

Total No. of Questions : 10]

SEAT No. :

P2392

[4758] - 551

[Total No. of Pages :2

T.E. (Electrical)

ENERGY AUDIT AND MANAGEMENT

(2012 Course) (End - Sem.) (303150) (Semester - II)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Use of calculator is allowed.*
- 5) *Assume Suitable data if necessary.*

- Q1)** a) Explain concept of green building. [6]
b) Explain importance of energy conservation in India. [4]

OR

- Q2)** a) Give salient features of Electricity Act 2003. [4]
b) Explain responsibilities and duties of Energy Manager Under EC act - 2001. [6]

- Q3)** a) Differentiate SSM and DSM. [6]
b) Explain DSM in agriculture sector. [4]

OR

- Q4)** a) Define energy management as per energy conservation act - 2001. Explain principles of energy management. [6]
b) Explain features of automatic meter reading in utility energy management. [4]

- Q5)** a) Define energy audit as per EC act - 2001. Why energy audit is necessary? What are the types of energy audit? [10]
b) Describe the "Sankey diagram" and its application in energy audit. [8]

OR

P.T.O.

- Q6) a)** Enlist and explain various instrumentation used in energy audit. [10]
b) Explain terms energy production relationship and specific energy consumption in detail. [8]

- Q7) a)** Explain energy conservation techniques in illumination and pumping system. [8]
b) What is cogeneration? Explain topping and bottoming cycles with block diagram. [8]

OR

- Q8) a)** Explain energy conservation techniques in transmission and distribution (T & D) sector of utility industries. [8]
b) Explain energy conservation potential in electric motors. What are the advantages of energy efficient motors. [8]

- Q9) a)** Define payback period and ROI methods used in economic analysis of energy conservation project. What are the limitations of these methods? [8]
b) Explain energy audit case study in Municipal corporations. [8]

OR

- Q10) a)** Explain time value of money concept and Net present value (NPV) method. [8]
b) Explain energy audit case study in educational institutes. [8]

