S6 EE (NEW)

G 1258 (Pages : 2) Reg. No.....

Name.....

B.TECH DEGREE EXAMINATION, MAY 2015

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 are the limitations of renewable energy sources ?
2. Name three collectors requiring one axis sun tracking.
3. What are the major advantages and disadvantages of a solar PV system ?
4. What are the factors responsible for distribution of wind energy on the surface of earth ?
5. What are the main advantages and disadvantages of biomass energy ?

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

6. Explain various aspects of energy conservation.
7. How is adequate supply of C02 maintained in a greenhouse ?
8. What do you understand by cell mismatch in solar module and what are its implications ?
9. Explain the major applications of wind power.
10. Comment on the origin and distribution of geothermal energy.

(5 × 5 = 25 marks)

Part C

Answer **all** *questions.*
Each full question carries 12 *marks.*

11. (a) What is meant by renewable energy sources ? Explain in brief these energy sources with special reference to Indian context.

Or

Turn over

(b) Draw schematic layout of a typical micro-hydro power station and explain the functions of each of its components.

12. (a) With the help of schematic diagram, explain the working of solar thermal water pump.

Or

(b) Describe the layout and working of a solar cooking system.

13. (a) Explain various factors contributing to losses and hence, reduction of efficiency of a solar cell.

Or

(b) Draw and explain an equivalent circuit of a practical solar PV cell.

14. (a) Describe various fuels used in fuel cells along with chemical reaction involved.

Or

(b) Describe the main considerations in selecting a site for wind generators.

15. (a) Explain the present status of development of ocean energy resources.

Or

(b) Explain different types of biofuels.

(5 × 12 = 60 marks)