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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
M.Tech I Year II Semester (R16) Regular Examinations May/June 2017
ENERGY AUDITING, CONSERVATION & MANAGEMENT
(Power Electronics)

(For Students admitted in 2016 only)

Time: **3 hours**Max. Marks: **60**(Answer all Five Units **5 X 12 =60** Marks)**UNIT-I**

- 1 a Discuss about the factors affecting the energy saving potential? 6M
b Explain in detail about the concept and types of energy audit 6M

OR

- 2 a Explain various energy conservation schemes? 6M
b What is the pie-chart, sankey diagrams and load profiles? Explain their Significance in energy audit with suitable example 6M

UNIT-II

- 3 a How the energy management program can be organized? Explain in detail? 12M

OR

- 4 a Explain in detail about initiating, planning and controlling in energy management. 6M
b Discuss the LANGUAGE and Questionnaire of energy manager 6M

UNIT-III

- 5 a Discuss about the role of supply voltage in the energy audit of electrical motor? 6M
b Compare the internal and external characteristics of DC drives and AC drives? 6M

OR

- 6 a What is motor energy audit? Explain 6M
b Discuss the characteristics of energy efficient motors 6M

UNIT-IV

- 7 a List the causes for poor power factor? 6M
b Explain the effects of poor power factor in process industries? 6M

OR

- 8 What is meant by non linear loads? Explain the effect of harmonics on power factor? 12M

UNIT-V

- 9 a List various factors has be considered while designing a good lighting system? 6M
b What are the applications of life cycle costing analysis? 6M

OR

- 10 a Explain briefly the lighting energy audit? 6M
b How the capacitor banks are improves the power factor, explain briefly? 6M

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