

TB205385V

Reg. No :

Name :

B. Sc. DEGREE (C.B.C.S.) EXAMINATION, NOVEMBER 2022
(2020 Admission Regular & 2019, 2018 Admissions Supplementary)
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. List two adverse effects of climate change.
2. What are the uses of forests?
3. List two reasons for deforestation.
4. What are renewable resources?. Give examples.
5. Where is the Trans Himalayan bio-diverse region found?
6. What is vermicomposting?
7. List two control measures to reduce air pollution.
8. Define the term biomagnification?
9. Is 21 a Fibonacci triangular number ? Explain.
10. Explain the Right to Equality.
11. Explain the Right to Freedom.
12. Explain the Right to Constitutional remedies.

Part B

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

(6x5=30)

13. What are the problems in using chemical pesticides?
14. Briefly explain the conflicts over water - the Kaveri river water issue and Mullaperiyar dam issue
15. What are the measures for the conservation of biodiversity?
16. Briefly explain the water cycle?
17. Briefly describe the biodiversity of the Gangetic Plains.
18. Explain the relation between Fibonacci sequence and Rabbit problem explained in the Fibonacci's book, Liber Abaci.
19. Describe the relation between Fibonacci numbers and cycloparaffins.
20. Write a short note on the main goals of the ILO, the International Labour Organization.
21. Explain the constitutional privileges for other backward classes and minorities in India.

Part C

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

(2x15=30)

22. Describe the classification of natural resources. Explain the problems associated with water, land and food resources.
23. Explain the causes effects and control measures of a) water pollution b) nuclear pollution c) soil pollution.
24. Explain the Euler's method and the method using ruler and compass for locating the point C on the line segment \overline{AB} such that the length of the greater part \overline{AC} is the mean proportional of the whole length \overline{AB} and the length \overline{BC} of the smaller part.

25. Explain the three generations of Human rights.