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OECMAT II

B.Sc. II Semester Degree Examination, September/October - 2023

MATHEMATICS - II

Fundamentals of Mathematics (OEC)
(CBCS)

Time : 3 Hours | Maximum Marks : 70

Note : *Answer **all** sections.*

SECTION - A

Answer **any ten** of the following questions. **10x3=30**

1. Define Natural numbers, Integers and Rational numbers.

2. Define G.C.D. with example.

3. Define Prime numbers, L.C.M. and Surds.

4. Define Arithmetic progressions, Geometric progressional with examples.

5. Define Harmonic progressions with example.

6. Define Sum to n terms of Arithmatic and Geometric prograional r^{th} terms.

7. Define sum to n terms of Harmonic progression with example.

8. Define approximation of Wrong number.

9. Define Square root and Cube root with two examples each.

10. Define Percentage, Average Error's with example.

11. Define Profit and Loss, and Ages ratios proportion.

12. Define Probability, Pie Charts.

SECTION - B

Answer **any eight** of the following questions. **8x5=40**

13. Define Ratio and Average with two examples each.

14. Define Simple interest and Compound interest with example.

15. Define One-One function, Onto function with example.

16. Define Equivalence relation with examples.

17. Define Permutation and Combination with examples.

18. Define Shares of different types.

19. Define Time and Distance mensuration with examples.

20. Define Permutation and combination with two examples each.

21. Define Shares of different types and Bankers Discount.

22. Find I differentiation of $y = f(x)$ using first principles with two examples.

23. Find $\frac{dy}{dx}$ of $\sin x$, $\cos x$ using first principles.

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