



# UNIVERSITY

# **UNIVERSITY EXAMINATIONS**

2<sup>ND</sup> 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

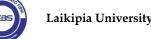
and C

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

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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	Average Product
		(MP)	(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)