



Coimisiún na Scrúduithe Stáit
State Examinations Commission

LEAVING CERTIFICATE 2008

MARKING SCHEME

AGRICULTURAL ECONOMICS

HIGHER LEVEL



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Agricultural Economics

<p style="text-align: center;">MARKING SCHEME and SUPPORT NOTES for use with the Marking Scheme</p>

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

- In many instances only key words are given i.e. these words must appear in the correct context in the candidate's answer in order to merit the assigned marks.
- The descriptions, methods and definitions in the scheme are not exclusive or definitive and alternative valid answers are acceptable.
- 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.

PART I (120 Marks)

15 QUESTIONS TO ANSWER.

ALL QUESTIONS CARRY EQUAL MARKS (8 MARKS)

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

PART II (200 Marks)

4 QUESTIONS TO ANSWER AT 50 MARKS EACH.

1. (a) Beef processing:
- (i) Ownership 10 marks graded
 - (ii) Main outlets 10 marks graded
 - (iii) Value added 10 marks graded
 - (iv) Competition 10 marks graded
- (b) Two implications of decoupling @ 5 marks each graded
- [50 marks]**
2. (a) Total Liabilities: 5 marks
- Net worth: 5 marks 10
- (b) Workings: 10 marks graded
- Explanation: 10 marks graded 20
- (c) Three factors @ 4 marks each graded 12
- (d) Two reasons @ 4 marks each graded 8
- [50 marks]**
3. (a) Two axes and three curves 15 marks graded 15
- (b) Explanations: Total Cost Curve: 5 marks graded
- Total Revenue Curve: 5 marks graded 10
- (c) Explanation 10 marks graded 10
- (d) Diagram 5 marks graded
- Explanation 10 marks graded 15
- [50 marks]**

4.	(a)	Definition of Price Cost Squeeze	12 marks graded	12
	(b)	Product Demand contribution	10 marks graded	
		Product Supply contribution	10 marks graded	20
	(c)	Three adjustment strategies @ 6 marks each graded		18
				[50 marks]
5.	(a)	Diagram: Two axes and two curves @ 2 marks each		8
	(b)	Explanation of shape of demand curve (DH)	10 marks graded	
		Explanation of shape of demand curve (DE)	10 marks graded	20
	(c)	Diagram: Two axes and demand curve	4 marks	
		Explanation of shape of composite demand curve	6 marks graded	10
	(d)	Three factors explained @ 4 marks each graded		12
				[50 marks]
6.	(a)	Three economic reasons prices @ 5 marks each graded		15
	(b)	Income gap explanation	10 marks graded	
		Income gap limitations	2 @ 5 marks each graded	20
	(c)	Incomes under Free Trade	8 marks graded	
		Incomes under Protection	7 marks graded	15
				[50 marks]

AGRICULTURAL ECONOMICS – HIGHER LEVEL
SUPPORT NOTES

PART I

1. There are many alternatives to Irish lamb on the French market which means that French customers have a wide variety of choice in relation to lamb. If the price of Irish lamb increases, customers can buy from other sources. Greater competition on French market.

2. % of land devoted to crop production: 9% (approx)
Number of Farm Holdings in Ireland: 132,000 (approx)

3. An EU Directive is binding only as to the results to be achieved while leaving within prescribed limits the choice of means to be employed to the member states.

4. Manufacturing Firm – Reduces output/Downwards quantity adjustment.
Family Farm – Maintains output while accepting lower prices.

5. MP: Additional quantity produced per increment/extra unit of input.

6. Straight line method involves using a fixed percentage of the original capital cost / asset each year until the item is fully depreciated; declining balance involves using a fixed percentage of the (residual) value / balance / reduced balance at the end of the previous year each year so that the annual depreciation diminishes as the value diminishes.

7. Positive: Migrant workers from EU countries may be a source of labour for Irish farms; Irish farmers may invest in property in EU countries and thereby gain from overseas investment; increased market for Irish agricultural products.
Negative: Increased requirements on EU budget imply decreasing support for Irish agriculture; increased competition as new countries may produce agricultural products which compete with Irish products.

8. Law of Comparative Advantage: Countries/producers should specialise at producing what they are most efficient at producing and acquire their other needs through trade. Countries/producers trade surplus production to acquire the goods not produced by themselves.

9. Many farmers dislike quasi-vertical integration as it may give too much control over production to people outside farming so the farmer may tend to become a mere employee. Loss of control to farmers.
10. Adoption of improved/better varieties of seed, spray, weed control, improved machinery and equipment, improved genetics, improved husbandry.
11. The capitalised value of an asset is that sum of money which if invested would provide the same income stream as the factor of production / the present value of the expected income to be earned in the future.
12. Cross compliance refers to farming in accordance with EU environmental and welfare standards. The Single Farm Payment is paid on the basis of each farmer complying with environmental and welfare standards (good agricultural practice). Farms may be inspected to ensure that good farming practice standards are adhered to.
13.
 - (i) Market period
 - (ii) Short run period (intra production)
 - (iii) Long run period (inter production)
14. Coupled payments refer to payments which are directly linked with a level of production. In order to receive a coupled payment, production must have taken place. Coupled payments are an incentive to produce. A Decoupled payment is a payment that is not linked to production. EU farmers received decoupled payments based on historic production and units of area. With decoupled payments, there is not the incentive to produce.
15. Development of drought/disease resistant varieties which would lead to increased yields/supplies of crops thereby increasing food supply / improved food quality / less use of chemical sprays.
16. Condition of Average: If less than the full market value of the property is insured, the amount of compensation that will be paid under the insurance will be equal to the proportion insured. Underinsurance is thus penalised.

- 17.** REPS (Rural Environment Protection Scheme): It rewards farmers for carrying out farming activities in an environmentally friendly manner and brings about environmental improvement on existing farms / establishes farming practices and production methods which reflect the increasing concern for conservation, landscape protection and wider environmental problems / designed to encourage farmers to farm in line with a series of environmental regulations and specified requirements.
- 18.** The Irish Farmers' Association is the largest farm organisation in the country, representing 85,000 farm families engaged in agricultural activity. The IFA has voluntary membership, has a presence in every parish in the country, and lobbies politicians, agri-business and policy makers to ensure that farming interests are recognized. The IFA holds meetings and runs campaigns on issues of agricultural importance.
- 19.** Expensive undertaking / logistical problems / may dislocate commercial trade / may dislocate native production.
- 20.** Drought in Australia, population growth in China and rest of world, surplus supplies of food from previous years no longer exist, competition for cereal ground from biofuels has resulted in decreased supply of wheat/barley on international markets, thereby increasing the price of such commodities.

SUPPORT NOTES

PART II

1.(a) (i) Ownership of processing capacity controlled predominately by private companies

Export Market Processors: 85%

Domestic Processors: 15%

(Further development required)

(ii) Home: 10% (approx) (Very high self-sufficiency).

UK: 48% (approx) (Very reliant on the UK).

EU: 31% (approx)

Rest of world: 11% (approx)

(Further development required)

(iii) Value added through further processing and development of markets for new products i.e. stir-frying, flavoured cuts, ready meals (convenience), organic production, beef products to meet requirements of export markets.

Beef to Italian market (paler, leaner meat than supplied to domestic and other markets) / feed cattle high volumes of grain rather than grass.

(iv) Competition from South American and Australian/New Zealand imports. Their costs of production significantly less than Irish costs. Threat of imports to viability of Irish industry. Also concerns about health checks and safety of beef produced in some non EU producing countries e.g. Brazil may not have the same stringent controls. Don't test for BSE and F&M in the majority of countries.

(b) Negative effect on cash flow as no longer receiving payments across the year. No longer required to keep stock to receive payment so many producers have reduced cattle numbers. Guaranteed payment. / stability of income, etc.

2. (a) Total Liabilities: €295,000
Net worth: €1,255,000

(b) Workings: Farm is solvent as **debt to net worth ratio** is less than 1
 $€295,000 : €1,255,000 = 0.23$ or $€295,000 / €1,255,000 = 0.23$
0.23 : 1

Explanation: It is solvent because the ratio is less than 1.

Only 23% of net worth is borrowed.

(c) Debt to net worth ratio of 0.23 indicates that just 23% of net worth is borrowed. Very positive financial position which would be favoured by bank manager as the farm Balance Sheet shows a low level of borrowing when compared to Net Worth value. High level of Fixed Assets as collateral.
Strong liquidity position (CA:CL) / strong cash flow (liquid assets).

(d) Industry as a whole is expanding and this requires additional capital.
Individual farmers must reorganise and expand their operations / set up new enterprises if they are to maintain incomes comparable with others in a growing economy.
The resource mix in farming is changing with the substitution of machines and non farm power for horsepower and manpower. These new inputs require much more capital than the traditional inputs they are displacing

3. (a) Axes – Vertical – Costs and Revenues

Horizontal – Output

Curves – Total Revenue

Total Cost

Fixed Cost

(b) Total Cost Curve: Fixed costs are shown at a constant level regardless of the level of output. Variable costs are represented by the area above fixed costs but below Total costs. Variable costs are very low at low levels of output but increase at an increasing rate as output is intensified. Total costs therefore represent the combination of fixed and variable costs.

Total Revenue Curve: Total Revenue is shown in the form of a straight line. Since the price of output is assumed to be the same regardless of the level of output, additional output adds proportionately to revenue hence the total revenue curve is a straight line through the origin.

(Reference to diagram and curves/lines must be included in answer)

(c) OP represents a break even point. Considerable profit can be made beyond OP.

Until output reaches OP the farm will continue to operate at a loss, but beyond this level profits will expand as output expands.

(d) The most profitable level of production is where the gap between the total revenue curve and the total cost curve is at its widest. This must be indicated on the diagram. If output is pushed beyond this point, the variable costs will rise more rapidly than revenue, and profit will begin to decline.

4. (a) Price cost squeeze is the tendency for input prices to rise more rapidly over time (or fall more slowly) than product prices.

(b) **Product Demand:** Demand $\uparrow \implies$ Shortage in supply \implies Price \uparrow .

Population growth and increased purchasing power cause an increase in product demand. Milk price has recently increased due to increased global demand for dairy products. Rising populations in India and China have also contributed to increased demand. An increase in product demand would be difficult to meet from domestic supplies as domestic supplies are not likely to grow at such a rapid rate. Imports however could increase to cope with growing demand.

Product Supply:

Lagging demand is not in itself sufficient to depress prices. If supply were also lagging and if resources were quitting agriculture rapidly, slack demand would not cause depressed prices. However, the resources engaged in farming do not have a high degree of mobility and therefore farmers are slow to cease farming. Output can be expanded through use of improved technologies, improved husbandry etc. When all suppliers act in the same direction, supply tends to expand faster than demand and unless surpluses can be disposed of, this will depress price. Currently, international grain prices are high due to reduced supply. Competition from biofuels for land.

Supply \downarrow demand constant \implies Shortage of supply \implies price \uparrow

Pig farmers: Grain prices (feedstuff for pigs) $\uparrow \implies$ Input prices \uparrow while product prices stagnant \implies Price cost squeeze for farmers.

(c) **Adjustment Strategies**

Increase farm size – increase output/supply – economies of scale.

Adopt new technology or husbandry – increase output, efficiency gains.

Successful marketing of product/producer group – command higher price.

Production of new product – service niche market – new market.

5. (a) Two axes, demand curve DH, demand curve DE.
- (b) Shape of demand curve (DH) – Steep – Inelastic demand – home market – closed protected market.
- Shape of demand curve (DE) - less steep – elastic demand – export demand – quantity purchased is more affected by price change – Irish butter on export market represents smaller proportion of total market – non Irish butter brands widely available.
- (c) Total demand curve:
Demand curve is combination of home and export demand. Curve represents the addition of DH and DE or the sum of the home and export demand at each price level.
In the home market, quantity purchased is not greatly affected by price change.
In the export market, quantity purchased is greatly affected by price change.
- (d) Tastes/preferences, price of product, price of substitute commodities, level of consumers' income.
Explanations required.

- 6. (a)**
- (i) Production levels are influenced by price paid the previous year and how easily entrants can enter/leave the market. Hence direct effect on price as determined by supply and demand (The pig cycle) e.g. potatoes.
 - (ii) Competition from imports and competing price e.g. Brazilian Beef.
 - (iii) Effects of disease outbreak on demand, consequent effect on price.
 - (iv) Seasonal effects.

- (b)** The income gap is most usually calculated as the difference between the per capita farm income of the farming workforce and the per capita income of the average industrial worker.

Limitations: (i) Selection of peer group very important; (ii) income gap does not take account of sources of income, (iii) wealth ownership and (iv) relative tax burden.

Explanations required.

- (c)** Free Trade allocates the production and distribution of goods and services by means of the autonomous price system: it preserves the freedom of both producer and consumer against the controls of government and planner. Allows open competition. Survival of the fittest. Free trade, however, may depress the level of income to farmers and may produce very unstable prices and incomes.

Under intervention, protection is offered against international competition and it has the effect of holding EU prices higher than they would be under a free trade policy.

