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KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
FIRST YEAR, FIRST SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF BUSINESS AND INFORMATION TECHNOLOGY

Date: 15th December, 2023
Time: 8.30am –10.30am

KBA 2113 - FUNDAMENTALS OF ECONOMICS

INSTRUCTIONS TO CANDIDATES

ANSWER **QUESTION ONE (COMPULSORY)** AND **ANY OTHER TWO** QUESTIONS

QUESTION ONE (30 MARKS)

a) The global shift towards electronic vehicles (EVs) has transformed the automotive industry. EVs require lithium-ion batteries and lithium is a critical component in this technology. The surge in demand for EVs led to a significant shift in both demand and supply in the world. As demand for EVs continued to rise, the supply of lithium struggled to keep pace. Lithium prices surged and geopolitical tension around lithium reserves emerged. EV manufacturers had to secure long-term supply contracts and explore alternative battery technology and mitigate supply risks.

Use the above scenario to answer the following questions

i) Suppose the Kenyan government has given instruction that all personal cars must be electronic vehicles. Illustrate and discuss the shift in demand for EVs hence equilibrium price and quantity **(5 marks)**

ii) Assume there is excess capacity of lithium, illustrate the shift in supply for lithium in the market **(4 marks)**

iii) How do we call alternative battery to the lithium-ion battery **(1 mark)**

iv) Discuss at least THREE factors that would affect the demand for EVs in Kenya today **(6 marks)**

b) The total revenue equation for a firm is given by the equation, $TR = 3Q^3 + 2Q^2 + 4Q$. Compute;

i) Marginal revenue when Q=10 units **(2 marks)**

ii) Average revenue when Q=6 units **(2 marks)**

c) An individual consumes various goods to satisfy his/her utility. Illustrate and discuss the point at which he/she is at equilibrium **(5 marks)**

d) Clearly illustrate short-run profit maximization by the monopolist. **(5 marks)**

QUESTION TWO (20 MARKS)

a) The total cost equation in the production of steels at the steel mills industry in Ruiru is given as follows $TC = 1000 + 100Q + 15Q^2 + Q^3$, determine;

i) Total Fixed cost **(1 mark)**

ii) Total variable cost when 10 bars of steel is manufactured **(2 marks)**

iii) Marginal cost of manufacturing 20 units of steel rod **(4 marks)**

b) Discuss normative and positive as methods used to analyze economic trends in an economy **(6 marks)**

c) The government has singled out only one company to provide key services to the citizens for a period of three years. The company has acquired monopoly power as a result. Discuss sources of monopoly power **(7 marks)**

QUESTION THREE (20 MARKS)

a) The current downpour has disrupted transportation of food stuffs from the countryside to Nairobi City County leading to a decline in basic commodity in the county. Illustrate and discuss factors contributing to this decline **(10 marks)**

b) Illustrate and discuss three stages of production any company undergoes. **(10 marks)**

QUESTION FOUR (20 MARKS)

a) Given the following equations: Q=100-2P and Q= 40+4P. Identify and define;

i) Demand and supply equations **(4 marks)**

ii) Compute price and quantity at which market clears **(6 marks)**

b) Discuss differences between competitive and monopoly market structures. **(10 marks)**

QUESTION FIVE(20 MARKS)

a) Discuss importance of price elasticity in an economy **(6 marks)**

b) The table below represents hypothetical figures for the total utility derived from consumption of three goods A, B and C by a student from Multimedia University. The prices of A, B and C are Kshs. 5, 3 and 2 respectively.

No. of units consumed	Total utility for A (TUA)	Total utility for B (TUB)	Total utility for C (TUC)
2	144	120	128
4	240	208	240
6	320	272	320
8	382	320	376
10	456	360	408
12	496	376	432
14	520	384	448

Required to find;

i) Marginal utilities for each good **(6 marks)**

ii) The optimal quantities of each good for consumption **(4 marks)**

c) There exists a situation where demand curve may slope upwards instead of downwards from left to right. Explain the conditions for the existence of abnormal demand curves. (**6 marks)**