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**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

 **UNIVERSITY EXAMINATIONS 2014/2015**

**YEAR I SEMESTER I EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE**

**HBC 2104: INTRODUCTION TO MICROECONOMICS**

**DATE: AUGUST 2015 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE – COMPULSORY (30 MARKS)**

1. Kenyan Motors Ltd had derived the following functions from its books:

 Q = 80 + 4p and Q = 320 – 16p

 Where Q is output and P is price of used Japanese cars

**Required:**

1. Indicate which function could represent demand and which could represent supply, giving reasons. [3 marks]
2. Calculate the equilibrium price and quantity and explain where equilibrium values are always of benefit to all potential consumers and producers. [3 marks]
3. Calculate the price elasticity of demand when the market is in equilibrium and interpret your results. [3 marks]
4. Explain any three factors that might lead to the type of elasticity calculated in (ii) above. [3 marks]
5. Suppose the demand function changes to Q = 400 – 16p with no change in supply. Explain the type of change that has occurred and calculate the new equilibrium values of price and quantity. [3 marks]
6. Explain any three factors that could cause the type of change indicated in (v) above. [3 marks]
7. Distinguish clearly between the following terms:
8. Normal good and Giffen good. [3 marks]
9. Explicit and implicit costs of production. [3 marks]
10. Equilibrium and disequilibrium states in commodity markets. [3 marks]
11. Income and cross elasticities of demand. [3 marks]

**QUESTION TWO (20 MARKS)**

1. Define indifference curves and explain their main properties [8 marks]
2. Explain how indifference curve analysis is used to determine the combination of two goods that will yield the maximum satisfaction to the consumer. [6 marks]
3. Define the law of diminishing marginal utility and indicate its major criticisms. [6 marks]

**QUESTION THREE (20 MARKS)**

1. A farmer producing beans on a three-acre farm faces the following total cost of production function:

Q 0 1 2 3 4 5 6 7 8

TC 5 9 12 14 15 18 22 28 36

**Required:**

1. What is the average fixed cost when 5 units of output are produced? [2 marks]
2. Calculate the variable cart (VC) marginal cost (MC) and average cost (AC) functions [6 marks]
3. Explain the relationship between AC and MC. [2 marks]
4. Using an arithmetic example explain the law of diminishing returns and indicate its assumptions. [5 marks]
5. Why are small firms popular in Kenya despite the advantages of large scale production? [5 marks]

**QUESTION FOUR (20 MARKS)**

1. Identify the conditions necessary for perfect competition and with the aid of diagrams, explain how the producer determines the profit maximizing output and price. [8 marks]
2. When the price of margarine rose from Shs.100 to Sh.120 per unit, the quantity of butter purchased increased from 600 to 1,000 units. Calculate the relevant elasticity and comment on your results. [3 marks]
3. A producer operating in a perfectly competitive market faces a total cost function given by TC = Q3 – 15Q2 + 120Q + 500 where TC is total cost and Q is output. Suppose the profit maximizing output (Q) is 10 units.

**Required:**

1. Determine average fixed cost (AFC), average variable cost (AVC), average cost (AV) and marginal cost (MC) when Q = 10 units. [4 marks]
2. What is the profit maximizing price? [2 marks]
3. Find the maximum profit earned by the firm and comment on your result. [3 marks]

**QUESTION FIVE (20 MARKS)**

1. Define monopoly and explain why the monopolistic faces a downward-sloping demand curve. How does he determine his output and price? [6 marks]
2. A monopolist’s average revenue (demand) curve is given by P = 180 – 12Q where P = price and Q is output. His total cost function is TC = 200 + 60Q

**Required:**

1. Determine the profit maximizing price and quantity. [3 marks]
2. Calculate the maximum profit or loss earned and comment on your result. [5 marks]
3. “ Since there is no competition, a monopolist always earns profits”. Do you agree with this statement? Why? Illustrate your answer with a diagram. [6 marks]