



**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE AWARD OF THE DEGREE**  
**OF BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND**  
**EXTENSION & BACHELOR OF SCIENCE IN RURAL DEVELOPMENT AND**  
**NATURAL RESOURCE MANAGEMENT**  
**FIRST SEMESTER 2022/2023**  
**(SEPTEMBER - DECEMBER, 2022)**

**ECON 100: INTRODUCTION TO ECONOMICS**

**STREAM: Y1 S1**

**TIME: 2 HOURS**

**DAY: TUESDAY, 12:00 P.M – 2:00 P.M**

**DATE: 29/12/2022**

**INSTRUCTIONS:**

- 1. Do not write anything on this question paper.**
- 2. Answer ALL Questions in section A (Compulsory) and any other THREE Questions in section B.**

**SECTION A (40 marks)- compulsory**

**1.**

- a) Compute own price elasticity
- b) Is the demand function own price elastic, own price inelastic or
- c) What will happen to quantity demanded if price increases by 1 percent
- d) What will happen to quantity demanded if price declines by 1
  - i)  $Q = 12 - 0.5P^2$  at  $P = 2$
  - ii)  $Q = 10 - 3P$  at  $P = 2$
  - iii)  $P = 100 - Q$  at  $P = 50$
  - iv)  $P = Q^2 - 4Q + 130$  at  $P = 10$
  - v)  $Q = \frac{5}{P^2}$

**2. Consider the following univariate demand functions**

- i)  $Q_a = 425 + 0.75P_b$  at  $P_b = 100$

- ii)  $Q_a = 75 - 3P_b$  at  $P_b = 5$
- iii)  $Q_a = 185 + 1.5P_b$  at  $P_b = 10$
- iv)  $Q_a = 200 - 2P_b$  at  $P_b = 50$

For each of the functions

- a) Find the cross price elasticity of  $Q_a$  with respect  $P_b$
- b) is the demand for a good elastic, inelastic or unit elasticity with respect to the price of good b
- c) are the two goods substitutes or complementary
- d) what happens to  $Q_a$  if  $P_b$  increases by 10 percent
- e) what happens to  $Q_a$  if  $P_b$  drops by 10 percent

1. A firm has the following demand and average total cost functions:

$$Q = 30 - P$$

$$ATC = \frac{7}{Q} - 6 + \frac{1}{2}Q$$

- i. find:
  - a) the total revenue function
  - b) the total cost function
- ii. find the level of output that will
  - a) maximize the revenue
  - b) minimize total costs
- iii) find:
  - a) the profit function
  - b) the level of output that will maximize profit

### SECTION B (30 MARKS)

- 1. Discuss the elasticity of supply and demand (10marks)
- 2. Discuss the market structures with the use of graphs (10marks)
- 3. Discuss the relevance of phillips curve in the modern economy (10marks)
- 4. Discuss the Keynesian income identity model. (10marks)