

Exam.Code:0936
Sub. Code: 6643

2054
B.E. (Electrical and Electronics Engineering)
Sixth Semester
EE-613: Energy Management and Auditing

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

- a) What is energy conservation? Explain briefly its importance.
- b) What do you mean by Time of Day (ToD) tariff?
- c) State the importance of energy policy for industries.
- d) What are different investment analysis tools relevant to energy management projects.
- e) Briefly explain the essential elements of monitoring and targeting system. (5x2)

UNIT - I

- II. a) How will you classify the energy strategy for the future? Briefly explain the various components involved in these strategies.
b) Write the important features of Energy Conservation Act, 2001 and role of BEE in its implementation. (2x5)
- III. Explain in detail the difference between preliminary and detailed energy audits. Write the format of energy audit reports. (10)
- IV. a) Explain how a CUSUM chart is drawn with an example.
b) Briefly explain different types of contracts. (2x5)

UNIT - II

- V. a) What are Total Harmonic Distribution and its effects on electrical system?
b) A process plant consumes of 12500 kwh per month at 0.9 power factor. What is the percentage reduction in distribution losses per month if power factor is improved upto 0.96 load end? (2x5)

P.T.O.

(2)

- VI. a) How does efficiency loss occur in a rewind motor? How do you check the efficacy of rewind motor?
- b) List the energy savings opportunities in industrial lighting systems. (2x5)
- VII. a) Explain working of a soft starter and its advantages over other conventional starters.
- b) Explain the principle of automatic power factor controller. (2x5)

x-x-x