

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

Term-End Examination

June, 2015

00041

**BIEEE-013 : POWER QUALITY ISSUES AND
REMEDIAL MEASURES**

Time : 3 hours

Maximum Marks : 70

Note : Attempt any five questions. Each question carries equal marks.

1. (a) What is power quality ? In what terms is it measured ? Explain. 7
- (b) What are the main causes of poor power quality ? 7
2. (a) What are the causes of voltage sag ? What are the remedial measures to overcome this issue ? 7
- (b) What is SMPS ? How is it affecting the power quality ? 7
3. (a) What is three-phase converter ? How is it affecting the power quality ? 7
- (b) How does the magnetic choke connected in series in the fluorescent lamps distort power quality ? 7

4. (a) What is power factor ? On what factors does it depend ? What is its significance in power quality ? 7
- (b) What is the difference between active and passive power factor correction ? Name one technique of each method. 7
5. (a) What is Static Var Compensator (SVC) ? Explain its working in detail. 7
- (b) What is STATCOM ? Explain its working to improve the quality of power system. 7
6. (a) What is filter ? Differentiate between active and passive filters. 7
- (b) Explain the functions of VPS ? How is it affecting the quality of power system ? 7
7. (a) What is Constant Voltage Transformer (CVT) ? Explain its working. 7
- (b) Why is grounding important ? Explain the various methods of grounding. 7
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