

Reg. No. :

Name :

Third Semester B.A. Degree Examination, March 2022

First Degree Programme under CBCSS

Economics

Core Course III

EC 1341 : BASIC TOOLS FOR ECONOMICS I

(2013 & 2014 Admission)

Time : 3 Hours

Max. Marks : 80

PART - A

Answer all questions in one word to maximum of two sentences. Each question carries 1 mark.

1. Rectangular Matrix
2. Minima
3. Variable
4. Bivariate
5. Endogenous
6. Average Cost
7. Constant variable

8. Quadratic equation
9. Universal set
10. Transpose of a matrix

(10 × 1 = 10 Marks)

PART – B

Answer **any eight** questions not exceeding one paragraph. Each question carries **2** marks.

11. Give a brief note on Column matrix.
12. What is meant by Single variable?
13. Briefly explain about Equality of matrix.
14. What is 'Definite integral'?
15. Differentiate between Unit matrix and Row matrix.
16. How can we find the 'Simple growth rate'?
17. Give a brief note on Symmetric matrix.
18. What do you mean by Marginal cost?
19. Define the determinants of a matrix order 3.
20. What do you mean by Constrained optimization.
21. Explain the term Demand.
22. What is meant by Ratio?

(8 × 2 = 16 Marks)

PART – C

Answer **any six** questions not exceeding **120** words. Each question carries **4** marks.

23. $\begin{bmatrix} 2 & 3 & 5 \\ 5 & 4 & 2 \\ 2 & 5 & 9 \end{bmatrix} \begin{bmatrix} 5 & -9 & 6 \\ 2 & 3 & -5 \\ 4 & -9 & 7 \end{bmatrix}$ Find $A+B$.

24. $A = \begin{bmatrix} 2 & 3 \\ 1 & 2 \end{bmatrix} B = \begin{bmatrix} 4 & 2 \\ 1 & 3 \end{bmatrix}$ Find $6A - 3B$.

25. Draw a supply curve and explain its properties.

26. Solve the equation $U = 2x^2 - 2y^2$.

27. Explain the power function.

28. Differentiate between ratio and proportion of growth rate.

29. Explain the Euler's theory?

30. Solve the equation $U = 4x^3 + 2y^2$.

31. Explain the points of inflexion.

(6 × 4 = 24 Marks)

PART – D

Answer **any two** questions, not exceeding **4** pages. Each question carries **15** marks.

32. Find the maximum and minimum values of $Y = 2X^3 - 3X^2 - 12X + 4$.

33. It is known that for a mill the number of Laboure's employed (X) and the total cost (y) are related by $y = \frac{3}{2(X-4)} + \frac{3X}{32}$. What value of x will minimize the cost?

34. Solve the equations by Crammer' rule $2x - 3y = 3$ and $4x - y = 11$.

35. Critically evaluate the properties of differentiation.

(2 × 15 = 30 Marks)

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