A – 2820

Reg. No. : ....

Name : ....

Sixth Semester B.Tech. Degree Examination, May 2016
(2008 Scheme)
### 08.606.2 : (Elective – II) : NEW ENERGY SYSTEMS (MPU)

Time : 3 Hours
Max. Marks : 100

PART – A

Answer **all** questions. **Each** question in Part – **A** carries **4** marks.

1. Explain what is meant by direct energy conversion.

2. Give an account of non-conventional energy sources.

3. Explain the principle of MHD generation.

4. What are the advantages and disadvantages of fuel cells ?

5. Discuss the applications of concentrating collectors.

6. Write notes on nuclear energy.

7. What is solar constant ? Explain.

8. Explain the principle of OTEC systems.

9. What is wind energy ? What are the methods of tapping it ?

10. Discuss the use of methanol.

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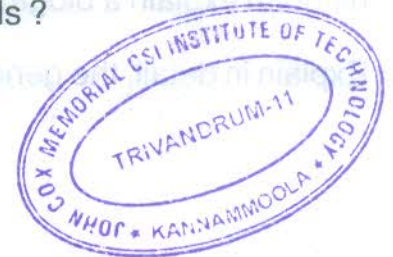
PART – B

Answer **one** question from **each** Module in Part – **B**. **Each** question in Part – **B** carries **20** marks.

Module – I

11. Describe the construction and functioning of a solar cell. What are its performance characteristics ?

12. With the help of a neat sketch explain a Redox cell. Also explain its thermodynamics.

Module – II

13. What are the different types of nuclear reactions that take place ? Explain the significance of each in nuclear power generation.

14. Describe a set up for generating power from geothermal energy.

Module – III

15. Discuss the design considerations of a biogas plant ? With the help of a neat diagram explain a biogas plant suitable for a small village.

16. Explain in detail, the generation, storage and transportation of hydrogen.

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