BACHELOR'S DEGREE (C.B.C.S.) EXAMINATION, FEBRUARY 2024
2021 ADMISSIONS SUPPLEMENTARY (SAY)
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. Define biotic resources? Give examples.

2. List two advantages of wind energy.

3. List two defects of mining.

4. Discuss about ozone layer depletion?

5. Define IUCN?

6. Explain the effects of air pollution?

7. List two control measures to reduce air pollution.

8. Suggest two ways in which individuals can help to prevent water pollution.

9. Define a Cunningham chain and how it is related to Fibonacci Sequence

10. List any three disadvantages of nuclear power generation.

11. Write a short note on the Right to Equality.

12. Describe the third generation of human rights.

Part B

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

(6x5=30)

13. Discuss the advantages and disadvantages of Solar energy?

14. Briefly explain the energy flow in an ecosystem.

15. What are the causes and effects of soil pollution?

16. What do you mean by endangered and endemic species of India?

17. Describe the causes and effects of air pollution?

18. Describe the relation between Fibonacci numbers and cycloparaffins.

19. Explain the relation between Fibonacci sequence and Rabbit problem explained in the Fibonacci's book, Liber Abaci.

20. Explain the rights for children in India.

21. Discuss about the constitutional privileges for Scheduled tribes in India.

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. List five biodiversity hotspots. What are the threats to biodiversity? Suggest methods to conserve biodiversity.

24. Explain the problem 'Fibonacci and sewage treatment' by R. A. Deninger's.

25. Discuss the constitutional provisions for Scheduled Castes, Scheduled Tribes and other marginalised groups.