Reg. No. : | | | | | | | | | | |

Question Paper Code: S31381

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Elective

Electrical and Electronics Engineering

01UEE914 - POWER QUALITY

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define the term power quality.
2. Sketch the CBEMA and ITI curves.
3. Differentiate voltage sag and swell.
4. List the causes for short interruptions.
5. State the principle of over voltage protection.
6. List the devices used in mitigation of over voltages.
7. Differentiate harmonics and inter harmonics.
8. Categorize types of filters used in reducing harmonics.
9. Identify the need of power quality monitoring?
10. Mention any four power conditioning equipments.

PART - B (5 x 16 = 80 Marks)

11. (a) Elaborate the power quality Issues on the utility side of power system. (16)

Or

(b) Discuss about power quality standards and CBEMA,ITI curves. (16)

12. (a) Estimate the sag severity in induction motor starting. (16)

Or

(b) Explain about the voltage sag mitigation devices. (16)

13. (a) Exemplify the devices for over voltage protection. (16)

Or

(b) Indicate the features of EMTP. (16)

14. (a) Point out the sources and effects of harmonic distortion in industries. (16)

Or

(b) Summarize IEEE and IEC standards on harmonics. (16)

15. (a) Interpret the power quality monitoring considerations. (16)

Or

(b) Describe power quality conditioning equipments. (16)

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