

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

Term-End Examination

00846

June, 2016

BIEEE-010 : POWER SYSTEM RELIABILITY

Time : 3 hours

Maximum Marks : 70

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

1. (a) Discuss in detail the outage probability in power system. 7
- (b) What are the various factors affecting the availability and unavailability of units in power systems ? 7
2. (a) Explain the different factors affecting the emergency assistance available through interconnections. 7
- (b) Explain the multi-connected system for the interconnected power system. 7

3. (a) Explain all limiting factors which are affecting the generating capacity of power system. 7
- (b) Discuss the techniques adopted in power system for Capacity Expansion Analysis. 7
4. (a) Describe the security function approach for the rapid start of generating units in power systems. 7
- (b) Explain "Hot Reserve" in a power system. 7
5. Explain in detail the various basic evaluation techniques for a radial distribution system. 14
6. (a) What are the advantages and disadvantages of interconnecting conventional and non-conventional energy resources? 7
- (b) Explain the Frequency Duration Method and its application in power system. 7
7. Write short notes on any *two* of the following: $2 \times 7 = 14$
- (a) State Load Model
- (b) Maximum Load Reserve
- (c) Parallel and Mesh Networks
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