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Name :

Reg. No:

EIGHTH SEMESTER B.TECH (ENGINEERING) DEGREE EXAMINATION, APRIL 2013

**EE/PTEE 09 804 L19 - POWER QUALITY ISSUES & REMEDIAL MEASURES
(2009 Admission)**

Time : Three Hours

Maximum Marks



Part A

Answer All questions: 2 Marks each

1. Explain the term DC offset
2. Define THD
3. Explain custom Power devices
4. What are active filters?
5. Explain the necessity of Grounding (10 Marks)

Part B

Answer any four questions: 5 Marks each

6. Explain the term Power Quality
7. Classify the PQ problems
8. Explain interharmonics
9. Explain Impedance Scan Analysis
10. What are series active filters?
11. Explain the NEC grounding requirements (20 Marks)

Answer All questions: 10 Marks each (40 Marks)

12. (a) Explain impulsive and oscillatory transients (10 Marks)
OR
(b) Explain sag and swell in voltages (10 Marks)
13. (a) Explain power factor under nonsinusoidal current conditions. Define distortion factor (10 Marks)
OR
(b) Write a note on harmonic distortion of fluorescent lamps (10 Marks)
14. (a) Explain Active Power Factor Corrected single phase front end converter (10 Marks)
OR
(b) Differentiate SVC and STATCOM (10 Marks)
15. (a) Explain d-q domain control of three phase shunt active filters (10 Marks)
OR
(b) Explain Voltage Restorers for sag, swell and flicker problems (10 Marks)
