



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF BUSINESS AND ECONOMICS**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**(FOOD SCIENCE AND TECHNOLOGY, AGRIBUSINESS MANAGEMENT AND**  
**AGRICULTURAL ECONOMICS)**  
**1<sup>ST</sup> YEAR 1<sup>ST</sup> SEMESTER 2023/2024 ACADEMIC YEAR**  
**SIAYA CAMPUS**

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**COURSE CODE: AEB 1101/ AEB 9202**

**COURSE TITLE: PRINCIPLES OF MICROECONOMICS/PRINCIPLES OF AGRICULTURAL ECONOMICS**

**EXAM VENUE: LR 1**

**STREAM: (SAFS)**

**DATE: 03/05/2024**

**EXAM SESSION: 14.00 – 16.00 PM**

**DURATION: 2 HOURS**

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**INSTRUCTIONS**

- i. Answer question ONE (COMPULSORY) and any other two questions**
- ii. Candidates are advised not to write on the question paper**
- iii. Candidates must hand in their answer booklet to the invigilator while in the examination**

### QUESTION ONE

- a) Explain the importance of studying economics to student of agriculture. (4 marks)
- b) Distinguish between positive economics and normative economics. (4 marks)
- c) Explain the various determinants of the supply of agricultural products. (4 marks)
- d) Outline the characteristics of indifference curves. (4 marks)
- e) Why is the Cobb-Douglas production popular in analyzing agricultural production? (2 marks)
- f) Citing examples, differentiate between perfect markets and imperfect markets. (6 marks)
- g) The price of a good changes from Kshs.1200 to Kshs. 800 causing demand to change from 40 units to 80 units. Compute the price elasticity of demand and interpret your answer. (4 marks)
- h) Explain why the role for government is inevitable even in a market economy. ( 2 marks)

### QUESTION TWO

- a) Citing examples, explain three exemptions to the law of demand. (5 marks)
- b) Suppose the demand and supply for milk in Kisumu County is described by the following equation.

$$Q_d = 60 - 10P$$

$$Q_s = -15 + 15P$$

Where P is the price in Kshs,  $Q_d$  is the quantity demanded in millions of gallons per year,  $Q_s$  is the quantity supplied in millions of gallons per year. Determine the equilibrium price and quantity of milk. (5 marks)

- c) Graphically explain how price and output determination takes place under perfectly competitive market. (10 marks)

### QUESTION THREE

- a) Describe the concept of least cost factor combination factors in agricultural production. (5 marks)
- b) A farmer would like to do a cost analysis for planning and decision making purposes. He has provided you with data below:

Output	1	2	3	4	5	6	7	8	9	10
Total Cost (Ksh.'000)	60	80	90	96	100	144	210	320	540	900

Using the average-marginal cost relationship, advice the farmer. (10 marks)

c) Explain the importance of the concept of elasticity in business management. (5 marks)

#### **QUESTION FOUR**

a) Given the following Cobb-Douglas production function:  $Q=AK^{\alpha}L^{\beta}$

i) Explain A,  $\alpha$  and  $\beta$  (3 marks)

ii) Derive the Marginal Rate of Technical Substitution. (5 marks)

b) With examples distinguish between inferior and giffen goods. (4 marks)

c) Explain the factors responsible for equilibrium wage differentials among different groups of workers. (6 marks)

d) Outline the characteristics of a free market system. (5 marks)

#### **QUESTION FIVE**

a) Explain the following concepts in economics:

i. Expansion path (2 marks)

ii. Marginal Rate of technical substitution. (2 marks)

iii. Technical efficiency (2 marks)

iv. Consumer sovereignty. (4 marks)

b) Explain the factors that lead to the existence of monopolies. (10 marks)