

Total No. of Questions : 10]

SEAT No. :

P3297

[Total No. of Pages : 2

[5353]-170

T.E. (Electrical)

ENERGY AUDIT AND MANAGEMENT

(2012 Pattern) (END - Semester)

Time : 2.30 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Solve Q1 or Q2, Q3 or Q4, 05 or Q6, Q7 or 08, Q9 or Q10.*
- 2) *Neat diagrams must be drawn wherever necessary*
- 3) *Figures to the right indicates full marks*
- 4) *Use of Calculator is allowed.*
- 5) *Assume Suitable data if necessary.*

- Q1)** a) Classify various energy resources. [5]
b) Give salient features of Electricity Act- 2003. [5]

OR

- Q2)** a) Explain role of renewable energy sources in energy management. [5]
b) Define Energy management. What are its objectives? [5]

- Q3)** a) What are the responsibilities of energy manager under EC act-2001? [5]
b) Define and explain energy security concept. [5]

OR

- Q4)** a) What are the advantages and barriers of demand side management (DSM)? [5]
b) Explain implementation of demand side management (DSM) in agriculture sector. [5]

- Q5)** a) Define energy audit. Why energy audit is necessary? Why data and information analysis is required in energy audit? [9]
b) Explain Sankey diagram. What is the role of Sankey diagram in energy audit? [9]

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OR

- Q6)** a) Enlist and explain various instruments used in energy audit. [9]
b) What is the role CUSUM chart in energy audit? Give various steps used in energy performance analysis using CUSUM technique. [9]

- Q7)** a) Explain various energy conservation opportunities and measures in boiler systems. [8]
b) Explain energy audit case study in paper industry. [8]

OR

- Q8)** a) Explain energy conservation measures in air conditioning systems. [8]
b) Explain various energy conservation opportunities and measures in T & D Sector. [8]

- Q9)** a) Explain net present value method. What are its advantages? [8]
b) Explain energy audit case study of municipal corporations. [8]

OR

- Q10)** a) Define sensitivity analysis? What are its objectives? Enlist various factors to be considered while carrying out sensitivity analysis? [8]
b) Explain simple payback period and return on investment method. What are the disadvantages of simple payback period method? [8]

