Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Electrical & Electronics) (2012 Batch)   (Sem.–7,8)
NON-CONVENTIONAL ENERGY SOURCES
Subject Code : BTEE-803
M.Code : 71932

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.   What are the Conventional and Non-Conventional Energy sources?

b.   Write **any one** example of Direct Energy Conservation.

c.   Explain Thompson effect in brief.

d.   What is a MHD generator?

e.   How can Geothermal energy be utilized for electricity generation?

f.   What are the limitations of solar power generation?

g.   Explain See back effect in brief.

h.   Write **any two** applications of fuel cells.

i.   What is Bio-mass?

j.   What are the factors responsible for distribution of wind energy on Earth's surface?

SECTION-B

2.   What are the different types of MHD generators? What are the factors upon which the conversion efficiency of MHD generators depends?

3.   Compare Fuel Cells and PV cells.

4.   Write short notes on classification of non-conventional energy sources.

5.   Explain the working Principle of fuel cells.

6.   What do you mean by Gibb's free energy? Explain with suitable graphical interpretation.

SECTION-C

7.   Give the design analysis of constant area MHD Generator.

8.   Write short notes on **any two** of the following :

     a) Types of Geothermal resources

     b) Grid connected Solar Power satellite

     c) Biomass gasification

9.   Explain **any one** of the solar collectors with the help of neat sketch.

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.