

20U313

(Pages: 2)

Name:

Reg. No:

THIRD SEMESTER B.A. DEGREE EXAMINATION, NOVEMBER 2021

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U ECO3 B03 - QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS

(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. Find value of $(7^2)^{-3}$?
2. What is a linear function?
3. Give the equation of the line parallel to X axis.
4. What will be the graph of a linear equation?
5. Show that $\begin{vmatrix} 3 & 6 \\ 1 & 2 \end{vmatrix}$ is singular.
6. Find the inverse of the matrix $\begin{bmatrix} 4 & 2 \\ -3 & 1 \end{bmatrix}$
7. What will be the minimum rank of a non zero matrix?
8. Explain the Merits of Sampling.
9. How to find mode in discrete series?
10. Define Skewness.
11. Explain the classifications of diagrams.
12. Explain the term perfect correlation.
13. What are the conditions for using Rank correlation?

14. Briefly explain regression
15. What is least square?

(Ceiling: 25 Marks)

Part B (Paragraph questions)

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

16. Solve $\log_5(x - 7) = 1$?
17. Solve $4x + 7 = 3x + 12$
18. If $A = \begin{bmatrix} 2 & 3 & 1 \\ 0 & -1 & 5 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 2 & -1 \\ 0 & -1 & 3 \end{bmatrix}$ Find $2A - 3B$
19. Solve using Cramm's Rule $2x - 3y = 3$; $4x - y = 11$
20. Differentiate less than ogive from greater than ogive
21. Explain the measures of dispersion.
22. Explain the merits of scatter diagram.
23. Explain various types of regression line.

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. An automobile spare part manufacturing company introduces production bonus to the employees that increases the cost of the spare part. The daily cost of production C for x number of spare parts is given by $C(x) = 2.05x + 550$. (a) If each spare part is sold for $Rs. 3$, determine the minimum number that must be produced and sold daily to ensure no loss. (b) If the selling price is increased by $Ps. 30$ per piece, what would be the break even point?
25. Write a detailed explanations on correlation.
26. Explain the methods of collecting sample.
27. Find Karl Pearson co-efficient of correlation between the values X & Y
X : 78 89 96 69 59 79 68 61 Y :
125 137 156 112 107 136 123 108

(2 × 10 = 20 Marks)
