

G 420

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2014

Sixth Semester

Branch : Electrical and Electronics Engineering

EE 010 606 L06 – RENEWABLE ENERGY RESOURCES

(New Scheme – 2010 Admission onwards)

[Regular/Improvement/Supplementary]



Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. What is the significance of an energy source?
2. How will you quantify solar radiation?
3. What is efficiency of a solar cell?
4. Write a note on availability of Wind energy.
5. Briefly discuss the importance of biomass.

(5 × 3 = 15 marks)

Part B

Answer all questions.

Each question carries 5 marks.

6. Explain Micro hydro power.
7. Discuss the solar collecting system.
8. What is an alone PV system? Discuss.
9. What are the applications of wind power generation?
10. Discuss the biomass conversion process.

(5 × 5 = 25 marks)

Turn over

Part C

Answer all questions.

Each full question carries 12 marks.

11. With necessary assumptions, derive and explain the hydro-power equation.

Or

12. Explain the different types of hydro-turbines and generators.

13. Explain the construction and working of a solar-based refrigeration system.

Or

14. With neat sketches, discuss the following :

(a) Solar furnace.

(b) Solar cooker.

(6 + 6 = 12 marks)

15. Explain the categories of PV systems.

Or

16. Discuss any *three* photovoltaic solar systems.

17. Explain the components of energy transfer systems in a windmill.

Or

18. Explain the types and applications of fuel cells.

19. Explain the construction and working of a tidal power plant.

Or

20. Discuss the resources, techniques of estimation and conversion systems of geothermal power.

[5 × 12 = 60 marks]

