



QP CODE: 25050790



25050790

Reg No :

Name :

MA DEGREE (CSS) EXAMINATION DECEMBER 2025

First Semester

M.A Development Economics

Core Courses - DE010105 - MATHEMATICS FOR ECONOMICS

2020 Admission Onwards

24C0422D

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Null Matrix.
2. Cofactors of a matrix.
3. Linear independence of vectors.
4. Limit of Function.
5. Necessary Condition of Minima.
6. Price elasticity of Demand.
7. Integration.
8. Beta Integrals.
9. Cob-Web Model.
10. Linear programming.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Write a note on laplace expansion.
12. The equilibrium conditions for two related markets (tea and coffee) are given below. $18P_b - P_p = 87$ $-2P_b + 36P_p = 98$ Find the equilibrium price for each market.
13. Describe important rules of differential calculus.
14. Maximize profits for a firm, given total revenue $R = 4000Q - 33Q^2$ and total cost $C = 2Q^3 - 3Q^2 + 400Q + 5000$, assuming $Q > 0$.





15. Explain Cost function using differentiation technique.
16. Explain integration by parts.
17. State the properties of definite Integrals.
18. Discuss the characteristics of Dual problem.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Write an essay on operations of matrices.
20. Compare first order condition of maximum with second-order condition for a maximum.
21. Distinguish between area under a curve and area between two curves.
22. Examine the basic requirements needed for employing linear programming technique.

(2×5=10 weightage)

