

Reg. No. : .....

Name: .....

**Eighth Semester B Tech Degree Examination, April – May 2017**

**(2013 Scheme – Model Question Paper)**

**13.801: ENERGY MANAGEMENT (M)**

Time: 3 Hours

Max Marks: 100

**Instructions:** Answer all questions from part-A

Answer any one question from each Module in Part-B.

**PART- A**

(Answer all questions. Each question carries 2 Marks)

1. Differentiate between conventional and non-conventional power plants?
2. What are the advantages of hydro electric power plant?
3. What is meant by “Energy Plantation”.
4. Write short note on energy storage plants.
5. What is a fuel cell?
6. Differentiate between heat recuperators & heat regenerators.
7. What is meant by energy conservation?
8. What are the important characteristics of a peak load power plant?
9. Differentiate between ECO and ECM.
10. Explain Energy Strategy & Energy Policy. (10 x 2 = 20 Marks)

**PART B**

**MODULE I**

11. a) Explain the working of a non-conventional hydro electric power plant (10 Marks)
- b) Explain the working of a nuclear fission based power plant with molten metal as coolant. (10 Marks)

**OR**

12. a) Explain the working of a power plant based on the principle of magneto hydro dynamics. (10 Marks)
- b) Explain the working of a power plant based on urban solid bio waste. (10 Marks)

**(PTO)**

## **MODULE II**

13. a

Explain the working of an energy storage plant most suitable for gas turbine based thermal power plant (10 Marks)

b) Explain the working of an energy displacement plant (10 Marks)

**OR**

14. a) Comment on the impact of Energy on economy, development and environment. (12Marks)

b) Explain the Energy Strategy and Energy Policy of India in detail. (8 Marks)

## **MODULE III**

15. a) Briefly explain the steps to be followed for supply side energy planning. (10 Marks)

b) Explain the different applications of computer in energy management. (10 Marks)

**OR**

16. a) Describe the procedure for comprehensive energy audit. (10Marks)

b) Explain on energy management control systems. (10Marks)

## **MODULE IV**

17. a) With a neat sketch explain the working of a combined cycle power plant (14Marks)

b) How higher efficiency is attained in combined cycle power plant? (6 Marks)

**OR**

18. a) Discuss on the ECOs applicable for a commercial building (10Marks)

b) Discuss on heat recovery by using heat recuperators and heat pumps. (10Marks)