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(Pages : 2)

Name.....

Reg. No.....

**FIFTH SEMESTER (CBCSS—U.G.)/INTEGRATED P.G. DEGREE  
EXAMINATION, NOVEMBER 2025**

Physics/Applied Physics

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

(2019 Syllabus)

Time : Two Hours

Maximum : 60 Marks

**Section A (Short Answer Type Question)***Answer all questions in one or two Sentences ; Each Correct Answer Carries a Maximum of 2 marks.*

1. Give two examples for non-conventional energy resources.
2. Give two examples each for non-renewable energy sources.
3. Define solar constant.
4. Name any *two* types of solar energy collectors.
5. What is the principle of solar cookers ?
6. Define a solar greenhouse.
7. What are the environmental impacts of wind energy ?
8. Is geothermal energy non renewable ? Justify your answer.
9. List two sources of geothermal energy.
10. Write two biogas applications.
11. What are the components of a tidal power plant ?
12. Mention two advantages of nuclear power plants.

(Ceiling - 20)

**Turn over**

**Section B (Paragraph/Problem Type)**

*Answer all questions in a paragraph of half of the page ; Each Correct Answer Carries a Maximum of 5 marks.*

13. Explain the measurement of solar radiation.
14. Discuss the physical principle of converting solar radiation into heat.
15. Describe the advantages and disadvantages of wind energy.
16. Explain the structure of Earth's interior related to geothermal energy.
17. What are the applications of geothermal energy ?
18. Discuss the biomass conversion process in detail.
19. Describe the advantages and disadvantages of OTEC.

(Ceiling - 30)

**Section C (Essay Type)**

*Essays - Answer in about two pages ; Answer Carries a Maximum of 10 marks.*

20. Explain the working principle of wind energy conversion and the components of a wind-electric generating power plant.
21. Discuss the working principle, types, advantages, and disadvantages of OTEC.

(1 × 10 = 10 marks)