# KENYATTA UNIVERSITY

## UNIVERSITY EXAMINATIONS 2020/2021

## FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN REAL ESTATE MANAGEMENT

## BRE 105: MICRO ECONOMICS

**DATE: Tuesday, 9th February 2021** **TIME: 11.00 a.m. - 1.00 p.m.**

**INSTRUCTIONS:**

**Answer Question ONE and any other TWO Questions.**

**QUESTION ONE**

a) Explain four characteristics of a planned market system. (8 marks)

b) The total cost equation in the production of bacon at Nyancobo factory is given ad follows:

$C = 1000 + 100Q + 5Q^2 + Q^3$

Where $C$ = Cost measured in shillings

$Q$ = Quantity measured in kilogram's

i) Compute the total average costs at the output level of 20 and 21 kilogrammes. (4 marks)

ii) What is the marginal cost at 12 kilograms? (2 marks)

c) Explain the following terms as used in micro economics

i) Production possibility frontier (3 marks)

ii) Substitution and income effects of a price change. (3 marks)

iii) Engel curve and income consumption curve. (4 marks)

d) Discuss three exceptions to the law of supply. (6 marks)

e) Given the following demand function

$Q_X = 100 - 2P2$

i) Calculate the price elasticity of demand when price is at Kshs.2 and kshs.6 (3marks)

ii) Calculate the price elasticity of demand in the price range of Kshs.3 and Ksh.5 (2 marks)

**QUESTION TWO**

a) Discuss the market equilibrium. (2 marks)

b) Briefly discuss the main characteristics of a perfect market. (8 marks)

c) The following demand and supply functions relates to commodity X,

$Q_d = 100 - 2P$

$Q_s = 40 + 4P$

i) Compute the equilibrium price and quantity. (4 mark)

ii) By use of a diagrams, explain the effects on the values from:

- a fall in price of x"s substitute. (2 marks)
- a simultaneous increase in input prices and a rise in the consumers "s income. (4 marks)

**QUESTION THREE**

a) Discuss the law of diminishing marginal utility (4 marks)

b) Illustrate and clearly explain the nature of indifference curves for perfect substitutes and for complementary goods. (6 marks)

c) Explain the property of convexity to the origin of an indifference curve. (4 marks)

d) Using the Cardinalist approach of consumer behaviour, distinguish between income and substitution effects of a price rise for a normal good. (6 marks)

**QUESTION FOUR**

a) Discuss any five factors that influence the elasticity of supply. (10 marks)

b) A monopoly firm is faced with the following demand function

$P = 13 - 0.5Q$

The Marginal Cost function for the firm is given by $3 + 4Q$

and the total fixed cost is 4.

**Determine:**

i) The profit maximizing output. (2 marks)

ii) The level of supernormal profit if any. (4 marks)

iii) The output level at the break-even point. (2 marks)

## QUESTION FIVE

Suppose in a two commodity market model the supply and demand functions are given as:

$QS_1 = -3 + 4p_1$ $\quad\quad$ $QS_2 = -18 + 4p_2$

$QD_1 = 4 - P1 + 1/2\ P_2$ $\quad\quad$ $QD_2 = 10 + P_1 - P_2$

**Required:**

a) Explain the relationship between the two commodities giving valid economic reasons. (6 marks)

b) Using the functions provided, calculate the equilibrium values of prices and quantities. (6 marks)

c) Discuss some of the factors that may cause a shift of the supply curve. (8 marks)