19U444 (Pages: 2) Name: .....

Reg.No: .....

FOURTH SEMESTER B.A. DEGREE EXAMINATION, APRIL 2021

(CBCSS - UG)

CC19U ECO4 B05 - QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS II

(Economics - Core Course)

(2019 Admission - Regular)

Time : 2.5 Hours Maximum : 80 Marks

Credit : 4

Part A (Short answer questions)

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

1. Check whether the function $f(x) = \frac{1}{x^2-4}$ is continuous or discontinuous..
2. If $x + y = a$, Find $\frac{dy}{dx}$
3. Find the partial derivative of $\frac{x}{y}$?
4. Give the condition for maximum revenue
5. Explain the relevance of Index Numbers
6. What is price quotations
7. Define quantity index numbers
8. What is Time reversal test
9. What is splicing?
10. Write an example of Time series?
11. Explain the merits of moving average method.
12. Explain the curve fitting method by mathematical equations.
13. Explain total fertility rate.
14. What is infant mortality rate?

15. Define a sure event and impossible event with an example.

(Ceiling: 25 Marks)

Part B (Paragraph questions)

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

16. If $y = e^{2x}$ find $\frac{d^2y}{dx^2}$

17. Determine the minima and maxima values of $f(x) = 2x^3 + 3x^2 - 36x - 12$

18. Explain the procedures of time reversal test in Fishers index numbers.

19. How Kelley's Index number is different from other index numbers?

20. Write a note on BSE

21. Write a note on cyclic variation.

22. Write a note on vital statistics.

23. A can hit a target 2 times with 5 shots, B can hit it 3 times with 4 shots and C can hit it 5 times with 8 shots. If they fire at a volley, what is the proability that at least one of them hits it?

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. The demand function of a monopolist is $p = 15 - 2x$ and the cost function is $C(x) = x^2 + 2x$. Find the (1) Marginal Cost (2) Mrginal Revenue (3) Equilibrium Output (4) Equilibrium Price (5) Average Cost (6) Average Cost when the output is 4 units.

25. Explain the formulae used under weighted aggregative method.

26. Check whether Laspeyer's and Paasche's index number satifies the time reversal and factor reversal test.

27. Two unbaised dice are thrown. Find the proability that (a) both dice show the same number (b) one dice shown 5 (c) first die shows 5 (d) the total of the numbers on the dice is 8 (e) total of the numbers on the dice is greater than 8 (f) a sum of 10

(2 × 10 = 20 Marks)

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