SECOND SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2020

(CBCSS - UG)

CC19U MEC2 C02 : MATHEMATICAL ECONOMICS

(Statistics - Complementary)

(2019 Admission - Regular)

Time: 2.00 Hrs   Max. Marks: 60

Credit: 3

(Draw diagram wherever necessary.The students can answer all questions in sections A & B)

A. Short answer questions. Each question carries 2 marks.

1. What are the effects of income inequality?

2. Explain lorenz cuve.

3. Discuss the differentiablity of function with several avriables.

4. Suppose $y_1 = x_1 x_2$, and $y_2 = x_1 + x_2$. Then find the Jacobian matrix.

5. If $f(x) = 5x^4 + 4x^4 + 3x^2 + 10x$. Find first order derivative.

6. Explain the concept of Local maxima and Local minima.

7. Give an example of equality constraint with two variables and one equality constraint.

8. What is one inequality constraint?

9. Explain constrained minimization problem.

10. What do you mean by khun-Tucker formulation?

11. Distinguish between open input output model and closed input output model.

12. Define leontief production function.

(Ceiling: 20 Marks)

B. Short essay questions (Paragraph). Each question carries 5 marks.

13. Explain Inequality in income and its effects in the society.

14. Define sufficient and necessary conditions of second order derivatives.

15. Explain the method of least squares analysis in several variables.

16. Explain the Inequality constarint with one variable.

17. Define input-output analysis.How do you diffrentiate open and closed inout-output model.

18. How to determine of equilibrium prices?

19. Discuss about the limitations of input-output analysis.

(Ceiling: 30 Marks)

C. Essay questions. Answer any one question.

20. i) Define global maxima and globa minima.

    ii) Find local minima and local maxima of the function xy^2+x^3y-xy

21. Explain: i) Input-output analysis.   ii) The Hawkins-simon conditions.

(1 × 10 = 10 Marks)

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