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Reg. No. : .....

Name : .....

*Elective*

*ME*

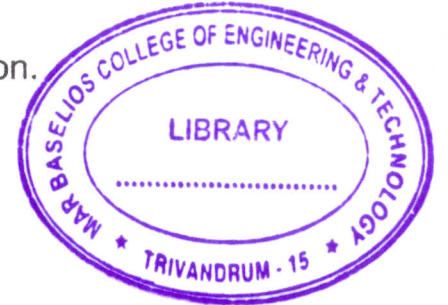
**Sixth Semester B.Tech. Degree Examination, May 2012  
(2008 Scheme)  
08.606.2 – (Elective – II) : New Energy Systems (MPU)**

Time: 3 Hours

Max. Marks : 100

**PART – A**

1. Explain Seebeck and Peltier effects.
2. Describe the working of a solar cooker.
3. What is the socio-economic relevance of biogas system ?
4. What are the advantages of tidal power ?
5. What are the limitations of solar energy ?
6. Explain the basic principle involved in photovoltaic conversion.
7. What are the limitations of using MHD power ?
8. What are the advantages of nuclear fussion ?
9. Write on use of methanol.
10. What are the advantages and disadvantages of fuel cells ?



**(10×4=40 Marks)**

**PART – B**

Answer **any one full** question from **each** Module.

**(3×20=60 Marks)**

**Module – I**

11. a) What are the advantages of Direct Energy conversion systems ?  
b) Define the figure of Merit of thermo electric generator.  
c) Describe the principle and constructional details of a thermoionic generator.

**(6+4+10=20)**

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12. a) Explain the principle of photo voltaic cell.
- b) Explain the working of any MHD cycle.

**Module – II**

13. With neat sketches describe the various solar energy collectors used.
14. a) Explain the methods of confining plasma.
- b) What are the conditions for sustained fusion reaction to occur ?
- c) How are plasma contained ?

(8+10+2=20)

**Module – III**

15. Briefly explain the production, storage and transportation of Hydrogen.
16. Explain in detail different types of geothermal sources.

