



MUNHUMUTAPA SCHOOL OF COMMERCE
DEPARTMENT OF ECONOMICS AND FINANCE
BACHELOR OF COMMERCE DEGREE
LEVEL 2 SEMESTER 1
EXAMINATION QUESTION PAPER

MODULE CODE

EC215

MODULE NARRATION

MICROECONOMICS 1

DATE

2024

DURATION

3 HOURS

GREAT ZIMBABWE UNIVERSITY
RECEIVED
-- NOV 2024

EXAMINATIONS OFFICE

INSTRUCTIONS TO CANDIDATES:

1. Answer any four questions
2. All questions carry equal marks
3. Start each answer on a fresh page
4. Show all workings, where applicable

QUESTION 1

(a) With the aid of diagrams and examples, explain the shape of indifference curves in the case of:

(i) Perfect substitutes. [5 marks]

(ii) Compliments [5 marks]

(b) Evaluate how important is the knowledge of the axioms of choice to the independent consumer. [15 marks]

[Total 25 marks]

QUESTION 2

(a) Explain the following terms:

(i) Well behaved preferences. [4 marks]

(ii) Compensated demand [4 marks]

(iii) Uncompensated demand [4 marks]

(b) A firm has the production function $F(K, L) = 2K^{\frac{1}{2}}L^{\frac{1}{2}}$ where K denotes capital and L denotes labour. Let r and w denote the prices of capital and labour, respectively. Let p denote the price of the good that is being produced.

Is the technology of the firm associated with decreasing-, constant- or increasing returns to scale? Motivate your answer. [5 marks]

(c) In the short run the capital stock is fixed, i.e. $K = \bar{K}$:

(i) State the short-run profit maximization problem. [3 marks]

(ii) What is the optimal level of labour which maximizes profit in the short run? [5 marks]

[Total 25 marks]

QUESTION 3

(a) Amanda can consume two goods x_1 and x_2 at price p_1 and p_2 respectively. She has an income of m and her preferences are represented by the following utility function: $U_1(x_1, x_2) = x_1 x_2^2$:

(i) Derive Amanda's Marshallian demand functions for the 2 goods.

[6 marks]

(ii) What are the Marshallian demand functions for the two goods if Amanda's utility changes to $U_2(x_1, x_2) = \frac{1}{8} x_1 x_2^2$

[6 marks]

(iii) Derive an expression for MRS between x_1 and x_2 for, $U_2(x_1, x_2) = \frac{1}{8} x_1 x_2^2$

[4 marks]

(b) Calculate MRS for:

(i) $x_1 = 1$ and $x_2 = 10$

[3 marks]

(ii) $x_1 = 10$ and $x_2 = 1$

[3 marks]

(iii) Are x_1 and x_2 normal good? Explain.

[3 marks]

[Total 25 marks]

QUESTION 4

(i) Explain the relationship between Marginal Cost (MC), Average Variable Cost and Average cost.

[9 marks]

(ii) Analyse the possible reasons as to why Short run Average cost curve will be tangential to the long run Average cost curve at a lower output and how important is this to the manufacturer of shoes.

[16 marks]

[Total 25 marks]

QUESTION 5

Consider a production function given as $f(k, l) = 3k^{1/4}l^{1/4}$,

(a) Using λ argument demonstrate that the production exhibits decreasing returns to scale. [5 marks]

(b) Derive the cost function given that $w_k = w_l = 9$ [10 marks]

(c) Derive the supply function of a competitive firm, assuming the cost function from (b) and fixed cost $F=2$, (give a formula for $y(p)$). [10 marks]

[Total 25 marks]

END OF EXAMINATION