

E 1560

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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2016

Sixth Semester

Choice Based Course—RENEWABLE ENERGY TECHNOLOGY

(For Model I and Model II B.Sc. Physics)

[2013 Admissions]

Time : Three Hours

Maximum Marks : 80

Part A

Answer all questions.

Each carries 1 mark.

1. What is renewable energy ?
2. Mention few applications of solar energy.
3. What is a solar pond ?
4. Differentiate between wind energy and tidal energy.
5. What are the advantages of geothermal energy?
6. What is biomass ?
7. Explain biodegradation.
8. What are the limitations of wave energy ?
9. State the merits of a fuel cell.
10. List a number of non conventional energy sources.

(10 × 1 = 10)

Part B

Answer any eight questions.

Each carries 2 marks.

11. Differentiate between renewable and non-renewable energy.
12. State the advantages of solar energy.
13. What are the features of concentrating collectors ?
14. List the criteria for site selection considerations for wind energy.
15. What are magma resources for geothermal energy ?
16. State the methods for obtaining energy from biomass.
17. Write a short note on thermal gasification of biomass.

Turn over

18. What is an open cycle OTEC system ?
19. Bring out the limitations of tidal power generation.
20. List the different types of wind mills.
21. What are the applications of fuel cells ?
22. Explain hydrolysis for hydrogen energy.

(8 × 2 = 16)

Part C

*Answer any six questions.
Each carries 4 marks.*

23. Bring out the various energy sources and their availability.
24. Give the performance analysis of parabolic collector.
25. Discuss solar electrical power generation.
26. Describe the working of a wind machine.
27. Discuss on the various geothermal sources.
28. Bring out the operation of a community biogas plant.
29. Discuss the double cycle system for tidal energy.
30. Explain the importance of OTEC in India.
31. Discuss on classification of fuel cells.

(6 × 4 = 24)

Part D

*Answer any two questions.
Each carries 15 marks.*

32. Discuss on the various renewable energy sources available in your state.
33. Describe different types of solar energy storage systems.
34. Discuss on operational and environmental problems associated with geothermal energy.
35. Bring out the design and principle of operation of a fuel cell in detail.

(2 × 15 = 30)