involving different costs and give methods to solve the problem. | CO1 |
| | OR | |
| | Explain Forecasting of Energy by Trend and Economic Projection Methods. | CO1 |
| Q. 3. | Describe the importance and execution of transmission system planning on long term basis. | CO1&CO2 |
| | OR | |
| | Discuss in detail about Power Pool Operation and power exchange contracts. | CO1&CO2 |
| Q. 4. | What is Power System Planning? What are its objectives? Discuss different stages involved in Planning. | CO2 |
| | OR | |
| | How automatic transmission planning is realized using interactive graphics. Explain. | CO2 |
| Q. 5. | Write short note on i) Electric utility industry<br>ii) Review of Load forecasting | CO1 |
| | OR | |
| | a) What is the need and importance of Generation system expansion planning? Discuss in detail. | CO1 |
| | b) Explain traditional generation expansion planning models in detail. | |