

EASTERN UNIVERSITY, SRI LANKA
FIRST YEAR/ FIRST SEMESTER EXAMINATION IN AGRICULTURE- 2005/2006
AEC 1101: INTRODUCTORY MICRO ECONOMICS

Answer all questions
Time allowed: 2 Hours

- 01) a) What are the characteristics of resources?
b) Define the term 'scarcity' in economic point of view
c) Discuss how the price of a commodity is determined in a market
d) Differentiate income and substitution effects created by a specific price change of a commodity
e) Interpret the nature of elasticities for the following,

Own price elasticity of rice - 0.86

Cross price elasticity of chicken and beef - 0.345

Income elasticity of rice - 0.153

(25 marks)

02) Rani has a weekly income of Rs 350 which she allocates between bread and carrot. Suppose bread (b) cost Rs 25 per Kg and carrot (c) cost Rs 50 per Kg,

- a) Draw her budget constraint
b) An import restriction of wheat raises the price of bread to Rs 50 per Kg. What does her budget constraint look like now?
c) Define the law of diminishing marginal utility
d) Suppose the marginal utility to Raja of product A is defined by the function, $MU_A = 22 - X$, where X is the number of units of A produced. For B, $MU_B = 41 - Y^2$, where Y is the number of units of B produced. Assume that the price of A is half the price of B. Price of B is Rs 2.
How much of A and B would Raja buy if he had Rs.12 to spend?

(25 marks)

03) a) Define a production function

b) i) Graphically show the different types of product curves and stages of production

ii) Define the rational stage of production

c) Using the table given below answer the following:

| | | | | | | | | | | |
|-------------|----|----|----|-----|-----|-----|-----|-----|-----|----|
| Land | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fertilizer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Yield (Kg) | 20 | 50 | 90 | 120 | 140 | 150 | 150 | 140 | 120 | 90 |

i) Calculate the average and marginal product of fertilizer

ii) If the output price is Rs 50 /kg and the fertilizer price is Rs 1000/kg, rent for unit land area is Rs 1500. Find out the optimal level of fertilizer usage.

d) Explain how the commodities are classified depending on the household income and quantity demanded, with diagram.

(25 marks)

04) a) Graphically show the different types of short run cost curves

b) The short run total cost function of a firm is given by $C = 0.01Y^2 + 10Y + 5$ where Y is the output, C = total cost

Derive firm's fixed cost, average fixed cost, variable cost, average variable cost, and marginal cost

c) How do long run cost curves related with economies of scale?

d) Fill the missing values to complete the following table,

| | TFC | TVC | TC | AFC | AVC | AC | MC |
|---|-----|-----|----|-----|-----|----|----|
| 0 | | | 30 | | | | |
| 1 | | | | | | | 10 |
| 2 | | | | | | 24 | |
| 3 | | 24 | | | | | |
| 4 | | | 62 | | | | |
| 5 | | | | | 10 | | |
| 6 | | | | | | 17 | |

(25 marks)