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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (ME) (E-I 2012 Onwards) (Sem.-6)
NON CONVENTIONAL ENERGY RESOURCES

Subject Code : DE/ME-1.3

M.Code : 71245

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS 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 have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**Answer briefly :**

1. Differentiate renewable and non-renewable energy resources.
2. What is solar constant?
3. Define solar pond.
4. What are the various sources of Bio-mass?
5. List the applications of solar energy.
6. What is geothermal energy?
7. What are the main types of MHD (Magnetic Hydrodynamic) systems?
8. Define single basin tidal power plants.
9. Explain working principle of fuel cell.
10. Name different types of bio gas plants.

SECTION-B

11. What are the main strategies you think for meeting the future energy requirements?
12. Describe various types of flat plate collectors with the help of suitable diagrams.
13. Define Wind Energy. What factors should be consider during site selection for wind mills?
14. Define Operating Principle of magnetic hydrodynamic generator (MHD).
15. What are the main sources of geothermal energy?

SECTION-C

16. What is bio-mass energy? Explain functioning and constructional features of any one bio gas plant.
17.
 - a) Discuss solar thermal power generation system.
 - b) Explain design procedure of concentrating collectors.
18. Write short Note on **any two** of the following :
 - a) Thermo-electric generator.
 - b) Components of wind energy conversion systems.
 - c) Tidal energy.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.