23U512 (Pages: 2) Name: .....

Reg.No: .....

FIFTH SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19UPHY5D01 / CC20UPHY5D01 - NON-CONVENTIONAL ENERGY SOURCES

(Physics - Open Course)

(2019 Admission onwards)

Time : 2.00 Hours Maximum : 60 Marks

Credit : 3

Part A (Short answer questions)

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

1. Explain briefly the impact of conventional sources of energy on environment.
2. Discuss the merits and demerits of the various renewable technologies developed in India.
3. How are solar collectors classified?
4. What is a Solar furnace? What are its primary components?
5. Comment on the lift and drag forces.
6. Give any one, of the factors that affects the output of wind energy converter.
7. Explain briefly the various parts of the earth's interior.
8. Give the name of the process that convert energy from biomass. Explain.
9. Discuss the application of biogas.
10. Explain the factors which affect wave energy?
11. What is the working principle of Ocean Thermal Energy Conversion(OTEC)?
12. What are the advantages of hydrogen as a fuel cell?

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)

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

13. What is the reason for variation in solar radiations reaching the earth than received on the outside of the atmosphere?
14. State the advantages and disadvantages of wind energy.
15. Enumerate the factors which should be given due consideration while selecting the site for WECS.
16. Discuss the application of geothermal energy.

17. Write a short note on 'liquid -dominated low temperature system'.

18. What are the main components of a tidal power plant and explain it's functions?

19. What is the working principle of Ocean Thermal Energy Conversion(OTEC)? What is the efficiency of OTEC?

(Ceiling: 30 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

20. Write any three advantage and disadvantages of a concentrating collector over a flat plate collector.

21. Discuss the different solid,liquid and gaseous biofuels. Define the term biomass and its resources

(1 × 10 = 10 Marks)

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