

2.3 The Firm - Long Questions

2000 Q2

- (d) The above firm may benefit from certain internal economies of scale.
- (i) Define what is meant by **internal economies of scale**.
 - (ii) State **TWO** examples of possible internal economies of scale.
- (15 marks)

2000 Q3

- (a) (i) Draw a short-run average cost curve and a long-run average cost curve.
(ii) Explain the reasons for the shape of each curve. (25 marks)

- (b) With the aid of **TWO** clearly labelled diagrams, explain the relationship between:
- (i) the short run and long run average cost curves.
 - (ii) the short run average and marginal cost curves.
- (30 marks)

- (c) A firm wishes to increase its labour force from 5 to 6 employees.
In order to do this the firm must raise the weekly wage rate from £200 to £230 per worker
- (i) Explain what is meant by the term **marginal cost of labour**.
 - (ii) Calculate, using the information above, this firm's marginal cost of labour.
- (20 marks)

2002 Q2

- (a) (i) Draw a short-run average cost curve and a short-run marginal cost curve.
(ii) Explain the relationships between the shapes of these curves. (20 marks)
- (b) It is generally agreed that the long-run average cost curve initially slopes downward due to **economies of scale** and then slopes upward due to **diseconomies of scale**. These economies and diseconomies can be both internal and external.
- (i) Define the underlined terms.
 - (ii) Distinguish between internal and external economies of scale, giving **TWO** examples in **each** case and explaining how each arises. (30 marks)

2004 Q3

- (a) (i) State the **Law of Diminishing Marginal Returns**.
(ii) Using the table below, state after which level of employment diminishing marginal returns set in. Explain your answer.

Number of persons employed	1	2	3	4	5
Total Output (in units)	14	30	50	64	76
Marginal Output (in units)	14				

(15 marks)

- (b) The **short-run average cost curve** of a firm initially slopes downwards and afterwards slopes upwards. Explain why this is the pattern of short-run average costs.

(15 marks)

- (c) It is generally agreed that the long-run average cost curve initially slopes downwards due to **economies of scale** and then slopes upwards due to **diseconomies of scale**. These economies and diseconomies can be both internal and external.

- (i) Define the underlined terms.
(ii) Distinguish between **internal** and **external** economies of scale, giving **TWO** examples in each case.

(30 marks)

- (d) While there can be advantages from producing on a large scale, the majority of firms in Ireland are small. Explain **THREE** reasons why small firms survive in the Irish economy.

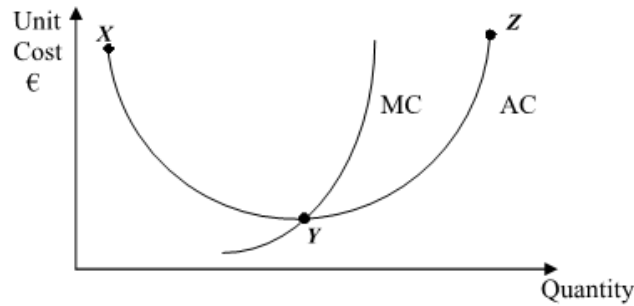
(15 marks)

2009 Q3

(a) The Short Run Average Cost (AC) of a firm is usually shown as a U-shaped curve.

(i) State and explain the reason(s) for the shape of the AC curve:

- From point X to Y;
- From point Y to Z.



(ii) Explain the relationship between the Marginal Cost (MC) and Average Cost (AC) curves as shown above.

(25 marks)

(b) 'The shape of a Long Run Average Cost (LRAC) curve is determined by economies and diseconomies of scale'.

- Explain this statement, with the aid of a clearly labelled diagram.
- Define **Internal Economies of Scale** and **External Economies of Scale**.
- State and explain **two** examples of **each** economy.

(30 marks)

(c) 'The Irish government should encourage initiatives that will prevent further cost increases and in turn sustain employment in small firms'.

Suggest with reasons actions the government could take to improve the competitiveness of small firms.

(20 marks)

[75 marks]

2011 Q4

The table below shows the short run production costs for a small firm producing and selling kitchen furniture.

Number of units of output	Fixed Costs	Variable Costs	Total Costs
	€	€	€
1	400	600	1,000
2	400	1,200	1,600
3	400	1,850	2,250
4	400	2,900	3,300
5	400	4,100	4,500

- (a) (i) Using the information in the table above calculate the following:
- The **marginal cost** of producing the 4th unit.
 - The **average cost** of producing 5 units.
 - The **profit** earned by the firm selling 5 units of output at €1,200 per unit. (Show your workings.)
- (ii) Using the information in the table above, draw the firm's short run average cost (AC) curve. Explain the reasons for its shape. (30)
- (b) *'The cost of doing business in Ireland is falling. However, some costs continue to increase or remain relatively high'.* (National Competitiveness Council Report, 2010)
- (i) Discuss the economic advantages of falling costs of production for the Irish economy.
- (ii) Outline possible restrictions on the growth of businesses in the Irish economy at present. (30)
- (c) The British Petroleum (BP) oil spill in the Gulf of Mexico in 2010 is estimated to have cost a total of \$40 bn. Identify **two** costs for BP and **two** costs to society associated with this oil spill.

2012 Q4

- (a) With the aid of **two** clearly labelled diagrams, explain the relationship between:
- (i) the short run average cost curve and long run average cost curve.
 - (ii) the short run average cost curve and marginal cost curve.
- (25)

- (c) Ocean Blue Ltd produces two boats weekly and incurs the following weekly costs:

- Rent: €1,200
- Raw materials: €2,000
- Labour: €1,600
- Normal profit: €1,000

What is the minimum price at which **each** boat can be sold if production is to continue:

- (i) in the short run?
- (ii) in the long run?

Explain your answers in **each** case.

(25)

2015 Q3

- (a) In the case of any two of the following three pairs distinguish between the two concepts:
- Marginal Cost and Average Cost
 - Explicit Cost and Implicit Cost
 - Normal Profit and Supernormal Profit.
- (20)
- (b) The table below shows the output and production costs for a small bakery.

Units of Bread	Total Costs (€)
0	100
100	200
200	280
300	330
400	360
500	450
600	600
700	770

- (i) Use the data in the table above to answer the following questions:
- What are the **fixed** costs of operating this bakery? Explain your answer.
 - What are the **variable** costs of producing 300 loaves of bread?
 - What is the **average** cost of producing 400 loaves of bread?
- (ii) Using the data from the table above, draw **one** graph showing the following (you may use graph paper to complete this question):
- Total costs (label the curve TC)
 - Total variable costs (label the curve VC)
 - Total fixed costs (label the curve FC)
- (iii) With reference to the graph you have drawn in part (ii) does the graph represent the short run or the long run? Outline a reason for your answer. (35)
- (c) Discuss possible economies of scale **and** diseconomies of scale that the bakery may experience, should it expand its scale of production in the long run. (20)

2016 Q2

- (c) Explain why small firms succeed in some markets while other markets are dominated by large firms.

[15]

2016 Q4

- (a) (i) Distinguish between the short-run and the long-run production periods.
 (ii) In the short-run firms may stay in the industry even if they are making a loss. Explain this statement. [15]

- (b) (i) Explain the terms **marginal revenue** and **marginal cost**.

The table below shows costs and revenue data of a firm.

Output	Price (€)	Total Revenue (€)	Total Cost (€)
1	20	20	42
2	20	40	60
3	20	60	77
4	20	80	97
5	20	100	130

Use the data in the table above to:

- (ii) Calculate the marginal revenue and marginal cost at **each** output level. **Show your workings.**
 (iii) Draw **one** graph showing the marginal revenue and marginal cost **and** identify the profit-maximising level of output for this firm. Explain your answer. [30]

2017 Q3

- (a) The table below shows the output and the total cost of a firm producing wireless earphones. The firm charges €13 per unit of output. Use this table to answer the questions which follow. (Show your workings.)

Output (units)	0	1,000	2,000	3,000	4,000	5,000	6,000
Total Cost (€)	5,000	13,000	18,000	24,000	32,000	45,000	60,000

- (i) Calculate the **fixed cost** and the **variable cost** when output is 3,000 units.
 (ii) Calculate the **average variable cost** when output is 5,000 units.
 (iii) Calculate total profit if 4,000 units are sold.
 (iv) Using the data in the table above, draw **one** graph showing the **average cost** and the **marginal cost** of the firm, labelling them AC and MC. (You may use graph paper.)

2018 Q3

- (a) The table below shows the output and total cost for a firm. The selling price for its product is fixed at €30 regardless of output.

Output (units)	0	1	2	3	4	5	6	7
Total Cost (€)	20	40	50	65	85	115	160	210

- (i) Define the term **marginal cost**.
- (ii) Draw and clearly label a graph to illustrate the marginal cost at each level of output.
- (iii) Indicate on the graph that you have drawn the profit-maximising level of output **and** explain your answer.
- (iv) Calculate the profit earned at this profit-maximising level of output. [25]