

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

**Term-End Examination**

**June, 2017**

**00744**

**BIEEE-010 : POWER SYSTEM RELIABILITY**

*Time : 3 hours*

*Maximum Marks : 70*

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

- 
- 
1. (a) How can you improve the reliability of the current Indian power systems ? 7
  - (b) How will you determine the reliability of series and parallel systems ? 7
  2. (a) Explain how loss of load probability can be estimated using load duration curve. 7
  - (b) Describe the Monte Carlo method in reliability evaluation of composite power system. 7
  3. (a) What do you mean by operating reserve ? Also discuss the operating replacement rate and PJM methods. 7
  - (b) What is spinning reserve ? Explain spinning reserve technique in reliability analysis. 7

4. (a) How is capacity expansion analysis carried out for generating systems ? 7
- (b) Describe the various reliability indices and frequency duration method. 7
5. (a) Discuss the various probability array methods for interconnected systems in detail. 7
- (b) Describe the functioning of a multicönnected system in detail. 7
6. (a) Discuss the effect of a load transfer in distribution system. 7
- (b) Explain various interruption indices in distribution system. 7
7. Write short notes on any *two* of the following :  $2 \times 7 = 14$
- (a) UC Risks
- (b) Generator System Models Used for Power System Analysis
- (c) Interconnected Systems
-