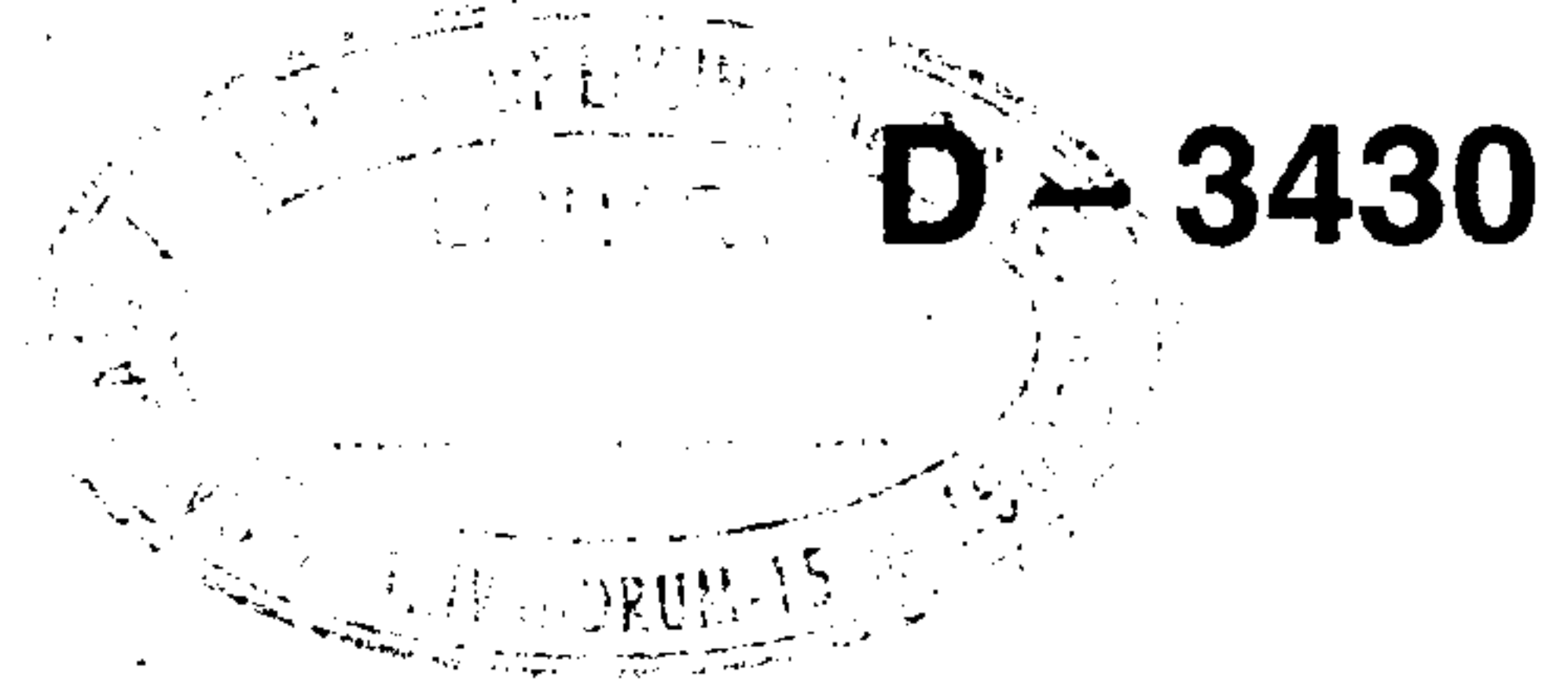




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Reg. No. :

Name :

Eighth Semester B.Tech. Degree Examination, December 2017
08.801 : ENERGY MANAGEMENT (MPU)
(2008 Scheme)

Time : 3 Hours

Max. Marks : 100

- Instructions :** 1) *Part – A: Answer all questions. Each questions carries 4 marks.*
- 2) *Part – B : Answer one full question from each Module. Each full question carries 20 marks.*

PART – A

(10×4=40 Marks)

1. What is the need for energy policy ?
2. What are energy audit instruments ? List any five.
3. List out four objectives of energy management.
4. Explain with suitable example energy conservation opportunities.
5. Explain with suitable example thermodynamic ECO.
6. Explain waste heat recovery system.
7. What is meant by energy conversion process ? List out different devices used for conversion process. Explain any one of them.
8. Electrical energy cannot be stored in large quantity. Justify.
9. List out the advantages and disadvantages of renewable energy sources.
10. Explain the difference between fuel cell and battery cell.

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PART – B

(3×20=60 Marks)

Module – I

11. a) Explain the construction and working of the Biogas plant. 10
b) Discuss energy conversion plants for base load, intermediate load and peak load with its features/characteristics. 10

OR

12. a) What is a fuel cell ? With a neat sketch explain the working of a molten carbonate fuel cell. 10
b) Explain with example and application, energy storage plants. 10

Module – II

13. Explain the functions of EMCS and discuss its benefits. 20

OR

14. a) The energy audit data for a steel company for a month is : (10) (M2)
i) Coal consumption = 82060 kg
ii) Electricity consumption = 42060 kWh
iii) Steel production = 600 tonne
iv) Calorific value of coal = 5800kCal/kg
Compute the specific energy consumption. 10
b) Explain briefly energy policy in India. Explain the significance of use of renewable sources for decentralised power generation in India. 10

Module – III

15. a) Explain any four intermediate electrical ECOs. 10
b) List out the guidelines for energy conservation of a chemical industry. 10

OR

16. a) What is meant by energy conservation ? Explain the main principles used for energy conservation in general. 10
b) What is the role of heat pumps in waste heat recovery system ? Explain with neat block diagram closed-loop heat pump system. 10