

B. Sc. DEGREE END SEMESTER EXAMINATION - OCTOBER 2025**SEMESTER 5 : PHYSICS****COURSE : 19U5CRPHY08 : ENERGY AND ENVIRONMENTAL PHYSICS AND HUMAN RIGHTS
VISION***(For Regular 2023 Admission and Supplementary 2022/ 2021/ 2020/ 2019 Admissions)*

Time : Three Hours

Max. Marks: 75

PART A**Answer any 10 (2 marks each)**

1. Inspect why we transmit electricity at high voltages low current in long distance transmission?
2. List any two electrical instrument that consume least energy in our homes?
3. How are 'heat islands' created in cities?
4. Explain when and why the water act was passed?
5. Summarise oil refining?
6. Comment on overutilization and pollution of surface and groundwater.
7. Comment on solar cookers?
8. Illustrate urban and rural equity issues.
9. Explain the significance of geothermal energy as a renewable resource.
10. Explain the significance of photovoltaic cells in production of electricity.
11. What are the different types of space heating.
12. Differentiate between endangered and endemic species.

(2 x 10 = 20)**PART B****Answer any 7 (5 marks each)**

13. Describe various food resources, its uses and associated problems.
14. Illustrate the spectral distribution of solar radiation.
15. Explicate the significance of tidal and wave power as a renewable resource and its limitations.
16. Enumerate on the difficulties in the use of fossil fuels.
17. Illustrate a convective solar pond with the help of a diagram.
18. Explain social, ethical, aesthetic and option values of biodiversity.
19. How can you stop acid rain?
20. What are the penalties for offences committed to wildlife?
21. How a fuel cell is constructed?
22. What is the role of environmental protection act?

(5 x 7 = 35)**PART C****Answer any 2 (10 marks each)**

23. Propose the do's and dont's of habitat preservation.
24. With the help of neat diagram explain the working of two types of biogas plant.

25. Explain various natural resources and associated problems.
26. Discuss various aspects of (a) optical concentrator (b) solar cooker and (c) Photo voltaic systems.

(10 x 2 = 20)