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

Question Paper Code: 39314

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

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. Differentiate between impulse transients and oscillatory transients.
3. What is the importance of voltage sag estimation?
4. How fast transfer switches are used in minimizing the severity of sags?
5. State the principle of over voltage protection.
6. Write the methods used for protection of cable.
7. Give IEEE and IEC stands for EMC.
8. Name the two Indices for measuring harmonic content of waveform.
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) Explain the following power quality issues in detail with examples. (16)

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

Or

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

13. (a) Explain the various methods to mitigate voltage swells. (16)

Or

(b) Discuss about PSCAD and EMTP for transient studies. (16)

14. (a) Explain the sources of harmonics from commercial and industrial loads. (16)

Or

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

15. (a) Explain the harmonic analyzer and disturbance analyzer. (16)

Or

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

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