23138637

QP CODE: 23138637

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, OCTOBER 2023

Fifth Semester

CORE COURSE - MM5CRT04 - ENVIRONMENTAL MATHEMATICS & HUMAN RIGHTS

B.Sc Mathematics Model I & B.Sc Mathematics Model II Computer Science

2017 Admission Onwards

4A1423A0

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Define deforestration.
2. What do you mean by exploitation of mineral resources?
3. What do you mean by non-renewable energy resources?
4. What are the remedies of air pollution?
5. What do you mean by ground water pollution?
6. What is acid rain?
7. Using Recurrence relation in Fibonacci numbers find F_0 and F_{-1}.
8. Find the solution of Recurrence Relation $a_n = \gamma\, a_{n-1}$ with $a_0 = c$
9. Draw the diagram of a pyramid showing the golden ratio.
10. The term 'the number of our physical body' refers what?
11. Describe the value dimensions of human rights.
12. What is CERD? Describe how it functions.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. What are the benefits of dams?

14. What are the different kinds of food problems in the world?

15. What are the different types of marine pollution? Explain the different methods of reducing marine pollution.

16. Write a short note on Source Reduction Techniques.

17. Explain the relation between Fibonacci numbers and male bees.

18. Express the gcd as a linear combination of 2024 and 1024.

19. Explain the Gatteis discovery of Golden ratio.

20. How do we relate centroids of circles and Golden ratio?

21. What are the major legislations containing rights and safeguards for women?

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Explain the precautionary steps for mitigation of losses due to various disasters.

23. Prove that the number of divisions needed to compute (a . b) by the Euclidean algorithm is no more than five times the number of decimal digits in b , where $a \geq b \geq 2$.

24.
    1. Discuss about Euler's construction of Golden ratio
    2. Explain Newton's method of generating the Golden ratio

25. Describe UDHR. Write the summary of the articles of UDHR.

(2×15=30)