



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate 2014

Marking Scheme

Agricultural Economics

Ordinary Level

Note to teachers and students on the use of published marking schemes

Marking schemes published by the State Examinations Commission are not intended to be standalone documents. They are an essential resource for examiners who receive training in the correct interpretation and application of the scheme. This training involves, among other things, marking samples of student work and discussing the marks awarded, so as to clarify the correct application of the scheme. The work of examiners is subsequently monitored by Advising Examiners to ensure consistent and accurate application of the marking scheme. This process is overseen by the Chief Examiner, usually assisted by a Chief Advising Examiner. The Chief Examiner is the final authority regarding whether or not the marking scheme has been correctly applied to any piece of candidate work.

Marking schemes are working documents. While a draft marking scheme is prepared in advance of the examination, the scheme is not finalised until examiners have applied it to candidates' work and the feedback from all examiners has been collated and considered in light of the full range of responses of candidates, the overall level of difficulty of the examination and the need to maintain consistency in standards from year to year. This published document contains the finalised scheme, as it was applied to all candidates' work.

In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with their Advising Examiners when in doubt.

Future Marking Schemes

Assumptions about future marking schemes on the basis of past schemes should be avoided. While the underlying assessment principles remain the same, the details of the marking of a particular type of question may change in the context of the contribution of that question to the overall examination in a given year. The Chief Examiner in any given year has the responsibility to determine how best to ensure the fair and accurate assessment of candidates' work and to ensure consistency in the standard of the assessment from year to year. Accordingly, aspects of the structure, detail and application of the marking scheme for a particular examination are subject to change from one year to the next without notice.



LEAVING CERTIFICATE 2014

AGRICULTURAL ECONOMICS

ORDINARY LEVEL

MARKING SCHEME

AND

EXPECTED RESPONSES

Marking Scheme and Expected Responses for use with the Marking Scheme.

In considering the marking scheme the following points should be noted:

- The expected responses presented are not exclusive. Marks may be awarded for any other correct answers.
- The expected responses in many cases contain key phrases which must appear in the candidate's answer in order to merit the assigned marks.
- Further relevant points of information presented by candidates are marked and rewarded on their merits.
- The detail required in any answer is determined by the context and the manner in which the question is asked and by the number of marks assigned to the answer in the examination paper. Requirements may therefore vary from year to year.

Leaving Certificate Examination, 2014
AGRICULTURAL ECONOMICS - Ordinary Level

Outline Marking Scheme

PART 1 (120 Marks)

20 QUESTIONS - 15 QUESTIONS TO ANSWER.

ALL QUESTIONS CARRY EQUAL MARKS (8 marks)

- | | | | |
|-----|---------------------------|-----|---------------------------|
| 1. | 2 @ 4 marks each | 11. | 4 @ 2 marks each |
| 2. | 8 marks (3 m + 3 m + 2 m) | 12. | 8 marks (3 m + 3 m + 2 m) |
| 3. | 2 @ 4 marks each | 13. | 2 @ 4 marks each |
| 4. | 2 @ 4 marks each | 14. | 2 @ 4 marks each |
| 5. | 8 marks (3 m + 3 m + 2 m) | 15. | 2 @ 4 marks each |
| 6. | 8 marks (3 m + 3 m + 2 m) | 16. | 8 marks (3 m + 3 m + 2 m) |
| 7. | 2 @ 4 marks each | 17. | 8 marks (3 m + 3 m + 2 m) |
| 8. | 2 @ 4 marks each | 18. | 2 @ 4 marks each |
| 9. | 2 @ 4 marks each | 19. | 8 marks (3 m + 3 m + 2 m) |
| 10. | 2 @ 4 marks each | 20. | 2 @ 4 marks each |

PART 2 (200 Marks)

6 QUESTIONS - 4 QUESTIONS TO ANSWER

ALL QUESTIONS CARRY EQUAL MARKS (50 marks)

- 1. (a)** Function of a market 8 marks
- (b)** (i) Quantity demanded 3 marks
- (ii) Quantity supplied 3 marks
- (iii) Equilibrium price 3 marks
- Equilibrium quantity 3 marks
- Explanation 10 marks (5 m + 5 m)
- (c)** (i) Total revenue calculated 5 marks
- (ii) Effect on demand curve 5 marks
- Effect on price 5 marks
- Effect on quantity 5 marks

[50 marks]

- 2. (a)** CAP objective 1 5 marks
- CAP objective 2 5 marks
- (b)** Positive contribution 1 10 marks (5 m + 5 m)
- Positive contribution 2 10 marks (5 m + 5 m)
- (c)** Opportunity of trade expansion 10 marks (5 m + 5 m)
- Challenge of trade expansion 10 marks (5 m + 5 m)

[50 marks]

- | | | |
|---------------|---|---------|
| 3. (a) | (i) Example of receipt | 7 marks |
| | Example of payment | 7 marks |
| | (ii) Opening cash balance | 7 marks |
| | (iii) Comparison of cash flow performance | 7 marks |
| | Two reasons @ 4 marks each | 8 marks |
| (b) | Net cash calculated | 7 marks |
| | Closing cash calculated | 7 marks |

[50 marks]

- | | | |
|---------------|--|----------------------|
| 4. (a) | Name component A | 5 marks |
| | Explanation of component | 5 marks |
| | Name of component B | 5 marks |
| | Explanation of component | 5 marks |
| (b) | (i) One way to raise value-added content | 10 marks (5 m + 5 m) |
| | (ii) Benefit of higher value-added content | 10 marks (5 m + 5 m) |
| (c) | Benefit 1 of Quality Assurance scheme | 5 marks |
| | Benefit 2 of Quality Assurance scheme | 5 marks |

[50 marks]

- | | | |
|---------------|----------------------------------|-----------------------|
| 5. (a) | (i) Production of graph | 12 marks |
| | Labelling the axes and TPC curve | 8 marks (2m+3m+3m) |
| | (ii) Explanation of concept | 20 marks (10m +5m+5m) |
| (b) | Example 1 of intermediate input | 5 marks |
| | Example 2 of intermediate input | 5 marks |

[50 marks]

- | | | |
|---------------|--|--------------------|
| 6. (a) | Explanation of family farm income (FFI) | 12 marks (6m + 6m) |
| (b) | Source 1 of off-farm income | 6 marks |
| | Source 2 of off-farm income | 6 marks |
| (c) | Discussion of FFI variation across regions | 10 marks (5m + 5m) |
| | Reason 1 for regional differences | 8 marks |
| | Reason 2 for regional differences | 8 marks |

[50 marks]

Leaving Certificate Examination 2014

AGRICULTURAL ECONOMICS - Ordinary Level

Expected Responses

Part 1

(Answer 15 questions from 20. Eight marks per question)

1. In the market system prices are determined by the interaction of Supply and Demand
2. **GDP:** G = Gross D = Domestic P = Product
3. The Irish agricultural (including forestry and fishing) sector in 2012 accounted for:
 - (i) 2.5% (approx.) of national output (Gross Value Added).
 - (ii) 5% (approx.) of national employment.
4. State two methods of calculating depreciation in the case of a farm business:
 - (i) Declining balance
 - (ii) Straight line
5. The given graph shows the trend in total sheep, cattle and pig numbers for Ireland in the years 2005 to 2013. Indicate which label (A, B or C) applies to each series.

Sheep = B Cattle = A Pigs = C
6. Fill in the three missing components of the marketing mix:

Price Promotion Place
7. Net Worth in a farming context is the difference in euro between Total Assets and Total liabilities.
8. State one function of each of the following institutions:
 - (i) **Department of Agriculture, Food and the Marine**

Any one of the following

 - Regulation of the agriculture, fisheries, and food industries through national and EU legislation.
 - Development and implementation of national and EU schemes in support of Agriculture, Food, Fisheries, Forestry and Rural Environment.
 - Monitoring and controlling aspects of Food Safety.
 - Monitoring and controlling animal and plant health and animal welfare.
 - Direct provision of support services to Agriculture, Fisheries, Food and Forestry.

(ii) Teagasc:

Any one of the following

- Agricultural production and environmental research
- Food research
- Advisory service to farmers
- Full-time courses at agricultural colleges
- On-going training for farmers
- Support for rural development activities.

9. Circle the correct number in each of the following cases:

- (i) Number of EU Member States from 1 July 2013 28
- (ii) CAP spending as a % (approx.) of the EU budget in 2013 40%

10. Suppose a food product has a price elasticity of demand (PED) of -1.7, then a 10% fall in the market price will lead to a Rise in the quantity demanded of 17%.

11. From given data taken from the National Farm Survey 2012, indicate the correct system of farming.

- (i) Tillage 64 ha and Cattle rearing 35 ha
- (ii) Dairying €887 and Sheep €375

12. The long-term financial position of the farm can be examined in the farm's balance sheet and is measured by the debt to net worth ratio.

13. Explain the term 'joint product' and state one example from Irish agriculture:

(i) Explanation: Products that are linked to each other in production i.e. in general one can't be produced without the other.

(ii) Example: Grain and straw, wool and sheep meat, milk and beef, beef and hides.

14. Circle the correct number for the given statistics taken from the 2010 Census of Agriculture for Ireland:

- (i) Number of farm holdings (approx.) 140,000
- (ii) Proportion of land area used for agriculture (approx.) 66%

15. State two direct payments received by Irish farmers:

Single farm payment, Disadvantage area payment, REPS/AEOS

16. State one example of each of the following items in a typical family farm balance sheet:

- (i) **Fixed asset:** Land, buildings, machinery, breeding stock
- (ii) **Long term liability:** Term loans, owned capital
- (iii) **Current asset:** Trading livestock, debtors, stocks of unused feed, fertilisers, cash in hand.

17. Fill in the three missing words to complete the standard definition of economics.

"Economics is a social science which studies human behaviour as a relationship between ends and scarce resources which have alternative uses."

18. (i) Explain the term 'Indirect tax':

A tax on consumption / expenditure and output

(ii) Circle the indirect tax from the given list: VAT

19. Insert the correct term into each of the three spaces provided below. A given term can only be inserted once.

Factor of production	LAND	LABOUR	(i) CAPITAL	MANAGEMENT
Factor price	Rent	(ii) Wages	Interest	(iii) Profit

20. (i) A tariff is a tax on imports of goods and services coming into the country from abroad.

(ii) State why there is generally no tariff on agricultural goods imported into Ireland from France:

Free trade between EU member states means there are generally no tariffs on imports from another member state.

Part 2

(Answer four questions from six. 50 marks per question)

- Q1 (a) What is the main function of any market, such as the market for potatoes?**
A market is a mechanism which brings buyers (consumers, demanders) and sellers (producers, suppliers) together to exchange goods between themselves at a price established in the market through the forces of supply and demand.
- (b) (i) What quantity of potatoes is demanded when the price is €4 per kg?**
15 million kgs per annum
- (ii) What quantity of potatoes is supplied when the price is €2 per kg?**
10 million kgs per annum
- (iii) State the equilibrium price and quantity in the potato market. Explain your answer.**
Equilibrium price = €3 per kg
Equilibrium quantity = 20 million kgs per annum
- At the equilibrium price (€3 per kg) the quantity supplied and demanded is the same (20 million kgs) and there is no tendency for change. The market is in balance or has cleared.
- (c) (i) Calculate annual total revenue (TR) in the market for potatoes at equilibrium.**
TR = €60 million per annum. [€3 x 20 million]
- (ii) Pasta may be considered as a substitute good for potatoes. If there is an increase in the market price of pasta, state the likely effect this would have on the demand curve for potatoes and on the equilibrium market price and quantity of potatoes.**
Demand curve for potatoes shifts to the right.
Equilibrium market price goes up
Equilibrium market quantity goes up.

Q2 (a) State two objectives of the Common Agricultural Policy (CAP) as outlined in the Treaty of Rome, 1957.

- Increased agricultural productivity
- Fair standard of living for farmers
- Stable markets
- Regular supply of agricultural product
- Reasonable prices for consumers.

(b) In addition to producing agricultural products, farming provides other positive contributions to society. Outline two of these positive contributions.

- Protection of habitats, hedgerow management, etc. Farmers can manage important habitats etc. through REPS/AEOS and other schemes
- Prevention of land reverting to wilderness. By farming the land stays clean of scrub and stays in productive condition
- Providing visual amenity in the countryside. Farming keeps the landscape visually attractive for people including tourists
- Maintaining social and economic life in rural areas. Farming keeps jobs and people in the countryside and contributes to a balanced spread in the population.

(c) EU trade in agricultural goods with Canada, and possibly the USA, is expected to expand considerably over the coming years, as new trade agreements are negotiated.

Outline one marketing opportunity and one challenge that this trade expansion may present for Irish agriculture.

Opportunity:

Creation of greater access to North American markets because of lower trade barriers against agricultural imports from the EU.

Specific opportunities for Irish agriculture include greater access for

- dairy produce such as butter, cheese, milk ingredients
- speciality Irish food products such as beef and lamb
- Domestic pig and poultry producers may benefit from cheaper imported feed ingredients for e.g. maize, soya meal.

Challenge:

Greater access for US and Canadian agricultural exports to the EU may threaten Irish exports to EU countries like the UK, Germany and France. Specific challenges may come from:

- increased access of cheaper imported beef, wheat, barley into the EU
- Smaller EU family farms may not be able to compete against the lower prices that larger farms in the US and Canada can sustain.

Q3 (a) (i) State one type of receipt and one type of payment that might apply to Sarah's farm (from given Cash Flow statement).

Receipt: Milk sales, SFP, calf sales.

Payment: Fertiliser, feed, vet, contractor.

(ii) State the Opening Cash for the first quarter (Q1) for 2014.

€5,000

(iii) Compare briefly the actual cash flow performance of the first two quarters (Q1 and Q2) for 2014 and outline two possible reasons for the different outcome between the two quarters.

Receipts up €12,000, payments down €4,000 and as a result net cash is up by €16,000 i.e. from (€5,000) in Q1 to €11,000 in Q2.

Receipts likely to be up as milk output per cow tends to peak in May-June. Also possible that some of Sarah's cows only came into milk production in Q2. There could also have been an increase in milk price in Q2. Payments likely to be down due to less purchased feed as cows are likely to be out on grass.

(b) Calculate the budgeted (forecasted) Net Cash and Closing Cash for the third quarter (Q3).

Net cash for Q3 = €8,000

Closing cash for Q3 = €19,000

Q4 (a) Name the components A and B in the given food chain and explain what each means.

A = Agricultural output

This is farm production which leaves the farm gate and enters the market for agricultural produce. Farmers receive payment from the buyers of their output.

B = Distribution

This covers all those activities that bring the output of domestic food processing companies and imported food to the ultimate food consumers. Included in distribution would be import, transport, storage and wholesale companies, retailers and other providers of outlets for consumers to buy food.

(b) In 2012 the value of Ireland's agri-food exports amounted to approximately €9 billion.

(i) Outline one way in which the value-added content (i.e. the degree of processing) of Irish agri-food exports could be increased.

Ways to increase value-added include:

- Instead of exporting live cattle, produce the meat cuts and meat products at home and then export
- Instead of exporting tonnes of commodity butter, cheese, milk products, produce branded products and milk ingredients at home and then export
- Replace some of our exports of potatoes, fruit and vegetables with more processed products like jams, desserts, potato-based products, juices, etc.
- Instead of exporting malting barley and malt for brewing/distilling, produce the beer and whiskey at home.

(ii) Explain one benefit for the Irish economy of increasing the value-added content of agri-food exports.

- Greater profits for the food processing industry
- Opportunity for investment in new processing facilities as consumers develop loyalty to branded Irish products
- More employment in food processing
- Rural economy benefits from more jobs
- More exports to non-euro countries generates foreign exchange and improves the balance of payments position of the country
- More tax revenue for government.

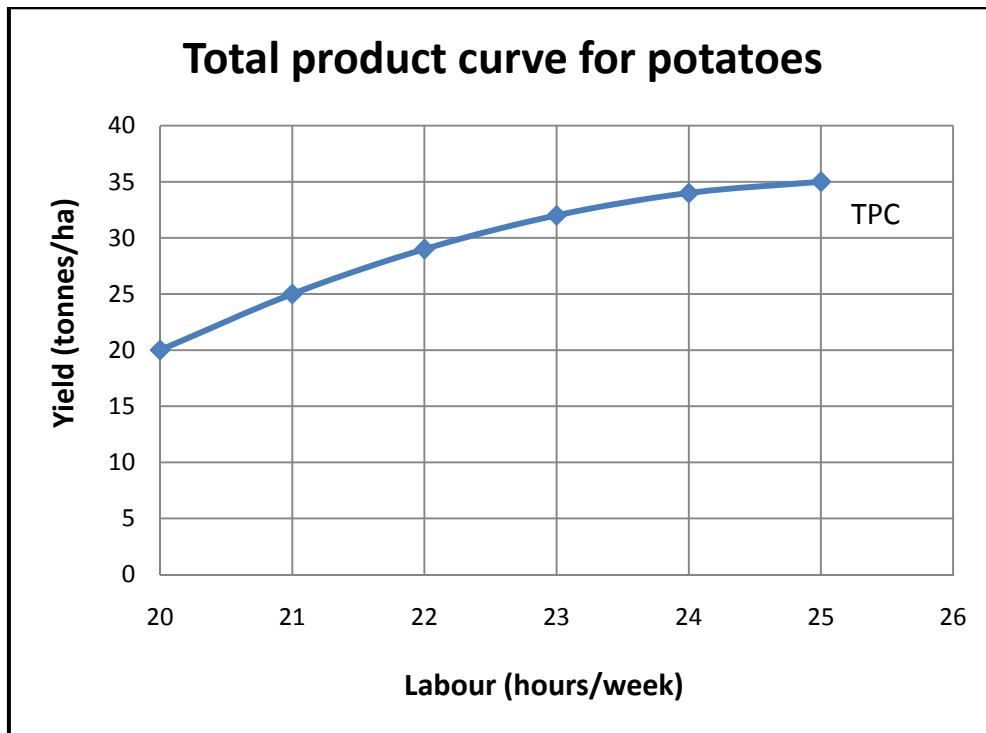
(c) Outline the benefits of the Bord Bia Quality Assurance Scheme for Irish agriculture.

The Scheme is operated by Bord Bia. It means that all steps in the Irish food chain are quality assured by a public agency.

Benefits include:

- Consumers have confidence that their food is safe and can be traced back to the farm from which it originates
- Irish produce gets a marketing advantage over food produced in countries where there is no quality assurance
- Consumers tend to be prepared to pay for more quality assured food which could mean increased market returns for processors
- Higher farm-gate prices for farmers
- Potential for long term supply contracts for farmers from processors.

Q5 (a) (i) Draw the Total Product Curve (TPC) for potatoes based on given data.



(ii) The TPC should show “output increasing but at a decreasing rate”. Explain this concept by comparing the changes in output obtained when labour is increased from 20 to 21 hours per week and from 22 to 23 hours per week.

When labour increases by 1 hour per week from 20 to 21 hours, potato yield increases by 5 tonnes/ha. However when labour increases by the same 1 hour per week from 22 to 23 hours, yield only increases by 3 tonnes/ha. The law of diminishing returns applies here i.e. as more and more labour is used, potato yield increases but at a declining rate of increase for each additional hour per week of labour used in potato production.

(b) State two examples of intermediate inputs used in potato production.

- Fertilisers
- Sprays (weeds, disease)
- Bags (for packing by farmer)
- Seed potatoes
- Advisory/consultancy services (for crop production).

Q6 (a) Explain the term 'family farm income' (FFI) as used in the annual National Farm Survey.

FFI is the principal measure of income used in the NFS. It is calculated by deducting all farm costs (direct and overhead) from the value of farm gross output. Factors of production owned by the farmer, such as labour and land, are not included as costs.

FFI therefore represents the financial reward to all members of the family, who work on the farm, for their labour, management and investment. It does not include income from non-farming sources and thus may not be equated to household income.

(b) Name two possible sources of income for the farm household, other than from farming itself.

- Off-farm job
- State transfer payments e.g. pension
- Private pension
- Dividends from investments
- Interest on bank deposits.

(c) Using the information in the given bar chart, outline the main differences in average FFI between the regions and outline two reasons why these regional differences exist.

There is considerable variation around the national average FFI of €25,479. Midlands, South and South West are closest to the national average. Border, and West are well below the national average at around €15,000. South East at nearly €40,000 and also East are above the national average.

Reasons for regional differences [in terms of the lower incomes in Border and West (B&W) and the higher incomes in South East and East (S&E)]:

- Better / more productive land in S&E compared to B&W
- Bigger farms in S&E compared to B&W
- More full-time farmers in S&E compared to B&W
- More of the profitable farming enterprises in S&E compared to B&W
- Younger and more progressive farmers in S&E compared to B&W.

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