

The Open University of Sri Lanka
Faculty of Engineering Technology
Department of Agricultural & Plantation Engineering



038

Study Programme : Bachelor of Industrial Studies Honours in Agriculture

Name of the Examination : Final Examination

Course Code and Title : AGM3354 Principles of Economics

Academic Year : 2023/24

Date and time : 10-02-2025

Time : 13.30 to 16.30

Duration : 3 hours

Answer any four (04) Questions from questions 2 to 6. Write your answers in the answer book.

Question 2:

Consider a farmer who grows both beans and carrots while sharing land, machinery, and labor. The farmer fully utilizes all available resources, and the feasible production combinations are as follows.

Beans (tons)	Carrot (tons)
0	50
4	45
8	40
12	35
16	30
20	25
24	20
28	15
32	10
36	5
40	0

- Draw the production possibility curve of the factory (*4 marks*).
- What do you understand by the term “trade off”? What is the trade-off faced by the farmer? (*4 marks*)
- Suppose the farmer produces 24tons of beans and 20tons of carrots.
 - What is the opportunity cost of producing **four (4)** additional tons of beans. (*4 marks*)
 - What is the opportunity cost of producing **five (5)** additional tons of carrots? (*4 marks*)
- Suppose that the research officers at an agricultural research station developed a new variety of beans which produces higher yield. Graphically show the change in PPF curve with respect to the change in technology. (*4 marks*)

Question 3:

The demand and supply equations for rice are as given below:

Demand: $Q_d = 2500 - 2P$

Supply: $Q_s = 100 + 8P$

Where **Q** is quantity and **P** is price per kg.

- Find the equilibrium price and quantity. (*6 marks*)
- If the government imposes a maximum selling price of Rs. 200 per kg, find the quantity demanded and supplied at that price. (*6 marks*)
- Identify whether there is a shortage or surplus. (*3 marks*)
- Graphically illustrate the above implication (*5 marks*)

Question 4:

- i. Define the term “Marginal Rate of Technical Substitution” (2 marks)
- ii. Differentiate between cardinal utility and ordinal utility. (3 marks)
- iii. Consider the following table which shows Kumara’s Total Utility derived from the consumption of “vadai” and plain tea.

Units	Total Utility (Utils)	
	Vadai	Plain Tea
1	125	60
2	225	110
3	300	150
4	350	180
5	375	200

- iv. Calculate the Marginal Utility for each good for each level of consumption. (5 marks)
- v. The price of a vadai is Rs. 25 and the price of a cup of plain tea is Rs. 20.00. If he spends Rs. 200 per day for vadai and tea to maximize his utility, find the amount of each good he consumes. (10 marks)

Question 5:

Write short notes on **four (04)** of the following. (5 marks for each)

- i. Money supply and inflation
- ii. Revenue and elasticity of demand
- iii. Three big questions in economics
- iv. Types of unemployment
- v. Ban on chemical fertilizers

Question 6:

- i. Define the term Gross Domestic Product (GDP). (2 marks)
- ii. Provide the equation for calculating GDP and define each variable included in the equation. (5 marks)
- iii. Briefly discuss the limitations of using GDP as a measure of a country's economic growth. (10 marks)
- iv. What do you understand by the term “GDP deflator”? (3 marks)