TB205395V **Reg. No :.....**

Name :.....

B. Sc. DEGREE (C.B.C.S.) EXAMINATION, NOVEMBER 2022

2020 ADMISSIONS REGULAR AND 2019, 2018 ADMISSIONS SUPPLEMENTARY

SEMESTER V - CORE COURSE (MATHEMATICS)

PH5B05B18 - ENVIRONMENTAL PHYSICS AND HUMAN RIGHTS

Time : 3 Hours **Maximum Marks : 60**

Part A

I. Answer any Ten questions. Each question carries 1 marks **(10x1=10)**

1. Briefly explain the need for public awareness in environmental management.
2. Write a note on deforestation.
3. Mention some of the world food problems.
4. Briefly discuss the aesthetic and option values of biodiversity.
5. Discuss the causes of soil degradation.
6. Write a note on nuclear hazards.
7. Briefly explain rainwater harvesting.
8. Define the specific speed of turbines.
9. Mention any two advantages and disadvantages of solar cooker.
10. Define the term air mass zero.
11. Explain the factors which affect plant growth in a greenhouse.
12. Explain the significance of UDHR.

Part B

II. Answer any Six questions. Each question carries 5 marks **(6x5=30)**

13. Explain the forest ecosystem.
14. Write a note on soil erosion and desertification.
15. Discuss the uses of forest resources.
16. Discuss the threats to biodiversity.
17. Discuss solid waste management.
18. Write a note on the Air prevention and control of pollution act.
19. Discuss the term ocean thermal energy conversion.
20. What is a solar greenhouse? How is carbon dioxide level maintained in it?
21. A solar cell (0.7 cm2) receives solar radiation with photons of 1.8 eV energy having an intensity of 0.7 mW/ cm2. Measurements show the open-circuit voltage of 0.6 V/ cm2, and the maximum current is 50%of the short-circuit current. The efficiency of the cell is 25%. Calculate the maximum voltage that the cell can give and find the fill factor.

Part C

III. Answer any Two questions. Each question carries 10 marks **(2x10=20)**

22. Write an essay on water resources and discuss the water conservation methods.
23. Explain the control measures , values ,conservative methods of biodiversity. Also discuss the threats to biodiversity.
24. Explain in detail the principle, characteristics, and efficiency of the solar cell. Discuss the reasons for its low

efficiency.

25. Mention the basic human rights for prisoners . Describe the important enactments and rules regarding the rights of prisoners.