

Code: 13A03806

B.Tech IV Year II Semester (R13) Advanced Supplementary Examinations July 2018

**ENERGY MANAGEMENT**

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

**PART – A**  
(Compulsory Question)

\*\*\*\*\*

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

- (a) Name the different elements of costs.
- (b) Explain law of supply.
- (c) List the causes of depreciation.
- (d) What is BEP?
- (e) Name the methods of investment appraisal.
- (f) Name the functions of energy manager.
- (g) What is energy auditing?
- (h) Name any four objectives of energy auditing.
- (i) What is time value of money?
- (j) Name any four Indian energy policies.

**PART – B**

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

**UNIT – I**

- 2 (a) What are the objectives of engineering economics?
- (b) What do you understand by present worth by the “72 rule”?

**OR**

- 3 List and explain the conditions for present worth comparisons.

**UNIT – II**

- 4 Define depreciation. Explain any four methods of depreciation.

**OR**

- 5 (a) Explain with sketch break even analysis and break even chart.
- (b) Write the difference between estimation and costing.

**UNIT – III**

- 6 (a) Indicate the limitations of present worth and internal rate of return methods.
- (b) What are the steps to be considered in setting up an energy management program?

**OR**

- 7 (a) Explain the organizational chart for energy management.
- (b) What is the role of energy management in process industry? Discuss.

**UNIT – IV**

- 8 State with reasons for the need of energy audit in any industry.

**OR**

- 9 Explain briefly:

- (a) Energy index.
- (b) Cost index.

**UNIT – V**

- 10 Discuss Indian energy scenario.

**OR**

- 11 Write short notes on:

- (a) Domestic energy production.
- (b) Transmission and distribution of power.