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R-11 / R-13

Code: 1G287

IV B.Tech. II Semester Supplementary Examinations Nov/Dec 2018

Energy Auditing and Demand Side Management

(Electrical and Electronics Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any **five** questions

All Questions carry equal marks (**14 Marks** each)

1. Explain the different types of representations in Energy consumption
2. Define pie-chart, Sankey diagrams and Load profiles.
3. Discuss construction details and characteristics of energy efficient motors.
4. What is the role of power factor on system performance? Explain the effects of harmonics on power factor.
5. Discuss in detail about good lighting system design and practice.
6. a) Explain how to develop cash flow models
b) Explain in brief about taxes and tax credit
7. What is DSM? Explain briefly. Explain any one technique of DSM
8. Discuss management and organization of energy conservation awareness program.

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R-11 / R-13

Code: 1G285

IV B.Tech. II Semester Supplementary Examinations Nov/Dec 2018

Principles of Power Quality

(Electrical and Electronics Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any **five** questions

All Questions carry equal marks (**14 Marks** each)

1. a) What is power quality? And explain the significance of power quality.
b) Write short notes on:
 - (i) oscillatory transients
 - (ii) voltage imbalance
2. a) Explain about sources of sags and interruptions
b) Explain the fundamental principles of protection.
3. Explain about various solutions at the end user level protection
4. a) Define harmonic distortion and write a short notes on it
b) What are the various harmonic sources from commercial loads? Explain.
5. What are the effects of harmonics? And explain the harmonic distortion evaluation procedure
6. Describe how utilities can deal with problems related to capacitor switching transients.
7. Describe the process of power quality bench marking.
8. Explain the various power quality monitoring considerations.
