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Reg. No. : .....

Name : .....

Eighth Semester B.Tech. Degree Examination, October 2014
(2008 Scheme)
08.801 : ENERGY MANAGEMENT (MPU)

Time : 3 Hours Max. Marks : 100

Instructions : 1) Part – ***A*** : Answer ***all*** questions. ***Each*** question 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 biomass ? List out various methods of utilisation of biomass for energy production.
2. Explain the principle of energy production by nuclear fission.
3. What are the criteria for site selection for a hydroelectric power plant ?
4. Define energy management. What is its significance ?
5. Explain any one energy management control system.
6. List out the advantages and disadvantages of renewable energy sources.
7. What is meant by pinch analysis ? Where is it used ?
8. Differentiate between energy strategy, energy policy and energy planning.
9. What is a heat regenerator ? Explain.
10. Explain fluidised bed combustion. How does it save energy ?

P.T.O.

PART – B (20×3=60 Marks)

Module – I

11. a) With a neat sketch explain the working of a MHD power plant. What are its relative advantages and disadvantages compared to conventional power generation ?

    b) What is a fuel cell ? With a neat sketch explain the working of a molten carbonate fuel cell.

OR

12. a) What is meant by energy displacement ? What is its significance in energy management ? List out various methods used.

    b) What is a load curve ? What are the different types ? How is it used for energy management of electrical power plants ?

Module – II

13. a) Briefly explain the procedures for an investment grade energy audit. What is its expected outcome ?

    b) Explain major areas of computer applications in energy management.

OR

14. a) Explain briefly energy policy in India. Explain the significance of use of renewable sources for decentralised power generation in India.

    b) Explain the seven principles of energy management.

Module – III

15. a) What is meant by energy conservation ? Explain the main principles used for energy conservation in general.

    b) Explain energy conservation opportunities commonly found in residential and commercial buildings.

OR

16. a) What is meant by Co generation ? What is the need for CHP power plants ? What are the different configurations of CHP power plants ?

    b) List out and explain energy conservation opportunities commonly found in chemical process industry.