D 50694

(Pages : 2)

Name.....

Reg. No.....

FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2023

Physics/Applied Physics

PHY 5D 01 (1)/APH 5D 01 (1)—NON CONVENTIONAL ENERGY SOURCES

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 M

The symbols used in question paper have their usual meanings.

Section A (Short Answer Type)

Answer **all** *questions in two* **or** *three sentences.*
Each correct answer carries a maximum of 2 *marks.*

1. List the conventional energy sources.
2. What do you mean by solar constant ?
3. What are the advantages of solar distilling ?
4. What is photovoltaic effect ? Write any *two* solar cell materials.
5. What are the basic characteristics of wind ?
6. List any *four* characteristics of a good wind power site.
7. List any *four* problems in operating large wind power generators.
8. What are the methods of extraction of geothermal energy ?
9. What are the raw materials used in a biogas plant ?
10. Discuss the major ocean energy sources.
11. List any *four* advantages of fuel cells.
12. What are the major problems in using hydrogen as an energy source ?

(Ceiling

Section B (Paragraph/Problem Type)

Answer **all** *questions in* **a paragraph** *of about* **half a page to one page.**
Each correct answer carries a maximum of 5 *marks.*

13. Using a suitable schematic, explain the working principle of a solar indirect crop dryer.
14. Using a suitable figure, list the essential parts of a wind-electric generating power plant.
15. List any *four* advantages and disadvantages of wind energy conversion system.
16. Explain the binary cycle hydro-geothermal energy resource.
17. List any *four* advantages and disadvantages of geothermal energy.
18. Explain Seebeck and Peltier effects.
19. What do you mean by a nuclear reactor ? Give its classification.

Section C (Essay Type)

Essays.

Answer in about **two pages**, *any* **one** *question.*
Correct answer carries 10 *marks.*

20. Using a suitable figure, discuss the working principle of a solar furnace. What are the a and uses of a solar furnace ?
21. Explain the processes involved in a biomass conversion process.

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