

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

**Term-End Examination**

00894

**June, 2014**

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

*Time : 3 hours*

*Maximum Marks : 70*

---

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

---

1. (a) Discuss the various remedial measures available for Power Quality problems. 7
- (b) Describe the various stages in Power Quality monitoring. 7
2. (a) Distinguish clearly between Power Quality and Equipment Immunity. 7
- (b) Explain the operation of Dynamic Voltage Restorer (DVR) for correction of voltage sag/swell. 7
3. (a) Explain the various functions of STATCOM in power system. 7
- (b) Explain the effects of steady state disturbances on various loads. 7

4. (a) What are the effects of harmonics on power system devices ? Describe in brief. 7
- (b) Discuss active harmonic filters for power quality improvement. 7
5. (a) Explain various types of transients that occur in power system. 7
- (b) Explain the methods of monitoring and mitigation of voltage sags. 7
6. (a) Discuss Harmonic mitigating transformers. What are various sequence harmonic currents ? 7
- (b) What are the disadvantages of low power factor ? Describe various methods for improving power factor. 7
7. (a) Explain the principles and configurations of UPS in detail. 7
- (b) What do you understand by grounding ? Describe various methods used for grounding in detail. 7
-