

20U510S

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Name:

Reg. No:

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

(CUCBCSS-UG)

CC15U PH5 D01 - NON-CONVENTIONAL ENERGY SOURCES

(Physics – Open Course)

(2015 to 2018 Admissions Supplementary/Improvement)

Time: Two Hours

Maximum: 40 Marks

Section A

Answer *all* questions. Each question carries 1 mark.

1. Define solar constant.
2. What is the use of pyranometer?
3. What are the basic components of wind energy conversion system?
4. Write any two advantages of geothermal energy over other energy forms.
5. Which are the four types of ocean energy sources?
6. Write the components of tidal power plant.

(6 × 1 = 6 Marks)

Section B

Answer *all* questions. Each question carries 2 marks.

7. Discuss the economic aspect of tidal energy conversion.
8. Write any four disadvantages of wind energy.
9. What is the basic principle of wind energy conversion?
10. Write a short note on any one solar energy collector.
11. What is solar furnace?

(5 × 2 = 10 Marks)

Section C

Answer any *four* questions. Each question carries 4 marks.

12. Explain solar distillation.
13. Discuss major advantages of battery for bulk energy storage.
14. Write a short note on solar green houses.
15. Describe about biomass method of obtaining energy from biomass.
16. Write a note on wind energy collectors.
17. What are the major problems in operating large wind power generators?

(4 × 4 =16 Marks)

Section D

Answer any *one* question. Each question carries 8 marks.

18. (i) Explain geo-pressured resources.
(ii) What are the applications of geothermal energy?
(iii) What are the environmental problems associated with geothermal energy.
19. (i) Discuss about ocean thermal electric conversion system.
(ii) Give the advantages, disadvantages and applications of OTEC.
20. (i) What is global warming? How can global warming be controlled?
(ii) Describe with a neat sketch the construction and working of a box type solar cooker.

(1 × 8 = 8 Marks)
