

22U536

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Name: .....

Reg.No: .....

**FIFTH SEMESTER B.A. DEGREE EXAMINATION, NOVEMBER 2024**

(CBCSS - UG)

(Regular/Supplementary/Improvement)

**CC19U ECO5 B10 - MATHEMATICAL ECONOMICS**

(Economics - Core Course)

(2019 Admission onwards)

Time : 2.5 Hours

Maximum : 80 Marks

Credit : 4

**Part A** (Short answer questions)

Answer *all* questions. Each question carries 2 marks.

1. What do you mean by a dependent variable?
2. What is MU?
3. Define MPS.
4. What is MRTs?
5. Explain the luxuries.
6. What do you mean by a multivariable function?
7. What do you mean by optimization with constraints?
8. What is lagrange multiplier?
9. What is linear production function?
10. What is the relevance of graphical solution to the LPP?
11. Explain the dissimilarities of an LPP with the Conventional theory of the firm.
12. What are the accounting assumptions of an IOA?
13. What is a transaction matrix?
14. What is a technology matrix?
15. What is equilibrium?

**(Ceiling: 25 Marks)**

**Part B** (Paragraph questions)

Answer *all* questions. Each question carries 5 marks.

16. Explain the Profit function.
17. Explain the relationship between AR and MR.

18. Explain the assumptions of linear programming.
19. What the dual implies?
20. Explain the static model of an IOA.
21. Write a short note on the features of market.
22. Explain the features of Monopoly.
23. Explain the discrimination under monopoly.

**(Ceiling: 35 Marks)**

**Part C (Essay questions)**

Answer any *two* questions. Each question carries 10 marks.

24. Explain in detail about an economic model.
25. Consider the Supply function  $Q = 0.25P - 10$ 
  - (a) Find the arc elasticity of supply when P increases from (i) 44 to 45; (ii) from 64 to 65.
  - (b) Find the Point elasticity when  $P=44$  and when  $P=64$  and compare your answers.
26. Prove the mathematical properties of CD function.
27. Derive the equilibrium condition for a firm under Perfect competition.

**(2 × 10 = 20 Marks)**

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