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Reg. No :

Name :

BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, NOVEMBER 2024

2022 ADMISSIONS REGULAR

SEMESTER V - CORE COURSE (MATHEMATICS)

MT5B05B18 - Human Rights and Mathematics for Environmental Studies

Time : 3 Hours

Maximum Marks : 80

Part A

I. Answer any Ten questions. Each question carries 2 marks

(10x2=20)

1. Write a short note on Chipko movement.
2. Discuss about ozone layer depletion?
3. Discuss about the problems caused by excessive use of fertilizers and pesticides?
4. What are the effects of dams on the lives of tribal people?
5. What is solid waste management?
6. Define pollutants. Give examples.
7. Explain the effects of air pollution?
8. What is vermicomposting?
9. List all Lucas numbers which are perfect squares.
10. List out 6 fundamental human rights.
11. Define UDHR?
12. Describe the second generation of human rights.

Part B

II. Answer any Six questions. Each question carries 5 marks

(6x5=30)

13. Explain the term food web?
14. What is the pyramid of energy?
15. Briefly describe the biodiversity of the Gangetic Plains.
16. Describe the causes and effects of air pollution?
17. What are the causes and effects of biomagnification?
18. Explain the relation between Fibonacci sequence and the Balmer Series.
19. Explain how P. Glaister of Reading University in England employed the Japanese art of origami to illustrate the occurrence of the Golden ratio.
20. Discuss about the constitutional privileges for Scheduled castes in India.
21. Write a short note on the main goals of the ILO, the International Labour Organization.

Part C

III. Answer any Two questions. Each question carries 15 marks

(2x15=30)

22. What are the different types of Ecosystems? Explain the features of each.
23. Explain the biogeographic classification of India.
24. Establish a relation between the Fibonacci numbers and the topological indices of Paraffins and Cycloparaffins.
25. Discuss the constitutional provisions for Scheduled Castes, Scheduled Tribes and other marginalised groups.