

23U314

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Name:

Reg.No:

THIRD SEMESTER B.A. DEGREE EXAMINATION, NOVEMBER 2024

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U ECO3 B03 - QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS - I

(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 the value of $\frac{2^{-2}}{2^3}$.
2. Solve $3x = 6$.
3. Solve $x^2 = 4$.
4. Define a saving function.
5. Define a diagonal matrix.
6. Give the formula to find out the inverse of a matrix.
7. What is interval scale?
8. Define Harmonic Mean.
9. What is Gini-Coefficient?
10. What is Platy kurtic?
11. Explain the classifications of diagrams.
12. Explain negative correlation.
13. What are the conditions for using Rank correlation?
14. What is least square?
15. Explain regression line.

(Ceiling: 25 Marks)

Part B (Paragraph questions)

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

16. Find logarithm of 625 to the base 5.
17. If the X intercept of a straight line is 2 and Y intercept is -3. Find the equation.

18. Draw the graph of $x^2 = 4y$.

19. Show that $\begin{vmatrix} 5 & 7 & 2 \\ 2 & 3 & 1 \\ 4 & 6 & 2 \end{vmatrix}$ is singular.

20. Find the Rank of $A = \begin{bmatrix} 5 & 2 & 1 \\ 0 & 1 & 3 \\ 2 & 1 & 0 \end{bmatrix}$

21. What is mean deviation?

22. Write a note on co-efficient of variation.

23. Write a note on degree of correlation.

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. (a) Find the equilibrium price for a commodity whose supply and demand functions are given by

$$Q_s = -7 + p \text{ and } Q_d = -3 - p?$$

(b) A text book publisher finds that the production cost is directly attributable to each book are *Rs.* 20 and that the fixed cost are *Rs.* 10,000. If each book can be sold for *Rs.* 30, determine the cost function, revenue function and break even point?

25. Solve $3x + 2y + z = 6$; $2x - 3y + 3z = 2$; $x + y + z = 3$ using Crammers' Rule.

26. Explain the methods of data collection.

27. Find the correlation between X and Y

X : 200 270 340 310 400

Y : 150 162 170 180 180

(2 × 10 = 20 Marks)
