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

Question Paper Code: 39314

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

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. What is the need for power quality standards?
3. What is the importance of voltage sag estimation?
4. What is the voltage interruption threshold?
5. Define Ferro resonance.
6. List the sources of over voltages.
7. List the harmonic indices.
8. Name the devices for controlling harmonic distortion.
9. What is the use of Flicker meter?
10. List the disturbances that can be analyzed by power line disturbance analyzer.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) What are the impacts of transient on power quality? Classify the transients that occur in a power system. (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) Explain about the voltage sag mitigation devices. (16)

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

Or

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

14. (a) Discuss the characteristics of harmonics generated by different types of industrial loads. (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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