23U426 (Pages: 2) Name : .....

Reg. No : .....

FOURTH SEMESTER B.A. DEGREE EXAMINATION, APRIL 2025

(CBCSS-UG)

(Regular/Supplementary/Improvement)

CC19U ECO4 B05 - QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS - II

(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 $\lim_{x\to 5} x^2 + 2$.
2. If $y = c^2 x$, where c is a constant, Find $\frac{dy}{dx}$.
3. Find the partial derivative $\frac{\partial f}{\partial x}$ of the function $f = \frac{x}{y}$.
4. Define Marginal Cost.
5. What is a price index number?
6. Explain the weighted aggregative method.
7. Define Paasche's index number.
8. What is Fisher's index number
9. Define Bowley's index numbers
10. What is Deflating?
11. What is BSE?
12. Explain ad-hoc survey.
13. Define Crude Birth Rate.
14. What is infant mortality rate?
15. Define a dependent events with an example.

(Ceiling: 25 Marks)

Part B (Paragraph questions)

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

16. Find $\lim_{x\to 1} \frac{x^2+4x-1}{x+1}$

17. Differentiate $y = \frac{x^2-1}{x^2+1}$

18. The cost for a company producing x number of Television per week is given by $4x^2 - 80x + 1500$ rupees. To have minimum cost, how many Television should be produced per week?

19. Explain the importance of time reversal test.

20. Briefly explain the analysis of time series

21. How we can calculate the semi avearge method.

22. Explain the merits and demerits of method of moving average.

23. A fair coin is tossed twicw. Find the proability that the tosses resultsin (a) two heads (b) at least one head.

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. If $y = x^3 logx$, prove that $x^2 \frac{d^2y}{dx^2} - x\frac{dy}{dx} + y = 0$

25. Write a detailed note on Index Numbers.

26. What are the major problems and limitations associated with the construction of index numbers?

27. (a) Find the proability of getting total of 8 or 10 in a single thrown with two dice..
(b) If $P(A) = .5, P(B) = .6$ and $P(A \cap B) = .2$, find $P(A \cup B)$.

(2 × 10 = 20 Marks)

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