



Reg. No. :

Name :

Sixth Semester B.Tech. Degree Examination, May 2018

(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. What are the advantages of renewable energy ?
2. What is thermionic emission ?
3. What is solar pond ?
4. What are the limitations of geothermal energy ?
5. What is Seebeck effect ?
6. What is photovoltaic effect ?
7. What are the disadvantages of wind energy ?
8. What are the constituents of biogas ?
9. What is the principle of OTEC plants ?
10. Explain one method of solar radiation measurement. **(10×2=20 Marks)**

PART – B

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

Module – 1

11. Explain with neat sketch, construction and working principle of high temperature solid oxide fuel cell. **20**

OR

P.T.O.



12. a) Explain the principle thermionic power generation with a neat sketch. 10
b) Explain with sketch, working of solar photovoltaic cell. 10

Module – 2

13. a) What are the disadvantages of fusion power plant ? 5
b) Explain Deuterium-Tritium fusion plant design. 15

OR

14. Explain central tower type solar power generation with neat sketch. 20

Module – 3

15. a) Explain with sketch, components of horizontal axis wind energy conversion system. 10
b) Explain any one method of ocean wave energy conversion systems. 10

OR

16. Compare and contrast between horizontal axis and vertical axis wind power conversion systems. 20

Module – 4

17. Explain with sketch, KVIC and Chinese type biogas digesters. 20

OR

18. Explain different methods of hydrogen production and storage. 20
-