

WARNING

This Question Paper **MUST** be returned with your answer book(s) at the end of the examination, otherwise marks will be lost.

Write your Examination Number here ⇒



Coimisiún na Scrúduithe Stáit
State Examinations Commission

LEAVING CERTIFICATE EXAMINATION 2016

WEDNESDAY 22 JUNE MORNING 9:30 - 12:00

AGRICULTURAL ECONOMICS – HIGHER LEVEL
(320 Marks)

Answer **fifteen** questions from Part 1 and **four** questions from Part 2.
 You should not spend more than one hour on Part 1.

Part 1 (120 marks)

Answer **fifteen** questions.
 Write the answers in the spaces provided.
 All questions carry equal marks (8 marks).

Part 2 (200 marks)

Answer **four** questions.
 Write the answers in your answer book(s).
 All questions carry equal marks (50 marks).
 Do **not** write answers to Part 2 on this question paper.

**REMEMBER TO RETURN THIS QUESTION PAPER WITH THE ANSWER BOOK(S)
 USED TO ANSWER THE QUESTIONS IN PART 2**

PART 1 (120 marks)

Answer **fifteen** questions.

Write the answers in the spaces provided.

All questions carry equal marks (8 marks).

1. Define the term ‘Opportunity Cost’ **and** give an example in the context of farming.

(i) **Definition:** _____

(ii) **Example:** _____

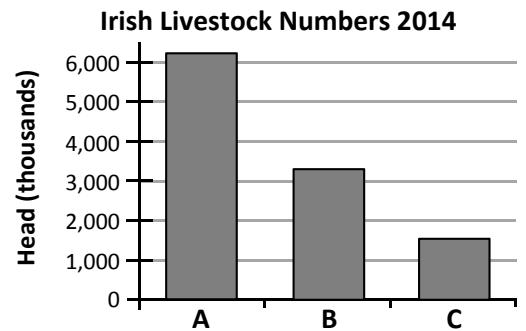
2. State which of the following outputs you would expect to be more price elastic in its supply (tick (✓) **one** answer). Give a reason for your answer.

(i) **Output that is more price elastic in its supply:** Cereals Wheat

(ii) **Reason:** _____

3. The bar chart on the right shows the numbers of Irish livestock in 2014 (source: CSO). Write **A**, **B**, and **C** in the appropriate spaces in the table below to show which type of livestock corresponds to **each** bar in the bar chart.

Livestock type	Cattle	Pigs	Sheep
Letter on graph (A, B, or C)			



4. Explain the term ‘Cross Compliance’ in the context of the direct payment system of the Common Agricultural Policy (CAP).

5. State **one** limitation to the development of good management as a factor of production on Irish farms **and** state **one** government measure introduced to address this limitation.

(i) **Limitation:** _____

(ii) **Measure to address it:** _____

6. Outline **two** ways in which the activities of Macra na Feirme promote rural development.

(i) _____

(ii) _____

7. Explain the term 'Capitalised Value of a Factor of Production'.

8. Define the term 'Labour Force' **and** state which national survey (other than the Census) is used by the Central Statistics Office to estimate its size.

(i) **Definition:** _____

(ii) **National survey:** _____

9. Identify **one** factor that could cause an upward shift in the total product curve. Give a reason for your answer.

(i) **Factor:** _____

(ii) **Reason:** _____

10. Outline **one** situation in which a farmer might prepare a partial budget rather than a complete budget.

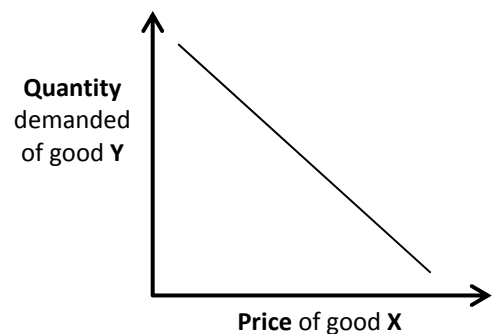
11. Ireland is a 'Small Open Economy'. Explain what this means.

12. The graph shows the relationship between the **price** of good **X** and the **quantity** demanded of good **Y**. State whether the goods are substitutes **or** complements in consumption. Give a reason for your answer.

(i) **Goods are:** (tick (✓) **one** answer)

Substitutes Complements

(ii) **Reason:** _____



13. Identify one possible advantage for farmers **and** one possible disadvantage for farmers arising from free trade in agricultural output.

(i) **Advantage:** _____

(ii) **Disadvantage:** _____

14. Explain why an economist would use real GDP (Gross Domestic Product) figures instead of nominal GDP figures.

15. Identify the correct statistic from the 2014 National Farm Survey for Ireland.
(tick (✓) **one** answer in **each case**)

- (i) Average (mean) farmer age, in years: 37 47 57
- (ii) Direct payments as a percentage of farm income: 72% 88% 95%

16. The 2016 budget introduced an income tax credit of €5,000 per annum for five years to be given to family farm partnerships. State **two** criteria a partnership must meet to gain this tax credit.

- (i) _____
- (ii) _____

17. Assume the price elasticity of demand for an agricultural product is -0.25 (i.e. negative) and farmers have a good growing season with increased output.
Complete the following statement by **circling** the correct word in **each case**.

‘The product is price **elastic** / **inelastic** in demand and the increase in output will result in **increased** / **decreased** farmer income.’

18. State **two** variables that affect the quantity supplied of an agricultural product, **other than** its price.

- (i) _____
- (ii) _____

19. State what each of the following acronyms stands for, in the context of global trade.

- (i) **WTO**: _____
- (ii) **TTIP**: _____

20. Production and Price Cycles can occur on some agricultural markets.
Explain, with reference to pigs, why this happens.

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PART 2 (200 marks)

Answer **four** questions.

Write the answers in your answer book(s).

All questions carry equal marks (50 marks).

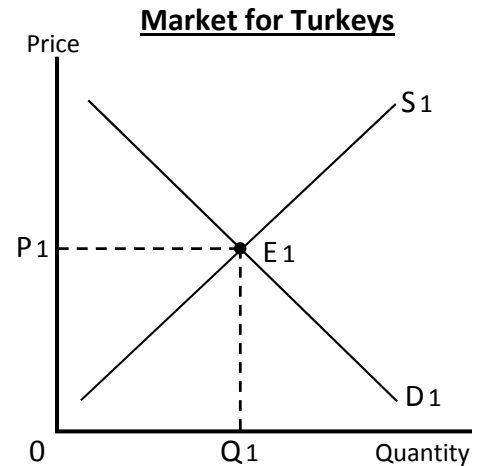
Do **not** write answers to Part 2 on this question paper.

1. (a) Explain the difference between a change in demand and a change in the quantity demanded.

- (b) The diagram on the right shows the demand (D1) and supply (S1) curves for turkeys. The market is at equilibrium at the point E1, with a market price of P1 and quantity of Q1.

Copy this diagram into your answer book and use it to show the impact on the **market price and quantity** of turkeys for **each** of the following (i), (ii), and (iii). Explain your answer in **each** case.

(Note: a separate copy of the diagram is required in **each** case.)



- (i) An increase in the demand for turkeys in the run-up to Christmas.
- (ii) A food scare affecting geese. (Assume that turkeys and geese are substitutes in production but **not** in consumption.)
- (iii) The publication of a report highlighting the health benefits of eating turkey in place of red meat, **and**, at the same time, an increase in the cost of turkey feed.

[50 marks]

2. (a) Explain what is meant by the term ‘Income Elasticity of Demand’.

- (b) Would you expect each of the following two food products to be income elastic **or** inelastic in demand? Give a reason for your answer in **each** case.

- (i) A food product that is consumed routinely and makes a significant contribution to the nutritional requirements of a country’s population (i.e. is a dietary staple). For example, milk is a dietary staple of many people in Ireland.
- (ii) A food product that is consumed in a relatively wealthy country. For example, people in Ireland are relatively wealthy compared to people in Nigeria.

- (c) The table below shows the average income for a country in 2015 and in 2016, and the quantity demanded for an agricultural product, good X, in these years.

Year	2015	2016
Average income	€30,000	€35,000
Quantity demanded of good X	130	195

- (i) Calculate the income elasticity of demand (YED) for good X. Show your work.

The YED for good Y is -0.5 , and the YED for good Z is 3.1 .

- (ii) State the economic terms used to describe good Y **and** good Z. Explain your answer in **each** case.

[50 marks]

3. (a) The table below shows the output and the total cost for an agricultural product.

Output	0	1	2	3	4	5	6
Total Cost (€)	21	24	28	33	40	50	66
Marginal Cost (€)	–						
Average Cost (€)	–						

- (i) Copy the table into your answer book.
Complete the rows for Marginal Cost **and** Average Cost.
- (ii) Assume that the revenue for this agricultural product is €7 per unit of output. On a **single graph**, with output on the *x*-axis and cost/revenue on the *y*-axis, plot **all** of the following (you may use graph paper to answer this question).
1. Marginal cost (label the curve **MC**)
 2. Average cost (label the curve **AC**)
 3. Marginal revenue (label the curve **MR**).

The profit-maximising level of output is the level which maximises profit or minimises loss.

- (iii) Using your graph, state the profit-maximising level of output. Explain your answer.
- (iv) Calculate the total amount of profit or loss at the profit-maximising level of output. Show your work.
- (b) Outline the difficulties involved in constructing an accurate measure of farm income, in order to compare the incomes of farmers and other groups in society.

[50 marks]

4. (a) Outline **two** uses farmers can make of cash flow budgeting.

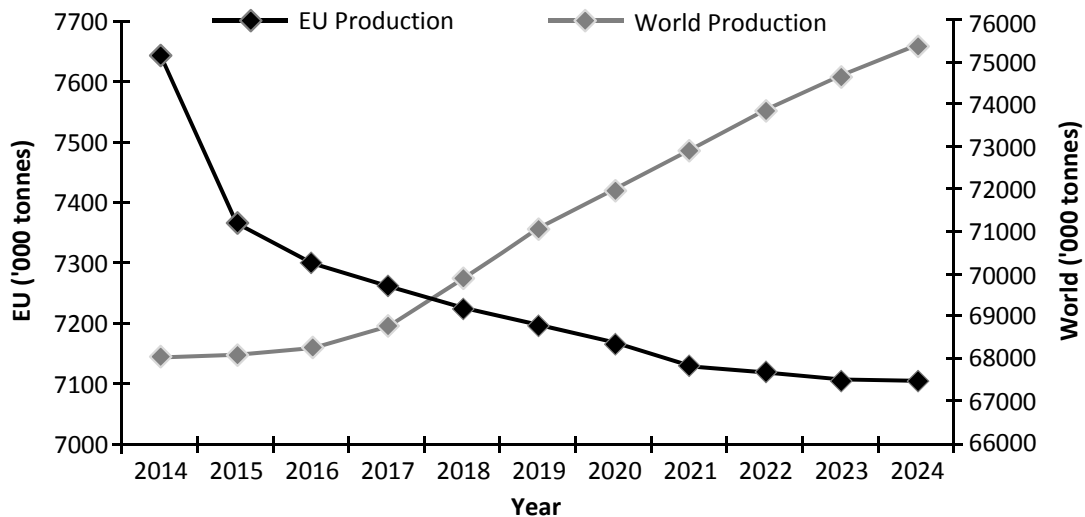
- (b) The table below shows the cash flow forecast (in euro) for Tom's dairy farm in 2017.

	Q1 (Jan–Mar)	Q2 (Apr–Jun)	Q3 (Jul–Sep)	Q4 (Oct–Dec)	Total
<i>Receipts</i>					
Farm income	15,000	A	60,000	14,000	124,000
Non-farm income	10,000	10,000	10,000	10,000	40,000
Total receipts	25,000	45,000	70,000	24,000	164,000
<i>Payments</i>					
Farm payments	35,000	20,800	13,500	40,800	110,100
Household costs	15,000	14,200	6,500	14,200	C
Total payments	50,000	35,000	B	55,000	160,000
Net Cash Flow	–25,000	10,000	50,000	–31,000	
Opening Cash	0	–25,000	–15,000	35,000	
Closing Cash	–25,000	–15,000	35,000	4,000	

- (i) Calculate the value of each of the missing entries in the table, marked **A**, **B**, and **C**.
- (ii) Tom would like to invest in a new tractor costing €30,000, which he plans to fund through a loan. The annual repayments on an 8 year loan are €160 on each €1,000. Using the above cash flow forecast, calculate Tom's repayment capacity **and** state whether or not he can afford the loan repayments. Show your work.
- (iii) The net cash flow surplus for the entire year (€4,000) is small and gives Tom little margin in case unforeseen expenses arise. Outline **three** measures Tom could consider to improve the overall cash flow of the farm.
- (iv) Although the overall cash flow for 2017 is expected to be in surplus, sizable deficits are forecast for the first half of the year. Outline **two** short-term adjustments Tom can use to create a more even cash flow throughout the year.

[50 marks]

5. (a) The graph below shows the current and expected beef production trends for the EU and world markets from 2014 to 2024 (source: OECD).



- (i) Using the information presented in the graph above, describe the trends in EU **and** world beef production from 2014 to 2024.
- (ii) Discuss **two** possible reasons for **each** trend described in part (a)(i).

- (b) Within a global market, Ireland's beef industry struggles to compete on scale and therefore needs to develop competitive advantages in other ways.

Identify and discuss **two** areas in which the Irish beef sector can develop a competitive advantage over other beef producing countries.

- (c) 'The import content of agricultural exports is low relative to non-agricultural exports.'
Explain what this statement means in the context of Irish beef production **and** outline why it is a positive aspect of Irish beef production.

[50 marks]

6. (a) (i) Define the term 'Productivity'.
- (ii) Explain the difference between partial and total productivity measures.
- (iii) Potato yields for Jessica's farm are 26 tonnes per hectare, while those for Sam's farm are 29 tonnes per hectare. Explain how Jessica's farm might nonetheless be more productive than Sam's farm, with respect to potato production.
- (b) 'Future food production systems must be as focused on managing and sustaining our natural resources as they are on increasing production. Making the right choices now will ensure that Ireland is well positioned to deliver sustainable growth far into the future.'
(Source: Food Wise 2025)
- (i) Outline **two** challenges faced by the Irish agriculture sector in achieving this sustainable growth.
- (ii) Identify **two** innovations that can be used by Irish **dairy** farmers to help achieve this sustainable growth. In the case of **each** innovation, discuss how it can contribute to achieving this sustainable growth.

[50 marks]

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