

LAIKIPIA



UNIVERSITY

UNIVERSITY EXAMINATIONS

2ND SEMESTER 2023/2024 ACADEMIC YEAR

**FIRST YEAR EXAMINATION FOR THE DEGREE OF
SCIENCE IN COMPUTER SCIENCE AND BICT**

ECON 100: INTRODUCTION TO ECONOMICS

STREAM: BICT/COMP SCI

TIME: 2 HRS

DAY: WEDNESDAY [8.30-10.30 A.M

DATE: 17/04/2024

THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES

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INSTRUCTIONS: Answer QUESTION ONE and other TWO QUESTIONS

QUESTION 1

a) Distinguish between the following concepts as used in economics

- i) Isoquant and indifference curves **(4 marks)**
- ii) Supply schedule and supply curve **(4 marks)**
- iii) Movement along and shift of the demand function **(4 marks)**

b) The structural model of an economy is given as below

- $C = 500 + 0.7 Y^d$ Consumption function
- $I = 270$ Investment
- $G = 450$ Government expenditure
- $T = 200$ Tax

Required

- i) Derive the savings function **(2 marks)**
- ii) Compute the equilibrium income (Y) and equilibrium consumption(C) **(4 marks)**
- c) Using a well labelled diagram, explain how a production possibility frontier (PPF) is used to explain the concept of scarcity, choice and opportunity cost. **(6 marks)**
- d) Explain three main determinants of price elasticity of supply. **(6 marks)**

QUESTION 2

- a) Explain the four properties of an indifference curve **(4 marks)**
- b) With the aid of well labelled diagrams differentiate between cost-push and demand-pull inflation **(10 marks)**
- c) The following Table gives the marginal utility of John’s consumption of three goods A, B and C.

| Units of Consumption | Marginal utility of good A | Marginal utility of good B | Marginal utility of good C |
|----------------------|----------------------------|----------------------------|----------------------------|
| 1 | 20 | 25 | 45 |
| 2 | 18 | 20 | 30 |



| | | | |
|---|----|----|----|
| 3 | 16 | 15 | 24 |
| 4 | 14 | 10 | 18 |
| 5 | 12 | 8 | 15 |
| 6 | 10 | 6 | 12 |

If good A, B and C cost Ksh. 2, Ksh 1 and Ksh 3 respectively, how many units of each good should John take to maximize utility with an income of Ksh 12. **(6 marks)**

QUESTION 3

- a) Explain four different types of market structures. Give an example in each case. **(8 marks)**
- b) Briefly explain at least two methods of measuring national income. **(4 marks)**
- c) Explain four types of unemployment experienced in Kenya. **(8 marks)**

QUESTION 4

a) The demand and supply functions for a commodity X are expressed as follows

$Q = 80 - 2P$ (i)

$Q = - 40 + 3P$ (ii)

Required

- i) From the above equations, identify the supply and demand functions. Give reasons for your answers. **(4 marks)**
- ii) Calculate the Equilibrium price and equilibrium quantity. **(2 marks)**
- iii) illustrate the equilibrium condition graphically. **(2 marks)**
- b) Explain at least four instruments of monetary policy. **(8 marks)**
- c) Discuss any two factors which affect the size of a country’s national economy. **(4 marks)**



QUESTION 5

A firm uses labour in its production process. The Table below shows the number of workers (L) and the total product (TP) of the corresponding labour units

| Labour (L) | Total Product (TP) | Marginal Product (MP) | Average Product (AP) |
|------------|--------------------|-----------------------|----------------------|
| 0 | 0 | | |
| 1 | 5 | | |
| 2 | 16 | | |
| 3 | 36 | | |
| 4 | 68 | | |
| 5 | 95 | | |
| 6 | 114 | | |
| 7 | 119 | | |
| 8 | 120 | | |
| 9 | 117 | | |
| 10 | 100 | | |

Required

- i) Calculate the Average product (AP) and Marginal product (MP) for the units of labor used. **(4 marks)**
- ii) On the same graph, draw the TPL, APL and MPL curves. **(4 marks)**
- iii) Use your graph to explain the relationship between the three curves. **(6 marks)**
- iv) Identify and explain the three stages of production. **(6 marks)**