

B.Tech IV Year II Semester (R15) Regular Examinations April 2019

ENERGY MANAGEMENT

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

1 Answer the following: (10 X 02 = 20 Marks)

- (a) What is interest?
- (b) Define labour and manufacturing cost.
- (c) Define depreciation.
- (d) Name any four methods of depreciation.
- (e) Define MARR.
- (f) List out functions of energy manager.
- (g) Define energy index.
- (h) What is energy saving potential?
- (i) What is pricing policy?
- (j) Write short notes on level of power generation in India.

PART – B

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

UNIT – I

2 What is time value of money? Explain importance of it in managerial decisions with an example.

OR

3 Discuss the interest rate from borrowers and lenders point of view with cash flow diagram.

UNIT – II

4 Define breakeven point. With a graph explain briefly break even analysis.

OR

5 A local transport company wants to purchase a heavy duty truck for 35 lakhs. The company assures that the truck can run 15 lakh km during its 10 years of operation. The salvage value of life period is Rs. 8 lakhs. If the truck has already run for this period of operation 10 lakh kilometers, find the depreciation of the truck at this period.

UNIT – III

6 A Rs. 1000 utility bond with 14 years remaining before maturity can be now purchased for Rs. 760. It pays interest of Rs. 20 each 6 month period. What rate of return is earned by purchasing the bond at the current market plus a brokerage charge of Rs. 2?

OR

7 Define rate of return and explain minimum acceptable rate of return and internal rate of return.

UNIT – IV

8 List and explain the different types of energy audits and on what factors it is classified.

OR

9 Explain the terms energy index and cost index with examples.

UNIT – V

10 Explain briefly transmission and distribution of power.

OR

11 Explain briefly:

- (a) Energy trade & its economic impacts.
- (b) Pricing policy of energy.