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Reg. No.....

Name.....

M.Sc. DEGREE (C.S.S.) EXAMINATION, APRIL 2019

Fourth Semester

Faculty of Science

Branch I (a) : Mathematics

MTO 4E 05—MATHEMATICAL ECONOMICS

(2012 Admission onwards)

Time : Three Hours Maximum Weight : 30

Part A

Answer any **five** *questions.*
Each question has weight 1.

1. State the consumer equilibrium under indifference curve analysis.
2. If D = 100 – 6P, S = 28 + 3P, find equilibrium price.
3. State law of variable proportions.
4. What is technology matrix ?
5. What are Ridge Lines ?
6. What is input-output table ?
7. Define order of difference equation.
8. What is input-output ratio ?

(5 × 1 = 5)

Part B

Answer any **five** *questions.*
Each question has weight 2.

9. What are the causes of downward sloping demand curve ?
10. Explain the concept of marginal rate of substitution.
11. Explain the properties of isoquants.
12. Distinguish between short run and long run production function.

Turn over

13. Explain the limitations of input-output analysis.

14. Explain various types of returns to scale.

15. Explain the Cobweb model.

16. Discuss the Keynesian lagged income determination model.

(5 × 2 = 10)

Part C

Answer any **three** *questions.*
Each question has weight 5.

17. (a) Critically examine the revealed preference theory of demand.

    (b) Discuss the merits of revealed preference theory to the Hicksian ordinal utility approach to consumer behaviour.

18. (a) Discuss the properties of indifference curves.

    (b) Explain the basic assumptions of indifference curve analysis.

    (c) Distinguish between cardinal utility and ordinal utility.

19. (a) Discuss the conditions for producer's equilibrium.

    (b) Explain economic region of production.

    (c) What do you mean by the choice of optimal expansion path.

20. (a) Explain Cobb-Douglas production function.

    (b) Discuss the properties of Cobb-Douglas production function.

21. (a) Explain the difference equation solution to Cobweb model.

    (b) Explain the stability conditions of cobweb model using the solution of cobweb difference equation model.

22. (a) Discuss the input-output analysis.

    (b) An economy has two basic products, wheat and oil. To produce 1 unit of wheat requires 0.25 units of wheat and 0.33 units of oil. Production of 1 unit of oil consumes 0.08 units of wheat and 0.11 units of oil. Find the production that will satisfy a demand for 500 units of wheat and 1000 units of oil.

(3 × 5 = 15)