

Registration No :

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Total Number of Pages : 01

B.Tech
PEEL5403

8th Semester Back Examination 2018-19

ELECTRICAL POWER QUALITY

BRANCH : EEE, ELECTRICAL

Time : 3 Hours

Max Marks : 70

Q.CODE : F097

Answer Question No.1 which is compulsory and any FIVE from the rest.
The figures in the right hand margin indicate marks.

Q1 Answer the following questions : (2 x 10)

- a) Power quality issue is a consumer-driven issue. Justify your answer.
- b) Mention the categories of the transients.
- c) 'Momentary over voltage' belongs to which class of power quality issue and what is the appropriate term used.
- d) Draw the voltage wave form for 3 phase voltage imbalance.
- e) Distinguish between notch and harmonics
- f) Explain the term flicker in power quality.
- g) Define the term ground loop.
- h) Mention at least two ambiguous term in the era of electrical power quality.
- i) Explain the term CVT.
- j) By Modified conductor spacing, which type of problems can be addressed.

Q2 a) Briefly discuss about the sag performance evaluation indices. (5)
b) Mention the standards associated with the voltage sag. (5)

Q3 a) Mention the most common events leading to ferroresonance. (5)
b) Explain about the principles of overvoltage protection. (5)

Q4 a) Distinguish between surge arrestors and surge suppressors. (5)
b) Mention the various lightning protection of over voltage lines? Explain each of them. (5)

Q5 a) Mention various causes of harmonics in distribution system. (5)
b) Distinguish between total harmonic distortion and total demand distortion. (5)

Q6 Explain in brief, how to locate harmonic sources and explain about methods to filter the harmonics in the system. (10)

Q7 Mention different voltage sag mitigation techniques? Explain in detail (10)

Q8 Write short answer on any TWO : (5 x 2)

- a) Standards on Harmonics
- b) Current-limiting fuses
- c) Flywheel with UPS system