FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

(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. What is a giffen good?

2. Mention the factors determining demand of a commodity.

3. What is supply and quantity supplied?

4. Explain Accounting and economic cost with examples.

5. Distinguish between varaibles factors and fixed factors.

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

7. What is diminishing marginal rate of substitution?

8. Define concavity and convexity of a function.

9. Define differential.

10. What is marginal productivity?

11. Define cross elasticity of demand.

12. What do you mean by constrained optimization of multivariable function?

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)

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

13. Explain market equilibrium.

14. Explain price elasticity of demand and distinguish between point elasticity and mid point method of finding price elasticity.

15. Given the demand function $P = 100 - 4Q$, calculate the total, average and marginal revenue functions.

16. Dislinguish between Cardinal and Ordinal Approach to utility.

17. The utility function $U = 4xy - y^2$ and budjet line is $2x + y = 6$. Find equilibrium bundle.

18. Find first and cross partial derivative of $z = 7x^3 + 9xy + 2y^5$

19. Explain the optimization of multivariable function.

(Ceiling: 30 Marks)

Part C (Essay questions)

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

20. i) Explain the concepts of revenue functions.
    ii) Explain the relation between Average Revenue and Marginal Revenue.

21. Optimize $z = 4x^2 - 2xy + 6y^2$ subject to the constraint $x + y = 72$

(1 × 10 = 10 Marks)

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