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Question Paper Code: 39314

B.E. / B.Tech. DEGREE EXAMINATION, MAY 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. What are the reasons for voltage imbalances?
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. Mention the devices used for overvoltage 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. Name few equipment's to measure power quality.
10. Write the function of flicker meter in power quality.

PART - B (5 x 16 = 80 Marks)

11. (a) Briefly explain Computer Business Equipment Manufacturers Association(CBEMA) curve and ITI curve. (16)

Or

(b) Explain the following power quality issues in detail with examples. (16)

12. (a) Discuss the methods to mitigate the voltage sags. (16)

Or

(b) Describe the procedure for estimating the voltage sag severity. (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) Discuss the role of active and passive filters in harmonic control. (16)

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

Or

(b) Discuss in detail about power quality measurement equipment's. (16)
