MACHAKOS UNIVERSITY

University Examinations for 2022/2023 Academic Year

SCHOOL OF BUSINESS, ECONOMICS AND HOSPITALITY AND TOURISM MANAGEMENT

DEPARTMENT OF ECONOMICS

FIRST YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF ECONOMIC& FINANCE

BACHELOR OF ECONOMICS & STATISTICS

BACHELOR OF ECONOMICS

BACHELOR ARTS

EET 100: MACROECONOMICS THEORY 1

DATE: **TIME:**

INSTRUCTIONS:

    (i)   **Answer question one (Compulsory) and any other two questions**

    (ii)   **Do not write on the question paper**

    (iii)   **Show your working clearly**

QUESTION ONE (COMPULSORY) (30 MARKS)

a)   Given

$$q = Ak^2l^5$$

    i.   Calculate marginal productivity of K and L   (4 marks)

    ii.   Interpret the answers in (i) above   (2 marks)

    iii.   Determine the return to scale of the give production function   (5 marks)

b)   Briefly explain how the forces of market (supply and demand) determines price of goods and services   (5 marks)

c)   Give similarities between Indifference curve and Isoquant curve   (6 marks)

d) Given:

$$U=f(q_x)$$ (5 marks)

    i) Proof at equilibrium marginal utility is equal to zero for consumption of free goods

    ii) Proof at equilibrium marginal utility is equal to price for consumption of priced goods

e)   Give and explain the assumptions under cardinalist theory of consumer behavior   (3 marks)

QUESTION TWO (20 MARKS)

a)   Show graphically how consumer equilibrium is arrived at in cardinalist approach in consumer theory   (4 marks)

b)   Use table below to determine the total fixed cost and marginal cost for each unit produced

(7 marks)

Unit produced	Total cost $
0	50
2	80
5	150
6	155
10	180
12	200

c)   Assume $U=f(x,y)$, then proof at equilibrium marginal rate of substitution (MRS_{xy}) is equal to ratio of marginal utility of the two goods.   (5 marks)

d)   Differentiate between oligopoly and monopoly markets structures   (4 marks)

QUESTION THREE (20 MARKS)

a)   Briefly explain the exceptions of the law of demand and law of supply   (4 marks)

b)   The table below gives the quantity demanded as prices are adjusted each given time

Price in Kshs	Quantity demanded
50	2
45	6
30	10
26	18
18	20
15	40
10	80

   i)   Sketch the demand curve using information in the table above   (6 marks)

   ii)   Is the good necessity or luxury good   (4 marks)

c) The price of a mango increased from Kshs 20/- to Kshs 35/- and which lead to an increase in the
    quantity supplied from 10,000 to 30,000 units. Calculate and interpret the point and arc elasticity
    of supply.   (6 marks)

QUESTION FOUR (20 MARKS)

a)   Briefly explain the application of elasticity of demand by fiscal policy makers in Kenya

                                                                           (5 marks)

b)   The following is given ;

$Q_d = a - bp$

$Q_s = -c + dp$

Required:

   i.   Calculate equilibrium price and quantity   (4 marks)
   ii.   Explain your answers in (i) with help of hypothetical graph   (3 marks)

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c)   With the help of well labeled graph explain how demand curve can be derived from cardinal approach in consumer theory.   (4 marks)

d)   Explain the effect of price floor and price ceiling on equilibrium quantity and prices (use graphs)   (4 marks)

QUESTION FIVE (20 MARKS)

a)   What is production possibility frontier (PPF) and sketch it   (3 marks)
b)   State, sketch and explain different costs curves as put forward in cost theory   (5 marks)
c)   Algebraically show the relationship between Marginal product and Average product   (5 marks)
d)   Highlight and briefly explain different types of elasticities   (3 marks)
e)   Using illustration, briefly describe the stages of production   (4 marks)