



Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, May 2018
(2013 Scheme)**

13.801 : ENERGY MANAGEMENT (MP)

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. What are the objectives of energy management programmes in industries ?
2. What are the advantages and disadvantages of solar energy ?
3. What is solar photo voltaic system ?
4. What are the different factors that affect the performance of a biogas plant ?
5. What are the uses of flue gas analyser in energy auditing ?
6. Differentiate between heat pipes and heat pumps.
7. What is the importance of power factor correction in industries ?
8. What is the impact of use of renewable energy sources in Indian economy ?
9. How peak load energy management is possible in industries ?
10. What are the advantages of waste heat recovery ? **(10×2=20 Marks)**

PART – B

Module – I

11. a) Explain the working of wind power plant and different components with a neat diagram. **10**
- b) Explain the principle of a fuel cell and its relative advantages over other non-conventional energy sources. **10**

OR

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12. a) Discuss the thermal energy power production and its impact on energy economy of industries. 10
- b) Discuss the scope of energy production from waste and its impact on environment. 10

Module – II

13. a) Explain the different types of load curves. 10
- b) What are the characteristics of energy policy for future energy needs in India ? 10

OR

14. a) Explain the different aspects of energy sector in India. Discuss the relation of energy scenario of India with that of world. 10
- b) What are the different environmental impacts produced by energy production throughout the world ? 10

Module – III

15. a) What are the different types energy auditing in industries ? 10
- b) What are the different steps in comprehensive energy auditing in industries ? 10

OR

16. a) Discuss the different methods to ensure optimum energy performance in industries. 10
- b) What are the objectives of energy management and how it is related to sustainable development of entire world ? 10

Module – IV

17. a) What is cogeneration ? What are the different types of cogeneration methods used in industries ? 8
- b) Explain the working of a shell type heat regenerator with a neat diagram. 12

OR

18. a) What are the thermodynamic energy conservation measures in Chemical Industries ? 8
- b) What are the different ECO opportunities in residential and commercial buildings ? 12
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