



Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code : 42484

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018

Eighth Semester

Electrical and Electronics Engineering

EE 2028 – POWER QUALITY

(Regulations 2008)

(Common to PTEE 2028 – Power Quality for B.E. (Part-Time)

Seventh Semester – EEE – Regulations 2009)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. What do you mean by power frequency variations in power quality ?
2. What is total harmonic distortion ?
3. How the power quality problem can be detected in a system ?
4. What are the causes of voltage sag in power system ?
5. Why low-pass filter is used in transient protection ?
6. What is the significance of EMTP studies ?
7. What are the various harmonic effects on devices and loads ?
8. State the difference between harmonics and transients.
9. List out the various power quality monitoring steps.
10. What is the role of expert system in power quality studies ?

PART - B

(5×16=80 Marks)

11. a) Discuss in detail about transients and waveform distortion related to power quality.
(OR)
- b) Discuss the short duration and long duration power quality events with neat illustrations.
12. a) Explain the estimation of voltage sag performance.
(OR)
- b) Discuss in detail about voltage sag mitigation techniques.
13. a) Discuss about the shielding and surge arrestors.
(OR)
- b) Describe the various sources of over voltages.
14. a) Explain briefly about harmonic distortion and conduct an evaluation study.
(OR)
- b) Write short notes on the benefits of active harmonic filters.
15. a) Discuss in detail about the expert system for power quality monitoring.
(OR)
- b) Explain the various equipments used for power quality monitoring and measurement.