

Roll No.

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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (2011 Onwards E-II) (Sem.-7,8)
ENERGY CONSERVATION AND MANAGEMENT
Subject Code : DE/ME-1.4
Paper ID : [A3068]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A**1. Write briefly :**

- a) What is insulation?
- b) Explain the operating principle of a regenerator.
- c) Why we need to implement "Good Housekeeping"?
- d) What is thermal storage?
- e) Define economizer.
- f) What are the applications of a heat pipe in heat exchanger?
- g) Define fluidized bed technology.
- h) Explain the difference between energy conservation and management.
- i) Why is Energy Conservation so Important?
- j) How can we save energy?

SECTION-B

2. What are alternative sources of energy? Explain them.
3. Write a note on fluidized bed technology.
4. Explain energy usage patterns in iron- steel and aluminum industries.
5. Explain the energy conservation case study in air conditioning.
6. Write a note on optimum use of primary movers for power generation in diesel and gas engines.

SECTION-C

7. Explain the regenerators and heat boiler waste heat recovery options and technologies. Give their advantages and applications.
8. Explain the principle and working of electron beam welding with neat and clean diagram. Give advantages, disadvantages and applications.
9. Write a note on optimum use of primary movers for power generation in steam turbines and gas turbines.