

Total No. of Questions : 10]

SEAT No. :

P2447

[Total No. of Pages : 2

[5253] - 170

T.E. (Electrical)

Energy Audit and Management

(2012 Pattern) (End Semester)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Solve 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 indicates full marks
- 4) Use of Calculator is allowed.
- 5) Assume Suitable data if necessary

Q1) a) Explain Indian energy scenario. [5]

b) What are the duties of Energy Manager under EC act 2001?. [5]

OR

Q2) a) Give salient features of Electricity Act- 2003. [5]

b) Define supply side management (SSM). What are its disadvantages? [5]

Q3) a) Explain implementation of SSM strategy through power factor tariff for controlling power demand. [5]

b) What is forced field analysis? How it is used in Energy Management?[5]

OR

Q4) a) Explain role of VAR compensation in demand side management (DSM).[5]

b) Explain role of renewable energy sources in energy management. [5]

Q5) a) Why energy audit is necessary? What are their types? Explain any one in detail. [9]

b) Explain various action plans for implementation of energy conservation options. [9]

OR

Q6) a) Explain energy audit case study in cement industry. [9]

b) Explain CUSUM charts. Give various steps used in energy performance analysis using CUSUM technique. [9]

P.T.O.

Q7) a) Explain various energy conservation opportunities and measures in illumination area. [8]

b) Which type of losses occurs in induction motor? What are the efficiency improvement measures for each type of loss? [8]

OR

Q8) a) What is co-generation? Explain energy conservation measures in waste heat recovery system. [8]

b) Explain various energy conservation opportunities and measures in DG set. [8]

Q9) a) Explain various financial appraisal techniques. [10]

b) Explain energy audit case study of an IT industry. [6]

OR

Q10) a) Define and explain sensitivity analysis? What are its objectives? What are the factors to be considered while carrying out sensitivity analysis? [10]

b) Explain energy audit case study in sugar factory. [6]

