FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BA Degree Examination, November 2016

ECO1C04 – Mathematical Tools for Economics

(2016 Admission onwards)

ix. Time: 1 ½ hours   Max. Marks: 4(

Part A
Answer *ALL* questions

1. Simplify $\dfrac{15ax^2}{5x}$

   a) $3ax^2$ b) $3ax$ c) $5ax^2$ d) $5ax$

2. Simplify $a(c - b) - b(a - c)$

   a) ac - 2ab –bc   b) ac - 2ab + bc   c) ac + 2ab + bc   d) ac + bc

3. Coefficient of x^2 in $4x^3 + 3x^2 - x + 1$ is:

   a) 1   b) -1   c) 3   d) 2

4. Expand and simplify $(x - 5)(x + 4)$

   a) $x^2 + 9x - 20$ b) $x^2 - x - 9$ c) $x^2 - x - 1$ d) $x^2 - x - 20$

5. Factorise $20x^2 - 9x + 20$

   a) (5 + 4x)(4 - 5x)   b) (5 - 4x)(4 - 5x)   c) (5 - 4x)(4 + 5x)   d) (5 + 4x)(4 + 5x)

6. Which ratio is equal to $1\dfrac{1}{3} : 2$

   a) $\dfrac{4}{3} : \dfrac{1}{2}$ b) $4 : 6$ c) $2\dfrac{4}{3} : 1\dfrac{1}{2}$ d) a and c

$(6 \times ½ = 3$ Mark

Part B (Very Short Answer Type Questions)

Answer *any 6* questions

7. Solve $6x^2 + 11x - 35 = 0$.

8. Solve the following simultaneous equations

   $9x - 6y = 12$ $\qquad\qquad$ $4x + 6y = 14$

9. Distinguish variable and parameter. Give suitable example

10. With a hypothetical example explain budget line

11. Solve $5x - 22.5 = 2.5(x - 6) + 7.5$

12. $3\dfrac{2}{4} + 2\dfrac{4}{7} - \dfrac{3}{5} = \ldots\ldots$

13. Simplify $10x^3 y^5 z \times 4x^4 y^{-2} z^{-3}$

14. Explain demand function.

$$(6 \times 2 = 12 \text{ Marks})$$

Part C (Short Essay)

Answer *any Three* questions

15. Graphically solve the following simultaneous equation

    $4x - 3y = 23$ $\qquad\qquad$ $3x + 4y = 11$

16. What are the uses of equations and graphs in economics?

17. Divide $10x^3 - 34x^2 + 62x - 20$ by $10x - 4$

18. *If* $a = 5x^3 + 4x^2 + 6xy - y^2$ $\quad b = 7x^2 + 2xy + 4y^2$ *and* $c = x^2 - 2xy + 4y^2$.

    Find (2a+b)-c

$$(3 \times 5 = 15 \text{ Marks})$$

Part D (Essay Questions)
Answer any *one* of the following questions

19. Write short note on the following. For each give suitable example

    a) Polynomials.

    b) Uses of quadratic equation in economics

20. Solve the following system of equations:

    a) $2x - 2y - 2z = 2$

    $2x - 3y + z = 10$

    $x + y - 2z = 0$

$$(1 \times 10 = 10 \text{ Marks})$$

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Name: ....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BA Degree Examination, November 2016

ECO1B01 – Micro Economics I

(2016 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

PART - A

Answer ALL questions. Each question carries ½ mark

1. If $Mu_x < Mu_y$, then Consumer Can do.....
   a. Increase the Consumption of X and Y
   b. Increase the consumption of Y alone
   c. Decrease the consumption of both the goods
   d. Decrease the consumption of X and Increase the consumption of Y

2. If an increase in the price of blue jeans leads to an increase in the demand for tennis shoes, then blue jeans and tennis shoes are
   a. complements.   b. inferior goods.
   c. normal goods.   d. substitutes.

3. The total area under Marginal utility curve is
   a. Total utility   b. Total Price
   c. Marginal utility   d. Satisfaction from Last unit

4. Induction Means the Pattern Analysis from
   a. General to Particular   b. Particular to general
   c. Abstract to concrete   d. Subjective to objective

5. Weak ordering is a basic assumption of which theory of consumption?
   a. Cardinal Analysis   b. Ordinal Analysis
   c. Behaviouristic Analysis   d. Subjective Analysis

6. If the price of a good is above the equilibrium price,
   a. there is a surplus (i.e. an excess supply) and the price will rise.
   b. there is a shortage (i.e. an excess demand) and the price will fall.
   c. there is a shortage (i.e. an excess demand) and the price will rise.
   d. there is a surplus (i.e. an excess supply) and the price will fall.

7. An inferior good is one for which an increase in income causes a(n)
   a. decrease in supply.   b. increase in demand.
   c. increase in supply.   d. decrease in demand.

8. Economic profit is equal to total revenue minus
   a. variable costs.   b. implicit costs.
   c. explicit costs.   d. marginal costs.

9. Introspective ordianlist approach was introduced by.....................

10. The concept of consumers surplus was first introduced by ....

11. The Substitution effect is .... for an inferior good.

12. In Cobb Douglas production function, "A" indicates..

(12 x ½ = 6 Marks)

PART - B
Answer any TEN questions. Each question carries two marks

13. Define economic model. What are the uses of economic model?
14. What is deductive and inductive method of analysis?
15. Distinguish between positive and normative approach.
16. What do you mean by consumer equilibrium?
17. Explain income elasticity of demand.
18. Explain the law of diminishing marginal utility.
19. What is income consumption curve?
20. What is Marginal revenue? How is it related with elasticity?
21. Draw an expansion path.
22. Distinguish between strong ordering and week ordering.
23. What are the properties of Isoquont?
24. Write a note on Hicksian consumers surplus

(10 x 2 = 20 Marks)

PART - C
Answer any SIX questions. Each question carries five marks

25. Distinguish between extension-contraction in demand and increase-decrease in demand.
26. Which are the methods to measure elasticity of demand? Explain any one method?
27. What is Engel curve?
28. Analyse producer's equilibrium using least cost combination of factors.
29. What is production function? Distinguish between short period and long period production function.
30. Distinguish between ICC and PCC. What is their importance?
31. Distinguish between Substitute and complementary goods in case of Cross elasticity of demand.
32. What is cob Douglas production function?

(6 x 5 = 30 Marks)

PART - D
Answer any TWO questions. Each question carries twelve marks

33. "Choice reveals preference". Explain?
34. Anlayse the decomposition of price effect into income effect and substitution effect in case of normal and inferior goods.
35. Evaluate consumer equilibrium using indifference curve analysis. Why Ordinal analysis is superior to cardinal analysis of consumer equilibrium?
36. Explain the law of variable proportions.

(2 x 12 = 24 Marks)