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B – 5957

Reg. No. : .....

Name : .....

Sixth Semester B.Tech. Degree Examination, April 2017
(2013 Scheme)
13.606.9 : NEW ENERGY SYSTEMS (MP)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions in Part **A**. **Each** question carries **2** marks.

1. Define thermionic generation.
2. Explain seebeck thermoelectric effect.
3. Differentiate between fuel cell and solar cell.
4. Explain about the benefits of thermal energy storage.
5. Explain the advantages of nuclear energy.
6. Define principle of OTEC system.
7. Name any four applications of wind energy.
8. Describe shortly about characteristics of wind energy.
9. What are the different types of geothermal energy deposits ?
10. Define the principle of biogas production. **(10×2=20 Marks)**

PART – B

Answer **any one full** question from **each** Module in Part **B**. **(4×20=80 Marks)**

MODULE – 1

11. Describe the principles of a fuel cell and discuss the choice of fuels required. **20**

OR

12. Explain different types of MHD generators with neat sketch. **20**

P.T.O.

MODULE – 2

13. Explain with suitable sketch the various methods of plasma heating and confinement adopted in nuclear fusion reactors. **20**

OR

14. Explain the following terms :

a) Fusion of nuclear fuel

b) Distribution of nuclear energy

c) The chain reaction. **20**

MODULE – 3

15. Explain the working principle of a vertical and horizontal axis wind mill. **20**

OR

16. Draw a schematic diagram of a vertical axis wind turbine and explain its working. Also mention its merits and demerits. **20**

MODULE – 4

17. What is meant by geothermal energy ? Explain any two non electric application of it. **20**

OR

18. Briefly explain about socio-economical relevance involved in biogas plants. **20**