21U131 (Pages: 2) Name: .....

Reg.No: .....

FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2021

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U MEC1 C01 - MATHEMATICAL ECONOMICS

(Statistics - Complementary Course)

(2019 Admission onwards)

Time : 2.00 Hours Maximum : 60 Marks

Credit : 3

Part A (Short answer questions)

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

1. Define demand and quantity demanded.
2. Define demand function.
3. How will you find arc elasticity of demand?
4. Explain Accounting and economic cost with examples.
5. What is marginal cost and average cost?
6. Define Total and Marginal Revenue.
7. Define indifference curve.
8. What is critical points?
9. What is total deifferential?
10. Find marginal productivity of Labour(L) $Q = 36KL - 2K^2 - 3L^3$
11. Define income elasticity of demand.
12. Write a short note on constrained optimization of multivariable function?

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)

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

13. Briefly explain supply of a commodity.
14. Explain market equilibrium.

15. Give reasons for the U-shape of a long run average cost curve.

16. Dislinguish between Cardinal and Ordinal Approach to utiliry.

17. Explain the comparison between cardinal utility approach and ordinal utility approach.

18. Find first order partial derivative of $z = \frac{(5x^2-7y)(3x^2+8y)}{4x+2y}$

19. Find the first derivative of $z = xlogx$

(Ceiling: 30 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

20. Establish the relation between AR, MR, and price elasticity of demand.

21. Optimize $z = 26x - 3x^2 + 5xy - 6y^2 + 12y$ subject to the constraint $3x + y = 170$

(1 × 10 = 10 Marks)

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