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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (E-I 2011 Onwards) (Sem.-6)
NON CONVENTIONAL ENERGY RESOURCES

Subject Code : DE/ME-1.3

M.Code : 71245

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION 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

1. Answer briefly :

- a. Write the advantage of using renewable energy sources.
- b. Define solar constant.
- c. What is the principle of power generation through wind energy?
- d. What is Peltier effect?
- e. What are the disadvantages of MHD technology?
- f. How biomass conversion takes place?
- g. What is the working principle of tidal energy plants?
- h. What are the beneficial properties of biomass?
- i. What is attenuation of solar radiations?
- j. Define lift and drag in case of wind energy.

SECTION-B

2. Describe the present scenario of renewable energy sources in India.
3. Explain biomass gasification process with the help of neat sketch.
4. Describe the application of solar ponds.
5. Explain constructional features and functioning of bio gas plants.
6. What are different components of wave energy plants? Explain.

SECTION-C

7. Explain MHD closed cycle system. What are its advantages and limitations?
8. Explain the applications of solar energy in process heating, water desalination and water pumping.
9. Write short notes on :
 - a) Types of thermo-electric generators.
 - b) Components and working of fuel cells.

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.