

Code: 13A02705

R13

B.Tech IV Year I Semester (R13) Regular Examinations November/December 2016

ENERGY AUDITING & DEMAND SIDE MANAGEMENT

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) What are the different types of energy audit?
 - (b) Mention various energy conservation methods.
 - (c) Explain the difference between energy efficient motors and standard motors.
 - (d) Define harmonics.
 - (e) Explain about Tongue tester.
 - (f) Explain about data logger.
 - (g) Define load management.
 - (h) Write benefits of DSM.
 - (i) Define payback method.
 - (j) Write short notes on participant cost test.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 Explain in detail about how to conserve electrical energy and explain some of the means to conserve energy.

OR

- 3 (a) Discuss energy situation in world and in India.
(b) What is energy index? How is it calculated? What is its use?

UNIT – II

- 4 Explain the constructional details of energy efficient motors.

OR

- 5 What is the role of power factor on system performance? Explain the effects of harmonics on power factor.

UNIT – III

- 6 Write short notes on: (a) Applications of PLC's. (b) Thermocouples. (c) Lighting control

OR

- 7 Briefly discuss about lighting energy audit.

UNIT – IV

- 8 (a) What is DSM? Explain briefly.
(b) Explain any one technique of DSM

OR

- 9 Explain about the concept of 'time of day pricing'.

UNIT – V

- 10 Explain pay back analysis. Mention its advantages and disadvantages.

OR

- 11 Explain in detail about:
(a) The time value of money concept
(b) Taxes and tax credit.
