



B.E DEGREE EXAMINATIONS: APRIL/MAY 2016

(Regulation 2009)

Eighth Semester

ELECTRICAL AND ELECTRONICS ENGINEERING

EEE352: Power Quality

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

- The ratio of the root mean square of the harmonic content to the rms value of the fundamental quantity expressed as a percent of the fundamental is
 - THD
 - TDD
 - Swell
 - Sag
- A set of curves representing the withstand capabilities of computers in terms of the magnitude and duration of the voltage disturbance is
 - ITI
 - CBEMA
 - capability
 - Harmonics
- An overvoltage is an increase in the rms ac voltage greater than _____ percent at the power frequency for a duration longer than _____.
 - 110, 1 sec
 - 110, 1 minute
 - 50, 1 sec
 - 50, 1 minute
- Which is used as voltage limiting device in utility surge arresters?
 - Low pass filter
 - Isolation transformer
 - MOV
 - Power conditioners
- Which of the following is not source of harmonics?
 - Adjustable speed drives
 - Arc furnaces
 - Induction furnaces
 - Resistive heater
- Shunt capacitors
 - Creates harmonics
 - Severe harmonic distortions
 - Capacitive reactance is constant with change in frequency
 - The capacitive reactance is proportional to the frequency

23. a) With neat diagrams explain how the harmonics are located.

(OR)

b) Discuss about voltage and current distortions.

24. a) Propose suitable methods to filter the inter-harmonic frequencies caused by induction furnaces.

(OR)

b) Discuss the reasons for grounding.

25. a) Write short notes on

i) Disturbance analyzer (7)

ii) Spectrum analyzer (7)

(OR)

b) With a neat block diagram explain how expert systems are used for PQ monitoring applications.
