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# Cost of Production Pack

Mr Traynor©

Economics  
Pack 2 • Leaving Cert

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# JT Economics

# The Business Guys

## Short Questions

### 1) 2018 Q4

(a) State the **Law of Diminishing Marginal Returns**.

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(b) Does this law apply in the short run or in the long run? Explain your answer.

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**(16 marks)**

### 2) 2017 Q1

The Irish government is under pressure to restore public sector pay to pre-financial crisis levels. Outline **two** opportunity costs for the Irish economy of this restoration.

(i) \_\_\_\_\_

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(ii) \_\_\_\_\_

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**(16 marks)**

### 3) 2016 Q2

Define the **Law of Diminishing Marginal Returns and** illustrate this with a suitable example.

Definition \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Example \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**(16 marks)**

### 4) 2016 Q4

Firms within the aircraft industry can benefit from economies of scale. Explain the term **economies of scale** and provide **one** example for a firm in the aircraft industry.

Explanation \_\_\_\_\_

\_\_\_\_\_

Example \_\_\_\_\_

\_\_\_\_\_

**(16 marks)**

### 5) 2015 Q1

Outline why 'choice' is fundamental to the study of economics.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**(16 marks)**

6) 2014 Q1

Define the term ‘**opportunity cost**’.

State **one** example of an opportunity cost facing the Irish Government.

**Definition:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Example:** \_\_\_\_\_

**(16 marks)**

7) 2014 Q2

If the marginal cost (MC) is **less than** average cost (AC), then AC must be **falling** when output increases.

(i) Is this statement true?                      Circle the correct answer.                      YES / NO

(ii) Explain the reason for your answer: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**(16 marks)**

8) 2014 Q9

Outline **two** possible social costs and **two** possible social benefits of an investment by 'EirGrid' in upgrading Ireland's electricity network by erecting high-voltage power lines (pylons).

**Social Costs:**

(i) \_\_\_\_\_  
\_\_\_\_\_

(ii) \_\_\_\_\_  
\_\_\_\_\_

**Social Benefits:**

(i) \_\_\_\_\_  
\_\_\_\_\_

(ii) \_\_\_\_\_  
\_\_\_\_\_

**(17 marks)**

9) 2013 Q1

The fundamental economic problem is one of 'scarcity'. Explain this concept.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**(16 marks)**

## 10)2013 Q9

A recent report to the Irish government highlighted the growing issue of alcohol abuse in Ireland.

- (a) Outline **one** private cost and **one** social cost related to excessive alcohol consumption.
- (b) Describe **one** advantage and **one** disadvantage of the government imposing a minimum price on alcohol products.

(a) **Private Cost:** \_\_\_\_\_

**Social Cost:** \_\_\_\_\_

(b) **Advantage:** \_\_\_\_\_

**Disadvantage:** \_\_\_\_\_

(17 marks)

## 11)2012 Q4

In relation to each statement listed below, indicate whether it is an **internal** or **external**

(a) **economy of scale** or (b) **diseconomy of scale**. (Place a tick (√) for each correct answer.)

Statement	(a) Economy of Scale		(b) Diseconomy of Scale	
	Internal	External	Internal	External
Repetitive tasks, workers are bored				
R&D costs are shared by many firms				
Discounts are available for bulk buying				
Inadequate infrastructure				

(16 marks)

## 12)2011 Q7

State **three** reasons why multinational firms are re-locating to countries like Vietnam, Indonesia and Thailand in Southeast Asia.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(iii) \_\_\_\_\_

(17 marks)



16)2007 Q7

‘An Irish banking group owns thirty branch offices. There is no opportunity cost to the banking group using these offices as they are fully owned’.

**True / False.**

Circle your choice and give a one sentence explanation of your answer.

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**(17 marks)**

17)2007 Q8

Define **Social Costs**. State **TWO** significant examples currently facing the Irish economy.

**Definition:** \_\_\_\_\_

**Example 1:** \_\_\_\_\_

**Example 2:** \_\_\_\_\_

**(17 marks)**

18)2007 Q9

Energy costs (e.g. electricity) increased significantly in Ireland during 2006.

Outline **TWO economic reasons** for the increase **and TWO economic consequences** of this specific development for the Irish economy.

**Reasons:**

**(i)** \_\_\_\_\_

**(ii)** \_\_\_\_\_

**Consequences:**

**(i)** \_\_\_\_\_

**(ii)** \_\_\_\_\_

**(17 marks)**

19)2006 Q5

Define **internal economies of scale**. State **TWO** examples.

**Definition:** \_\_\_\_\_

**Example (i):** \_\_\_\_\_

**Example (ii):** \_\_\_\_\_

**(16 marks)**

20)2005 Q1

Explain the concept **Opportunity Cost**. Why is the concept central to the study of Economics?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**(16 marks)**

21)2005 Q2

Outline **THREE** reasons for the survival of small firms in the Irish economy, even though they do not have the benefits of economies of scale.

**(i)** \_\_\_\_\_

**(ii)** \_\_\_\_\_

**(iii)** \_\_\_\_\_

**(16 marks)**

22)2005 Q7

“When a firm produces at a level of output at which marginal cost is greater than marginal revenue the firm is maximising profit (or minimising losses)”.

**True/False**

(Place a circle around your choice and write a one-sentence explanation of your answer).

\_\_\_\_\_  
\_\_\_\_\_

**(17 marks)**

23)2004 Q7

Outline **TWO** private benefits and **TWO** social benefits of the possible decline in the consumption of tobacco products, which is being promoted by government policies.

Private benefits:

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

Social benefits:

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(17 marks)

24)2004 Q8

“There is no opportunity cost to a firm in using an asset which it already owns”. **True / False.**  
(Place a circle around your choice and give a one sentence explanation of your answer.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(17 marks)

25)2003 Q8

Define social benefits and state **TWO** examples of social benefits which may arise from the Irish Government’s payment of student fees for most third level colleges in Ireland.

**Definition:** \_\_\_\_\_

\_\_\_\_\_

**Example 1:** \_\_\_\_\_

**Example 2:** \_\_\_\_\_

(17 marks)

## 26)2002 Q7

- (a) State the **Law of Diminishing Marginal Returns**.

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The table below illustrates the Law of Diminishing Marginal Returns.

<b>Number of persons employed</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Total output (in units)</b>	<b>12</b>	<b>27</b>	<b>47</b>	<b>63</b>	<b>73</b>
<b>Marginal Output (in units)</b>	<b>12</b>				

- (b) Complete the table above and state the point after which diminishing returns set in.

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**(17 marks)**

## 27)2001 Q3

Define **SOCIAL COSTS**. Give **TWO** examples.

.....

.....

Example (i) .....

Example (ii) .....

**(16 marks)**

## 28)2001 Q6

With the aid of a clearly labelled diagram, explain the relationship between the **average** and **marginal** costs.

Diagram



Explanation

.....

.....

.....

.....

**(17 marks)**

**Long Questions****2018 Q3 (a)**

- (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]

**2018 Q4 (b)**

- (b) *Globalisation allows firms to exploit economies of scale.*

- (i) Explain the term **economies of scale**.
- (ii) Discuss how a firm might benefit from economies of scale, providing examples to support your answer.
- (iii) Can firms become 'too big'? Explain your answer.

[30]

**2017 Q3 (a)**

- (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.)**

<b>Output (units)</b>	0	1,000	2,000	3,000	4,000	5,000	6,000
<b>Total Cost (€)</b>	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.)

[30]

**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]

- (c) *“Overall Ireland’s improving competitiveness performance over the period 2011 to 2014 has been central to the recovery in employment and economic growth.”*  
 (Source: *The National Competitiveness Council*, December 2015)

- (i) Outline the factors that influence the competitiveness of firms in Ireland.  
 (ii) Discuss **three** policies that the Irish government could consider to improve the competitiveness of firms in Ireland.

[30]

[75 marks]

**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)  
[75 marks]

**2012 Q3 (c)**

- (c) ‘There are 200,000 small firms in Ireland employing 655,000 people’.  
(Small Firms Association, December 2011)

Discuss the reasons why small firms survive in the Irish economy. (20)

**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)

- (b) Discuss the economic factors which should be considered by a firm when deciding where to locate its operations. (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)

**[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 4<sup>th</sup> 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. (15)

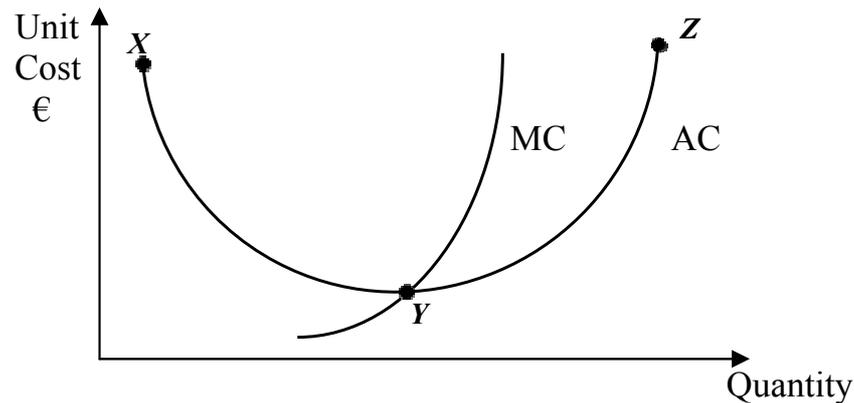
**[75 marks]**

**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]**

**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.

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

*(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)***[75 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)
- (c) Discuss the possible social costs **and** social benefits of the new roads being constructed throughout Ireland. (25 marks)
- [75 marks]**

## Answers

### Short Questions

#### 1) 2018 Q4

**(a)** State the **Law of Diminishing Marginal Returns**.

The law of diminishing marginal returns states:

If increasing quantities of a variable factor of production are added to a given quantity of a fixed factor of production then a stage will eventually be reached where the addition to the total output begins to decline.

**(b)** Does this apply in the short run or the long run? Explain your answer.

It applies in the short run only.

Why?

It is only in the short run that at least one input is fixed.

In the long run all inputs are variable.

10

6  
(2 + 4)

#### 2) 2017 Q1

The Irish government is under pressure to restore public sector pay to pre-financial crisis levels.

Outline **two** opportunity costs for the Irish economy of this restoration.

**(16 marks)**

Possible responses may include:

- **Less funds available to improve state services** such as improving the health services.
- **Less funds available to hire more public servants** such as teachers, gardaí, nurses etc.
- **Less funds available to increase social welfare payments** such as old age pensions / other allowances.
- **Less funds available to reduce taxation rates** such as income tax rates or VAT rates.
- **Less funds available to invest in capital infrastructure** such as provision of social housing.
- **Less funds available to help repay the national debt.**

## 3) 2016 Q2

**Define the Law of Diminishing Marginal Returns and illustrate this with a suitable example.**

**(16 marks)**

Definition: The Law of Diminishing Marginal Returns states

if increasing quantities of a variable factor of production are combined with a given quantity of a fixed factor of production, a stage will eventually be reached where the addition to total output (the marginal returns / output per unit of the variable factor) will begin to decrease.

**10 marks**

**Any suitable example explained: 6 marks**

## 4) 2016 Q4

Firms within the aircraft industry can benefit from economies of scale. Explain the term **economies of scale** and provide **one** example for a firm in the aircraft industry.

**(16 marks)**

Explanation

These result in a reduction in the LRAC of production as the firm / industry increases its size of operation/Ways in which an increase in output or capacity can reduce costs per unit / average costs.

**10 marks**

Some Examples:

- Technical economies – A firm in the aircraft / airline industry could justify the purchase of a large fuel efficient aircraft because it can spread the cost of such equipment over a larger number of passengers.
- Construction economies – Large hangars cost less per square metre to erect than small ones / building costs do not increase in proportion to the size of the firm i.e. it does not cost twice as much to build an extension of 20,000 m square as it does to build 10,000 m square / There are certain fixed costs in the initial stages e.g. surveyor's costs etc.
- Production economies - firms in the aircraft industry can keep the production process continuous.
- Integrated production – An aircraft manufacturer can reduce its per unit cost by involving itself at more than one stage in the production process.
- Purchasing economies – large firms can usually negotiate discounts as they buy in bulk e.g. Ryanair negotiated more favourable prices when buying a large quantity of Boeing aircraft/economies for the purchase of fuel.
- Financial economies – A large aircraft manufacturer will have access to a greater range of finance options than a small manufacturer and is more likely to be able to borrow at lower rates of interest.

**Example must refer to the aircraft/airline industry: 6 marks**

## 5) 2015 Q1

1. Outline why 'choice' is fundamental to the study of economics.

In Economics resources are **limited / finite / scarce** and have alternative uses while **wants are unlimited / infinite**. As a result **choices must be made** and these choices involve an opportunity cost.

**3 points of information: 8 + 4 + 4 marks**

## 6) 2014 Q1

Define the term '**opportunity cost**'.

State **one** example of an opportunity cost facing the Irish Government.

Opportunity cost is the cost of forgone alternatives involved in making a choice / the cost of something in terms of the next best alternative.

State **one** example of an opportunity cost facing the Irish Government.

Sample responses include the following:

- Spending on a new hospital the opportunity cost is the infrastructural project which must be deferred.
- Cuts in taxes next year implies less money to spend on other projects.
- The interest on government debt involves a sacrifice of government services such as education.

**Definition: 8 marks / Example: 8 marks**

## 7) 2014 Q2

If the marginal cost (MC) is **less than** average cost (AC), then AC must be **falling** when output increases.

(i) Is this statement true? Circle the correct answer. **YES** NO

(ii) Explain the reason for your answer:

If the additional cost of producing one extra unit is less than the average total cost then producing that extra unit lowers the average total cost.

**Circle correct answer: 1 mark / Explanation: 15 marks**

## 8) 2014 Q9

Outline **two** possible social costs and **two** possible social benefits of an investment by 'EirGrid' in upgrading Ireland's electricity network by erecting high-voltage power lines (pylons).

Social Costs could include:

**Visual intrusion on the landscape**

This may have a consequent negative impact on the tourism sector. Loss of visual amenity to local people.

**Possible health implications**

The electromagnetic fields may have a negative impact on health / the noise pollution.

**Potential damage to wildlife habitats / agriculture / equine industry**

The construction and maintenance of the new power lines through rural areas may damage local wildlife habitat / local farms and the horse-breeding industry.

**Decline in land and house prices in areas close to pylons.**

Social Benefits could include:

**Improved infrastructure / secure supply of electricity**

The improvement in the infrastructure may secure our supply of electricity and thereby may encourage FDI.

**Opportunities within the renewable energy sector**

Some entrepreneurs may invest in this sector resulting in increased employment within this sector.

**Increased capacity of renewable energy**

This would reduce our carbon emissions, reduce our dependence on imports and reduce the amount of money leaving the country to pay for these imports (roughly 85% of Ireland's energy needs are imported).

**1<sup>st</sup> correct response: 5 marks / 2<sup>nd</sup>, 3<sup>rd</sup> & 4<sup>th</sup> correct responses: 4 marks each**

## 9) 2013 Q1

The fundamental economic problem is one of 'scarcity'. Explain this concept.

**(16 marks)**

Scarcity means that while the supply of resources / factors of production are limited the demand for these is unlimited (unlimited wants/limited resources). Hence, society must choose on the use to which the resources are put. Making choices involves an opportunity cost.

**Any 2 points at 8 marks each**

## 10)2013 Q9

A recent report to the Irish government highlighted the growing issue of alcohol abuse in Ireland.

- (a) Outline **one** private cost and **one** social cost related to excessive alcohol consumption.  
 (b) Describe **one** advantage and **one** disadvantage of the government imposing a minimum price on alcohol products.

(17 marks)

<b>Costs</b>	
<b>One private cost:</b>	<b>One social cost:</b>
1. Decreased disposable income. 2. Possibility of long term illness / deterioration in health. 3. Possible absenteeism from work / less opportunities for promotion. 4. Increased private insurance costs. 5. Decreased productivity in work.	1. Increased health care costs. 2. Possible increase in crime /vandalism / risk of road accidents. 3. Increased absenteeism from work / disruption to provision of service. 4. Opportunity cost of money spent on health care.

<b>Imposing a minimum price on alcohol products</b>	
<b>Advantage</b>	<b>Disadvantage</b>
1. Reduction in alcohol consumption. 2. Possible reduction in 'binge' drinking by younger consumers. 3. Reduction in admission to A&E so lower healthcare costs. 4. Better use of scarce resources in hospitals. 5. Reduction in crime / vandalism / road accidents. 6. May close the gap in price between pubs and supermarkets – boost for pub trade.	1. Increased prices for consumers / reduced disposable income. 2. Reduced competition on the market / restricted consumer choice. 3. Possible increase in cross border shopping for alcohol. 4. Pub closures with possible job losses. 5. Increase in smuggling/purchase of alcohol products in the black economy.

**1<sup>st</sup> correct answer 5 marks. Next 3 correct answers at 4 marks each.**

## 11)2012 Q4

In relation to each statement listed below, indicate whether it is an **internal** or **external**

(a) **economy of scale** or (b) **diseconomy of scale**. (Place a tick (✓) for each correct answer.)

Statement	(a) Economy of Scale		(b) Diseconomy of Scale	
	Internal	External	Internal	External
Repetitive tasks, workers are bored			✓	
R&D costs are shared by many firms		✓		
Discounts are available for bulk buying	✓			
Inadequate infrastructure				✓

**4 correct answers at 4 marks each.**

## 12)2011 Q7

State **three** reasons why multinational firms are re-locating to countries like Vietnam, Indonesia and Thailand in Southeast Asia.

- 1. Lower wage costs:** wage rates outside Ireland are lower.
- 2. Lower costs of production:** firms may avail of more competitive energy prices; utility charges; insurance costs; professional fees etc.
- 3. Less restrictive regulatory framework:** regulations may be less strict making it easier to operate e.g. protection of the environment may face less regulation.
- 4. Emerging economies are in a growth phase:** access to growing international markets/new markets.
- 5. Development in communications technology:** access to speedier broadband.

**17 marks (10+5+2)**

## 13)2009 Q8

Define 'economic development'. Explain **two** social costs of economic development.

**Definition:**

An increase in GNP per head of population, which is accompanied by a fundamental change in the structure of society.

**Explain two social costs:**

- Pollution of air/water e.g. water pollution in Galway.
- Disfigurement of the landscape e.g. construction of roads disfigures the landscape.
- Possible loss of cultural heritage e.g. the construction of M3 through Hill of Tara.
- Traffic congestion in cities and towns with resulting problems.
- Global warming: increased carbon emissions will affect global weather patterns.
- Reduction in public amenities / urban sprawl/communities have less public spaces.

**Definition: 8 marks.**

**2 Social Costs: 5 marks + 4 marks.**

## 14)2008 Q3

A firm manufacturing 100 school desks weekly has the following total costs of production: Labour €2,000 (hired weekly); Raw Materials: €3,500; Normal Profit €1,500; Rent €3,000. What is the minimum price per school desk this firm could charge in the **short run**?

Workings / Explanation	€
Labour	2,000
+ Raw Materials	3,500
<b>Total Cost</b>	<b>5,500</b>
Cost per unit	<u>5,500</u>
	<b>100</b>
Cost per unit	55
A firm must cover its variable costs in the short run.	

**16 marks graded.**

## 15)2008 Q9

State **two** economic reasons for increased oil prices

1. **Greater demand for oil:** Newly industrialised countries such as China, India (BRIC).
2. **Affluence/Economic Growth:** with higher disposable incomes/greater purchasing power, as a result of economic growth there is a greater demand for bigger vehicles, more airline travel driving up oil prices.
3. **Reserves of oil declining/ high cost of extraction:** Oil is a non-renewable resource.
4. **Green taxes/excise duties:** In many countries a percentage of the price is a form of taxation.
5. **Lack of production in Middle East;** e.g. Iraq conflict, political uncertainty.
6. **Speculation:** investors are speculating on future prices of oil in world markets.

One Social Cost:

1. **Environmental damage:** Oil exploration increases as reserves run low (Irish coastline)/destroying rain forests in order to grow crops for bio fuels.
2. **Loss of excise duty:** If people cut back on use of oil, government loses tax revenue
3. **Increasing inflation;** The rising price of oil has added to inflationary pressures in some economies and a consequent fall in economic growth.
4. **Rising world food prices:** As countries switch production to crops for bio fuels, food process rise.
5. **Shortage of food** particularly in developing nations.

One Social Benefit:

1. **Environment:** there may be a reduction in pollution as people cut back on use thus helping environment/greater economy in the use of oil.
2. **Public transport:** If oil costs rise consumers may be more willing to use public transport.
3. **Less traffic congestion:** Consumers cut back on use of cars
4. **Incentive to source alternative sources of energy:** As oil becomes expensive other sources of energy may become a more viable solution.

**17 marks graded.**

16)2007 Q7

‘An Irish banking group owns thirty branch offices. There is no opportunity cost to the banking group using these offices as they are fully owned.

True / **False** 1 mark

The branch offices could be sold and the money invested or  
The branch offices could be rented out and an income earned.

**16 marks graded.**

17)2007 Q8

Define **Social Costs**. State **TWO** significant examples currently facing the Irish economy.

Definition: Cost/Price which society has to pay for the existence of a particular product.

**9 marks graded.**

TWO significant examples:

1. Pollution of air/water e.g. the current water pollution in Galway.
2. Disfigurement of the landscape e.g. construction of roads disfigures the landscape.
3. Possible loss of cultural heritage e.g. the construction of M3 through Hill of Tara.
4. Traffic congestion in cities and towns with resulting problems.
5. Reduction in public amenities / urban sprawl: communities have less public spaces.
6. Global warming: increased carbon emissions affects global weather patterns.

**8 marks graded.**

## 18)2007 Q9

Energy costs (e.g. electricity) increased significantly in Ireland during 2006.

Outline **TWO economic reasons** for the increase and **TWO economic consequences** of this specific development for the Irish economy.

**TWO economic reasons** for the increase:

1. **Increase in international oil prices:** caused by political instability and supply shortages.
2. **Increase in wage costs within the industry:**  
workers wage increases are passed on in the form of higher prices.
3. **Further regulation by government:**  
the addition of surcharges e.g. public service obligations levy by the ESB.
4. **Increased investment costs in the industry:**  
Firms must invest for future production.
5. To **make the company a more profitable investment** opportunity for investors.

**TWO economic consequences** of this specific development for the Irish economy:

<b>Positive consequences</b>	<b>Negative consequences</b>
<ol style="list-style-type: none"> <li>1. Increased emphasis in efficiency in producing this resource.</li> <li>2. Greater awareness by consumers of the scarcity of the resources / efficient consumption.</li> <li>3. Greater investment in R&amp;D into renewable / alternative resources.</li> <li>4. Government policy maybe re-evaluated resulting in policies which strive for better energy use.</li> <li>5. Increased government revenue through higher VAT revenues.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inflationary pressures / decrease in the standard of living.</li> <li>2. Loss of competitiveness of Irish industry.</li> <li>3. Possible re-location of mobile industry to cheaper locations.</li> <li>4. Job losses if industry closes or re-locates.</li> </ol>

**17 marks graded.**

## 19)2006 Q5

Define **internal economies of scale**. State **TWO** examples.

These are forces within a firm which cause the average / unit costs of that firm to decline as the firm grows in size.

Examples

1. Increased use of specialised machinery/equipment resulting in lower unit costs.
2. Labour economies / specialisation of workers:  
Dividing a job into distinct components may result in lower unit costs.
3. Construction economies: Larger plants cost less per cubic metre to construct than smaller ones.
4. Purchasing economies: Larger discounts are received from bulk purchasing.
5. Economies in distribution: Bulk delivers result in a lower unit cost of transport.
6. Financial economies: Bigger firms may avail of more competitive rates of interest.
7. Managerial economies:  
As a firm grows its management costs may not grow at the same rate as the firm grows.
8. Production Process economies:  
A large firm may be able to run one process into the next without costly discontinuities.
9. Indivisibility problems reduced: Expansion may allow for continuous production.
10. Marketing economies: Firms may experience saving in the costs of advertising.
11. Reduction in Waste: Large firms, with more lines of production, may reduce waste costs / less wastage of materials.

**16 marks graded.**

## 20)2005 Q1

Explain the concept Opportunity Cost. Why is this concept central to the study of Economics?

**Opportunity Cost is the cost of foregone alternatives.**

This concept is central to the study of economics because:

**Economics studies the allocation of scarce resources, which have alternative uses.  
The allocation of these resources involves making a choice.**

**16 marks graded.**

## 21)2005 Q2

2. Outline THREE reasons for the survival of small firms in the Irish economy, even though they do not have the benefits of economies of scale.

**1. Small size of market**

The restricted size of the market may not facilitate the operation of large scale business e.g. in a rural area a small shop may be viable while a large supermarket may not.

**2. Personal Services**

Consumers may desire personal attention in the provision of goods or services and a small firm may be the only type of business which can provide this e.g. a plumber providing repair services to households.

**3. Consumer Loyalty**

A small firm may have built up a reputation over the years in the provision of goods and services to its customers and consumers may respond by being loyal to that firm, making it difficult for other firms to gain entry.

**4. Viable Community**

Citizens in smaller communities may support local business so that the continuity of supply is ensured. e.g. in many areas throughout Ireland communities wish to maintain the existence of 'community' hospitals. Enterprise Boards encourage individuals to establish small businesses.

**5. Traditional / Niche markets**

- The type of product / service being supplied might make it more suitable for a small firm. Examples include: wedding planners; handmade/ craft products; perishable products etc.
- A small firm may find that it easier to locate close to the market where it might be difficult for a larger firm to do so e.g. roadside sellers of local produce can be flexible in choosing their location.

**6. Nature of the commodity**

Heavy goods which are costly to transport may be manufactured locally on a small scale to supply local markets e.g. the manufacture of concrete blocks in areas which service local markets.

**7. Membership of voluntary groups/Alliances between firms at different stages of production**

Some firms producing on a small scale may offset the disadvantage they have in competition with large producers by adopting a joint marketing strategy with other small suppliers e.g. hotel groups, individually owned grocery shops trading under a shared name.

**16 marks graded.**

3. Explain what is meant by Consumer Surplus.

**The benefit to consumers due to the difference between what consumers actually pay to consume a good and what they would have been willing to pay, rather than go without the good.**

**16 marks graded.**

## 22)2005 Q7

7. "When a firm produces at a level of output at which marginal cost is greater than marginal revenue the firm is maximising profit (or minimising losses)". True / **False**  
(Place a circle around your choice and write a one-sentence explanation of your answer)

False. The extra cost of producing further units of output is greater than the extra revenue generated therefore the firm could increase its profits by producing less output. The increased output adds more to cost than to revenues earned. Profits are maximised where  $MC=MR$ .

**17 marks graded.**

23)2004 Q7

Outline **TWO** private benefits **and** **TWO** social benefits of the possible decline in the consumption of tobacco products, which is being promoted by government policies.

Private benefits:

1. **Decreased spending on tobacco / consumer had a higher disposable income**
2. **Opportunity cost: the consumer can now use this income for something else.**
3. **Lower insurance premium due to the reduction in risk**
4. **Personal: easier for the person to socialise / lower cleaning bills/ more attractive**
5. **Healthier person: person may be ill less frequently / greater life expectancy.**

Social benefits:

1. **Healthier population as people have less respiratory illnesses.**
2. **Reduction in health costs – less people requiring medical care.**
3. **Environment benefits: less pollution / less litter.**
4. **Effect on economic activity: more people visiting restaurants / pubs – upturn in economic activity.**
5. **More productive workforce: less illnesses /less time off – higher productivity.**

**2 private benefits + 2 social: 17 marks graded**

24)2004 Q8

“**There is no opportunity cost to a firm in using an asset which it already owns**”. True / False  
(Place a circle around your choice and give a one sentence explanation of your answer).

**Correct Answer: False: 1 mark**

**Explanation: 16 marks graded.**

**The asset could be sold and the money invested *or***

**The asset could be rented out and an income earned**

## 25)2003 Q8

8. Social benefits are defined as:

The benefits/advantages, which accrue to society as a whole as a result of an individual / firm consuming / producing a commodity [which are not measured by the price system]

TWO examples of social benefits which may arise from the Irish Government's payment of student fees for most third level colleges in Ireland:

- (a) Improve the skills/ quality/ productivity / mobility of the labour force
- (b) Acts as an incentive for attracting foreign industry to Ireland.
- (c) Possible increase in present / future living standards.
- (d) May lead to an increase in future tax revenues for the state.
- (e) Fairer distribution of wealth: low-income student may be able to break the poverty trap.

*Correct definition: 12 marks graded and 2 examples*

## 26)2002 Q7

7. (a) **State the Diminishing Marginal Returns**

**10 marks**

As more units of a variable factor of production are added to other (constant) factors of production the returns to the variable factor will eventually fall.

(b) The table below illustrates the Law of Diminishing Returns

<b>Number of persons employed</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Total Output, in units</b>	<b>12</b>	<b>27</b>	<b>47</b>	<b>63</b>	<b>73</b>
<b>Marginal Output, in units</b>	<b>12</b>	<b>15</b>	<b>20</b>	<b>16</b>	<b>10</b>

**4 correct figures x 1 marks each = 4 marks**

State the point after which Diminishing Returns set in.

When the 4th person is employed/ After the 3rd person

**3 marks**

27)2001 Q3

Define SOCIAL COSTS. Give TWO examples. 16 marks  
 Price which society has to pay for the existence of a particular good / service.

Definition: 10 marks graded

Examples: 2 examples at 3 marks each = 6 marks

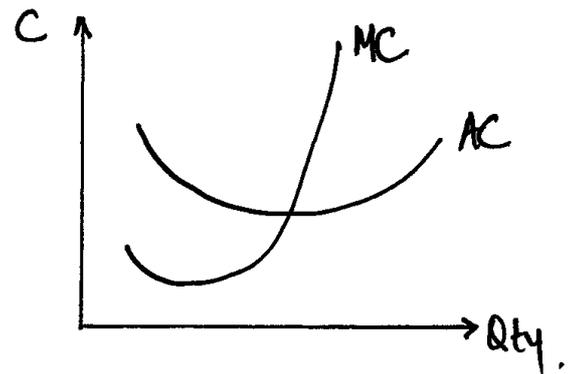
1. Pollution of air/water.
2. Noise nuisance
3. Disfigurement of the landscape.
4. Traffic congestion.
5. Reduction in public amenities / urban sprawl.

28)2001 Q6

. With the aid of a clearly labelled diagram, explain the relationship between the average and marginal costs. (17 marks)

Diagram : (8 marks)

Cost axis: 2 marks  
 Quantity Axis: 2 marks  
 AC : 2 marks  
 MC : 2 marks [-2]



MC must cut AC at its lowest point.

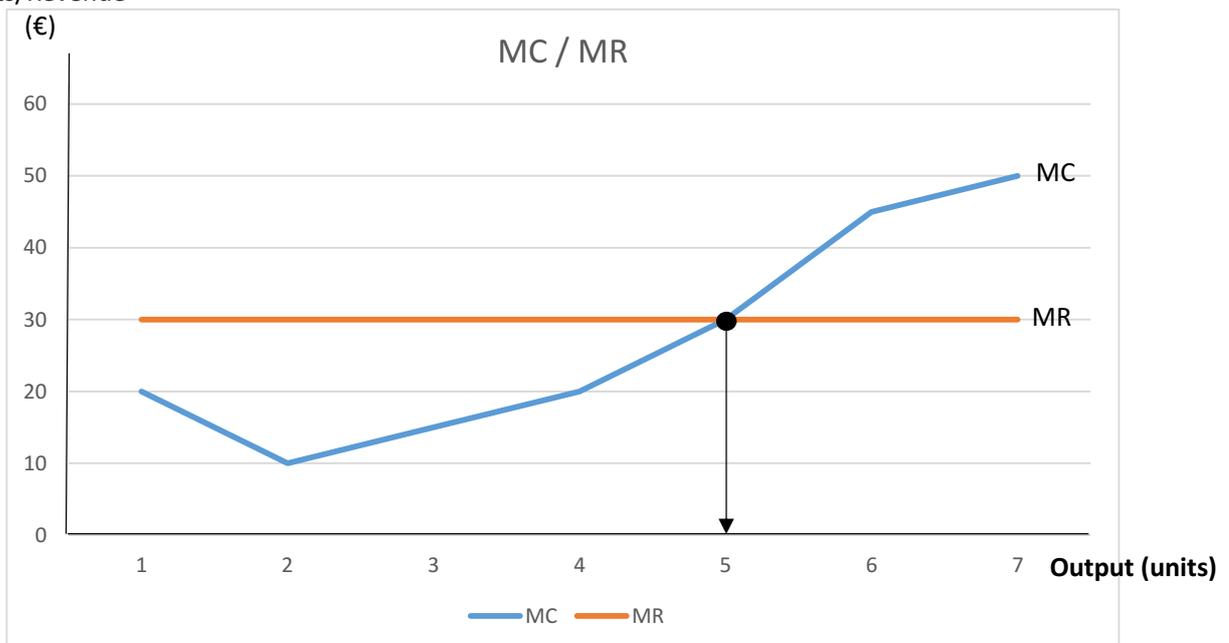
Explanation : (9 marks)

- When  $MC > AC$  then AC is rising : 3 marks
- When  $MC < AC$  then AC is falling : 3 marks
- When  $MC = AC$  then AC is at a minimum/ constant : 3 marks

**Long Questions****2018 Q3 (a)**

	Possible responses	Max Mark																										
(a)	<p>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.</p> <table border="1"> <thead> <tr> <th>Output (units)</th> <th>0</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> </tr> </thead> <tbody> <tr> <th>Total Cost (€)</th> <td>20</td> <td>40</td> <td>50</td> <td>65</td> <td>85</td> <td>115</td> <td>160</td> <td>210</td> </tr> </tbody> </table>	Output (units)	0	1	2	3	4	5	6	7	Total Cost (€)	20	40	50	65	85	115	160	210	5								
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Total Cost (€)	20	40	50	65	85	115	160	210																				
(i)	<p>Define the term <b>marginal cost</b>.</p> <p><b>The change / addition to total cost</b> as a result of producing <b>one extra unit of output</b>.</p>																											
(ii)	<p>Draw and clearly label a graph to illustrate the marginal cost at each level of output.</p> <table border="1"> <thead> <tr> <th>Output (units)</th> <th>0</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> </tr> </thead> <tbody> <tr> <th>Total Cost (€)</th> <td>20</td> <td>40</td> <td>50</td> <td>65</td> <td>85</td> <td>115</td> <td>160</td> <td>210</td> </tr> <tr> <th>MC (€)</th> <td></td> <td>20</td> <td>10</td> <td>15</td> <td>20</td> <td>30</td> <td>45</td> <td>50</td> </tr> </tbody> </table>	Output (units)	0	1	2	3	4	5	6	7	Total Cost (€)	20	40	50	65	85	115	160	210	MC (€)		20	10	15	20	30	45	50
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Total Cost (€)	20	40	50	65	85	115	160	210																				
MC (€)		20	10	15	20	30	45	50																				

Costs/Revenue

**Diagram: 8**

MC: 7 points x 1 marks

Label: 1 mark

**2018 Q3 (a) Continued**

	Possible responses	Max Mark
(iii)	<p>Indicate on the graph that you have drawn the profit-maximising level of output <b>and</b> explain your answer.</p> <p><b>Explanation:</b>            Profit maximisation occurs when <math>MC = MR</math>.            The MR for this product is €30.            Profit maximisation occurs at an output level of 5 units.</p> <p>As long as marginal revenue exceeds marginal cost, increasing the quantity adds to profit. At <math>MC = MR</math> profit is neither increased or decreased.</p>	<p>2+2</p> <p>4</p>
(iv)	<p>Calculate the profit earned at this profit-maximising level of output.</p> <p style="text-align: center;"> <math>TR - TC</math>  <math>(P \times Q) = €30 \times 5 = €150</math>  <math>€150 - €115 = €35</math> </p>	<p>4</p> <p><b>25</b></p>

**2018 Q4 (b)**

	Possible responses	Max Mark
(b)	<i>Globalisation allows firms to exploit economies of scale.</i>	
(i)	<p>Explain the term <b>economies of scale</b>.</p> <p>Economies of scale arise when average cost / unit cost of production falls as output rises/as firm expands its scale of operations.</p>	9
(ii)	<p>Discuss how a firm might benefit from economies of scale, providing examples to support your answer.</p> <p><b>Technical economies of scale</b> Higher production levels allow for the possibility of increased use of technology in production. Cost is spread over a larger quantity of output e.g. A new machine which produces greater output is purchased.</p> <p><b>Labour economies</b> Higher production levels allow for specialisation among workers. Each worker could specialise on a specific task and become very skilled at it. As a result, the output per worker could increase and the cost per unit could be reduced.</p> <p><b>Economies in the use of raw materials / reduction in waste</b> Large firms with more lines of production, may reduce waste costs/less wastage of materials.</p> <p><b>Financial economies</b> Larger firms may have access to a greater range of finance options than a small firm and are more likely to be able to borrow at lower rates of interest hence reducing production costs. Some capital investment is only suitable for high levels of output.</p> <p><b>Purchasing economies</b> A large firm may be able to avail of discounts in the purchase of raw materials / lower supply costs when buying in bulk (can buy in larger quantities and can agree discounts from suppliers).</p> <p><b>Economies in distribution</b> With a larger volume of production, a firm may be able to organise a more efficient transport and distribution system e.g. Tesco uses a centralised distribution system.</p> <p><b>Marketing / advertising economies</b> This may include savings in advertising as these costs can be spread over a greater number of units of output/the advertising message is directed at more customers so unit costs fall. e.g. Nike's advertising during the World Cup.</p> <p><b>Managerial economies</b> As a firm expands in size it will be able to hire staff with specialised skills to look after certain aspects of the business e.g. HR. As a firm grows in size management costs may not grow in proportion to the growth of the firm.</p> <p style="text-align: center;"><b>-1m if example is not given</b></p>	2 x 7 (3 + 4)

**2018 Q4 (b) Continued**

	Possible responses	Max Mark
(b) (iii)	<p><b>Better infrastructure.</b> As roads / communications etc. improve these will benefit all firms as costs may fall. Example of how the road infrastructure improvements help reduce costs for firms e.g. delays and bottlenecks are reduced.</p> <p><b>Development of specialist firms</b> Some of the jobs, which a firm once performed may be contracted out to specialist firms at reduced costs e.g. the supply of linen to hotels.</p> <p><b>Development of separate R &amp; D units / Provision of specialist courses</b> As industry becomes very large R&amp;D agencies may set up to provide facilities for individual firms / The costs of research may be shared between firms or with a public body like Teagasc. If education institutes provide specialist courses it will help provide qualified workers to firms and reduce costs.</p> <p>Can firms become 'too big'? Explain your answer.</p> <p>Yes, as there are disadvantages associated 'big firms'.</p> <p>Possible responses include:</p> <ul style="list-style-type: none"> <li>• <b>Managerial diseconomies</b> As a firm continues to grow, additional layers of management may be needed to cope with the increasing complexity of operations, especially if firm is spread between many locations.</li> <li>• <b>Lack of worker motivation / staff morale</b> As firms get bigger it may result in poor staff morale—workers may lack motivation if they are working for a large company. Workers may feel that they are just a 'number' and this may result in increased workplace conflict, leading to rising costs/ increased absenteeism.</li> <li>• <b>Shortages of skilled labour / Scarcity in the of factors of production</b> Increased production might lead to shortages of key inputs e.g., skilled labour. Labour costs could increase as higher wage rates may be needed to recruit sufficient labour /As demand for factors of production increase they may become scarce and their price will increase.</li> <li>• <b>Increase in bureaucracy / administration costs</b> A bigger firm might lead to more complex and bureaucratic management systems. Communication difficulties may slow down the effectiveness of business operations as the business expands, leading to higher costs. Decision making may be slower. Administration costs may increase disproportionately as output increases.</li> </ul>	<p><b>1 x 7</b> <b>(3 + 4)</b></p> <p><b>30</b></p>

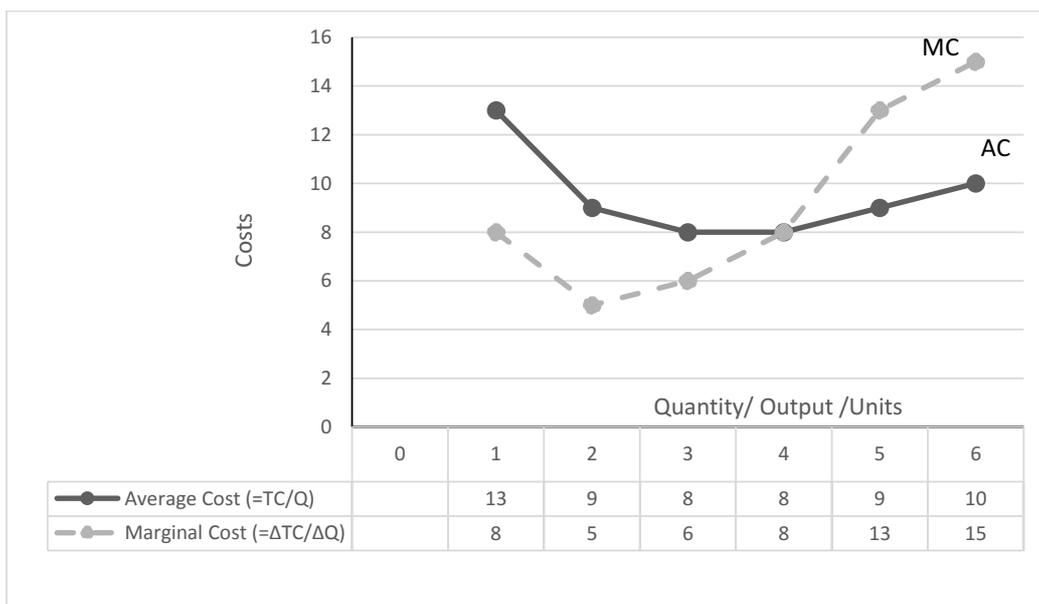
**2017 Q3 (a)**

- (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.) [30]
- (i) FC = **€5,000** because at Output 0, TC = €5,000  
VC = TC – FC. At 3,000 units: 24,000 – 5,000 = **€19,000** **5 marks**
- (ii) Calculate the **average variable cost** (AVC) when output is 5,000 units.  
AVC = VC/Q.  
At 5,000 units: VC = €45,000 – €5,000 = €40,000 . AVC = 40,000 / 5,000 = **€8 per unit** . **5 marks**
- (iii) Calculate total profit if 4,000 units are sold.  
Total Profit = Total Revenue (P x Q) – Total Cost  
(4,000 x €13) = €52,000 – 32,000 = **€20,000** **4 marks**
- (iv) Using the data in the table above, draw **one** graph showing the **average cost** and the **marginal cost** of the firm.

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
Average Cost	-	13	9	8	8	9	10
Marginal Cost	-	8	5	6	8	13	15



**Points on AC curve: 6m**  
**Points on MC curve: 6m**  
**Labels of Axes; Costs / Quantity/MC/AC : 4 at 1 mark**

**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]

- (i) **Distinguish between** the short-run and the long-run production periods.

In the short run production period at least one factor of production/input is fixed and cannot be varied while in the long run all factors of production /inputs are variable.

**10 marks (5+5)**

- (ii) In the short-run firms may stay in the industry even if they are making a loss. Explain this statement.

**If a firm's total revenue is greater than its total variable costs, then it will continue to produce in the short run. Any revenue generated above the firm's variable cost can contribute towards paying the fixed costs i.e. the loss by producing would be smaller than by closing down.**

**5 marks**

- (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]

**2016 Q4 Continued**

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

**Marginal revenue** is the addition to total revenue as a result of producing one extra unit of output.  
**Marginal cost** is the addition to total cost of producing an extra unit of output.

2 x 5 marks

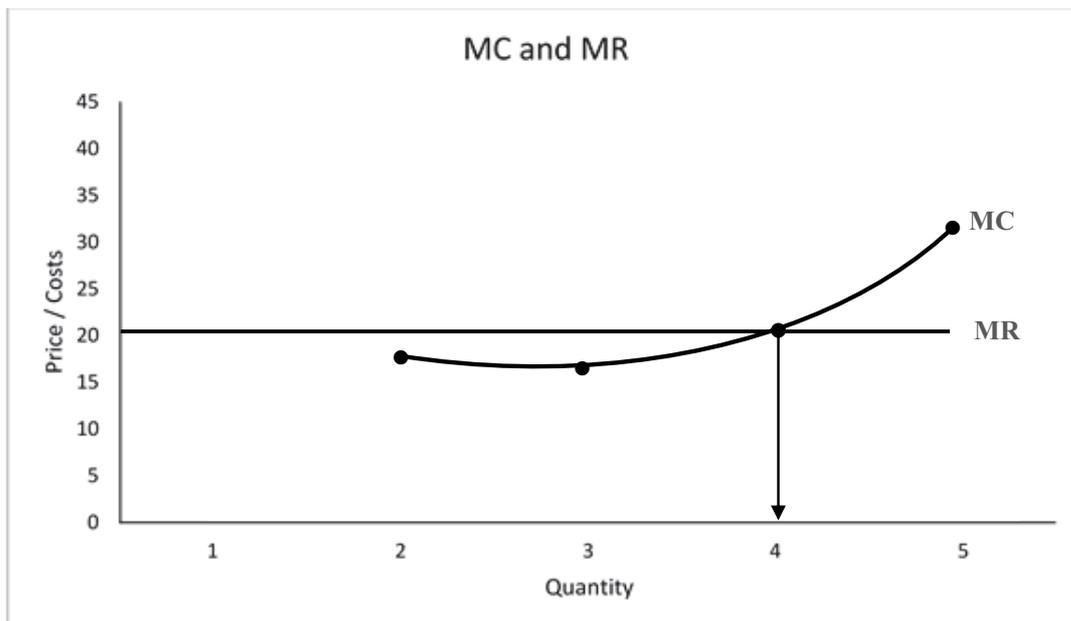
- (ii)

Output	Price	Total Revenue	Total Cost	MR	MC
1	20	20	42	-	-
2	20	40	60	$40 - 20 = 20$	$60 - 42 = 18$
3	20	60	77	$60 - 40 = 20$	$77 - 60 = 17$
4	20	80	97	$80 - 60 = 20$	$97 - 77 = 20$
5	20	100	130	$100 - 80 = 20$	$130 - 97 = 33$

Calculation of MR: 4 marks.

Calculation of MC: 4 marks.

- (iii)



Graph: 5 marks

Price	Quantity	MR	MC	Identify profit max. output
1	1	1	1	1

**Profit-maximising level of output: 4 units of output: where MC = MR**      3 marks

If more than 4 units are produced, then the extra cost (marginal) of producing more units of the good is greater than the extra (marginal) revenue generated therefore the firm could increase its profits/minimise its losses by producing less output.

4 marks

**2016 Q4 Continued**

- (c) “Overall Ireland’s improving competitiveness performance over the period 2011 to 2014 has been central to the recovery in employment and economic growth.”

(Source: The National Competitiveness Council, December 2015)

- (i) Outline the factors that influence the competitiveness of firms in Ireland.  
 (ii) Discuss **three** policies that the Irish government could consider to improve the competitiveness of firms in Ireland. [30]
- (i) Outline the factors that influence the competitiveness of firms in Ireland.  
 Possible responses include:

**Wage costs**

High labour costs (the recent increase in the national minimum wage) increase the cost of production and lead to less competitiveness. Housing and rising accommodation costs in certain areas may lead to workers seeking higher wages which lead to increase costs of production and hence a reduction in competitiveness. The rate of employers’ PRSI also affects costs. A shortage of skilled labour leads to higher wages being paid to secure such workers which increase costs of production and hence reduces competitiveness.

**Cost of doing business/Utility costs**

Cost increases for a business reduce competitiveness. Energy costs tend to be high in Ireland and add to costs of production thus making business less competitive. Higher insurance premiums add to these costs.

**Tax rates / increases**

Increases in indirect tax rates such as VAT increases the costs of goods and services; the cost of raw materials and so reduce competitiveness.

**Inadequate infrastructure**

The lack of high speed broadband adds to the costs for Irish firms. Transport costs are also increasing in Ireland.

**Regulation (ease of doing business)/Government policy**

Too much red tape involved in running a business increases costs (e.g. by imposing higher standards or greater restrictions on production) and as a result reduces competitiveness.

**Inflation rates**

If the inflation rate in Ireland is rising, then the cost of production may be rising and this would make firms in Ireland less competitive.

**State of Technology within the firm**

If technology is not efficient and up to date it costs the business money which increase costs and reduce competitiveness.

**Research and Development**

To retain its competitive position a firm needs to invest in R & D, otherwise it will lose out to firms who do. Firms that produce innovative products through R&D may be more competitive; this requires a long-term view so firms are willing to invest.

**Changing value of the Euro**

Should the euro fall in value then this will make Irish exports more competitive abroad.

**3 x 5 marks (2+3)**

## **2016 Q4 Continued**

- (ii) Discuss **three** policies that the Irish government could consider to improve the competitiveness of firms in Ireland.

### **Wage restraint**

The government could try to reach agreement with the social partners to limit pay increases.

### **Reduce taxation**

A decrease in indirect taxes such as VAT, excise duty on fuel would reduce costs for Irish firms and help improve competitiveness. A decrease in the rate of the employers PRSI contribution will help firms reduce their costs.

### **Reduce utility charges / monitor non-labour costs**

A reduction in costs for electricity, gas, postage, waste charges state would help to reduce the costs for Irish firms and thus improve competitiveness. If measures were taken to reduce insurance premiums, then costs would fall.

### **Improve the infrastructure for business / workers**

Lack of broadband and poor transport infrastructure (gridlock on the M50) in some areas makes some firms less competitive. By improving the infrastructure, it should make firms more efficient and thus reduce costs. If the government can reduce the cost of housing this would help workers and reduce the pressure for wage increases.

### **Reduce bureaucracy / red tape / legislation**

By making it easier to do business a firm's costs may fall e.g. reducing legal requirements; health and safety requirements etc. By encouraging more flexible labour practices e.g. encourage part-time work, costs for firms may fall.

### **Subsidies to firms / incentives to firms**

By subsidising training costs, a firm's costs may decrease and it may become more competitive. Grants to foster innovation and R&D in firms would reduce costs.

### **Funding skills / education / training**

The government can fund programmes which help develop skills which are needed by firms. This would ensure the availability of a skilled workforce making workers more efficient and helps reduce costs of firms. Targeted education funding to meet future skills needs in the growth sectors.

### **Encourage competition in the market / deregulation**

Introduce measures which will improve competition and so this may help reduce costs. Increase consumer knowledge by ensuring comparison information is available. Discourage mergers and takeovers which might reduce the number of competing firms.

**3 x 5 marks (2+3)**

**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)

**Marginal cost**

Is the addition / increase in total cost from the production of an extra unit of output.

**Average cost**

Is total cost divided by the total number of units produced/ It is the cost per unit of output produced.

**Explicit cost** (the known costs/the money costs)

The costs a firm pays for inputs (recorded by accountants). They require a cash outlay by the firm.

**Implicit cost**

The implicit costs are often non-monetary costs and are often difficult to quantify / firm uses the resources it owns. Inputs not purchased in a market transaction.

(The owners' time and investment in the firm e.g. the wages the owner does not take for his / her effort.)

**Normal Profit**

Is the minimum amount of profit which the entrepreneur needs to earn to keep resources in their present use in the long run / is the minimum amount required to keep factors of production in their current use. Normal profit is part of the total cost of production.

**Supernormal profit**

Is the profit earned in excess of normal profit / is profit over and above the minimum required to keep factors of production in their current use. It occurs whenever the average revenue received from selling goods is greater than the average cost associated with production.

**4 explanations at 5 marks each**

(b) The table below shows the output and production costs for a small bakery.

Units of Bread	Total Costs (€)	Total Variable Costs
0	100	<b>0</b>
100	200	<b>100</b>
200	280	<b>180</b>
300	330	<b>230</b>
400	360	<b>260</b>
500	450	<b>350</b>
600	600	<b>500</b>
700	770	<b>670</b>

**2015 Q3 Continued**

(i) Use the data in the table above to answer the following questions:

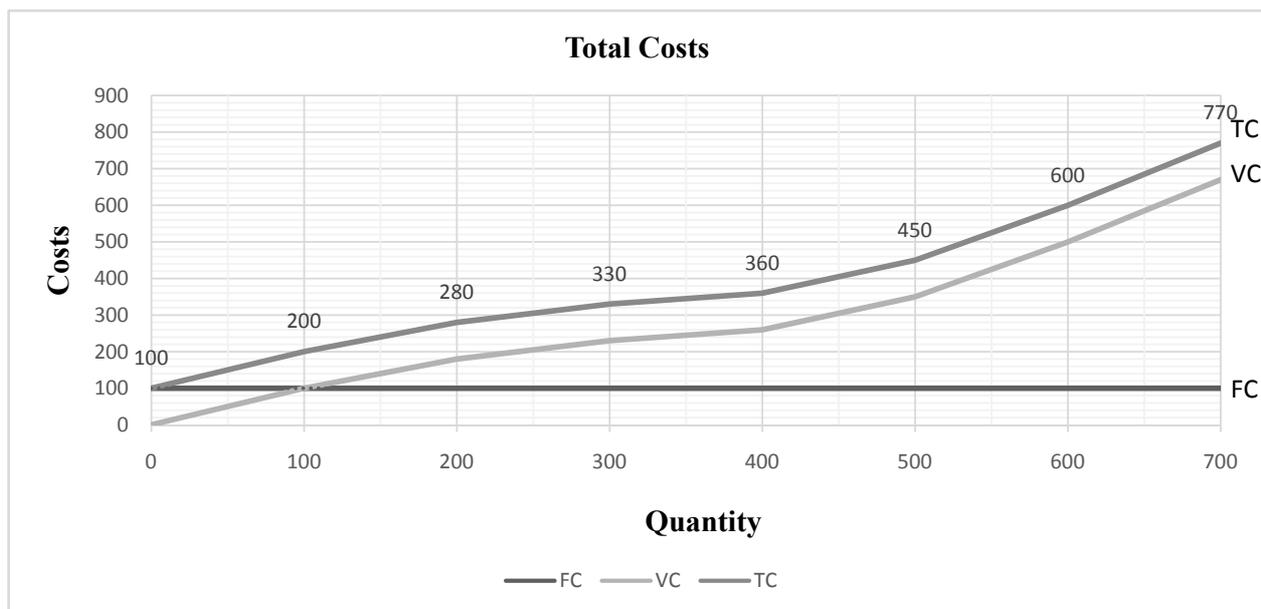
- What are the **fixed costs** of operating this bakery? Explain your answer.
- What are the **variable costs** of producing 300 loaves of bread?
- What is the **average cost** of producing 400 loaves of bread?

• Fixed costs: €100. To produce 0 units costs €100 so these are the fixed costs. **6 marks**

• Total Variable Costs of 300 loaves: €330 – €100 = €230 **3 marks**

• Average cost of 400 loaves =  $\frac{\text{Total cost}}{\text{Total output}} = \frac{€360}{400} = €0.90$  per loaf **3 marks**

(ii) Using the data from the table above, draw **one** graph showing the following:  
Total costs (label the curve TC) / Total variable costs (label the curve VC) /  
Total fixed costs (label the curve FC)



- Labels: Costs / Qty **2 at 1 mark each = 2 marks** )
- Graph of total fixed costs: **4 marks** )
- Graph of total cost: **2 + 2 + 3 = 7 marks** )
- Graph of total variable cost: **2 + 2 + 3 = 7 marks** )

**20 marks**

(Start point / end point + correct trend)

(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.

The graph represents the **short run**

**Fixed costs** only exist in the short run / at least one of the factors of production being used is fixed in quantity.

**3 marks**

**2015 Q3 Continued**

- (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)

**Possible economies of scale for the bakery**

- **Technical economies of scale**  
If the bakery expands they could justify the purchase of more advanced machinery as the cost could be spread over a larger quantity of output.
- **Economies in the use of labour**  
If the bakery expands higher production levels allow specialisation and the division of labour / each worker could specialise on a specific task and become very skilled at it. As a result the output per worker could increase and the cost per unit could be reduced.
- **Production economies**  
The bakery could engage in a continuous production process by operating three 8 hour shifts per day for example. This reduces costs as there is no interruption to the production process.
- **Economies in the use of raw materials**  
A large bakery may be able to make better use of their raw materials by producing a broader range of products and thus reduce waste.
- **Financial economies**  
A large bakery may be able to negotiate more favourable borrowing rates with financial institutions and may have a wider choice of institutions to access loans.
- **Purchasing**  
A large bakery may be able to avail of discounts in the purchase of raw materials/lower supply costs when buying in bulk (can buy in larger quantities and can agree discounts from suppliers).
- **Economies in distribution**  
With a larger volume of production the bakery may be able to organise a more efficient transport and distribution system.
- **Marketing economies**  
May be able to reduce advertising costs as these can be spread over a greater number of units of output / the bakery will be advertising for a larger volume of customers and its cost per unit may fall.

**Possible diseconomies of scale for the bakery**

- **Managerial diseconomies**  
The bigger the firm, the more stretched the management team becomes. Communication may become a problem, so inefficiencies may develop which increase costs for the firm.
- **Lack of worker motivation / staff morale / workplace conflict**  
Specialisation and division of labour may lead to workers becoming bored with repetitive tasks and the quality of the work may suffer as a result. As the bakery expands, the interests of the workers and management may conflict and lead to industrial relations problems. Morale may suffer which can lead to increasing costs for the firm.

**4 points at 5 marks each (2 + 3)**

**Must have a minimum of one economy / diseconomy.**

**Reference must be made to the bakery**

## **2012 Q3 (c)**

- (c) 'There are 200,000 small firms in Ireland employing 655,000 people'.  
(Small Firms Association, December 2011)  
Discuss the reasons why small firms survive in the Irish economy. (20)

### **1. Small size of market / Scale of operation**

The restricted size of the market may not facilitate the operation of large scale business e.g. in a rural area a small shop may be viable while a large supermarket may not.

### **2. Personal services**

Consumers may desire personal attention in the provision of goods or services and a small firm may be the only type of business which can provide this e.g. a plumber providing repair services to households.

### **3. Consumer loyalty**

A small firm may have built up a reputation over the years in the provision of goods and services to its customers and they may respond by being loyal to that firm, making it difficult for other firms to gain a foothold.

### **4. Support the community**

Citizens in smaller communities may support local business so that the continuity of supply is guaranteed, thus helping to maintain a viable community e.g. farmers' markets supplying local produce to local business.

### **5. Traditional / Niche markets**

- The type of product / service being supplied might make it more suitable for a small firm. Examples include: wedding planners; handmade/ craft products; perishable products etc.
- A small firm may find it easier to locate close to the market where it might be difficult for a larger firm to do so e.g. roadside sellers of local produce can be flexible in choosing their location.

### **6. Exclusive nature of the commodity**

Heavy goods which are costly to transport may be manufactured locally on a small scale to supply nearby markets e.g. the manufacture of concrete blocks in areas which service local markets.

### **7. Availability of capital**

Small firms may find it very difficult to get the finance to expand their operations and hence the business remains small.

### **8. Membership of voluntary groups.**

Some firms producing on a small scale may offset the disadvantage they have in competition with large firms by engaging in a joint marketing strategy with other small suppliers – hotel groups, individually owned grocery shops trading under a shared name (Spar, Centra etc)

**4 at 5 marks each.**

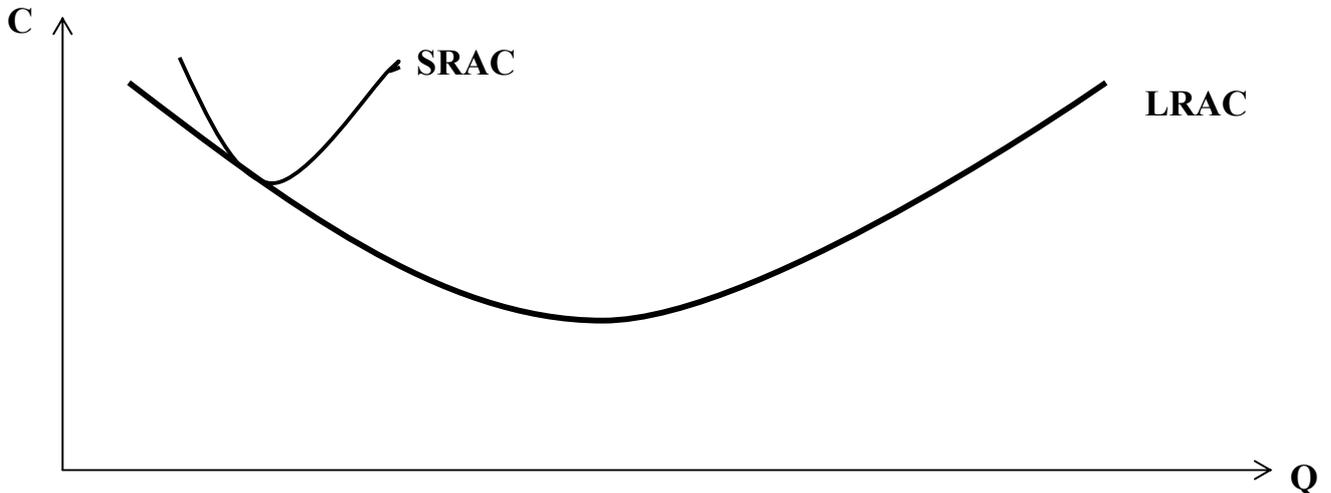
**2012 Q4**

(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)

(i) the short run average cost curve and long run average cost curve.



**SRAC:** Each SRAC curve represents a different scale of operation / size of firm.

*or*

As a firm expands each SRAC represents its costs at a different stage of development.

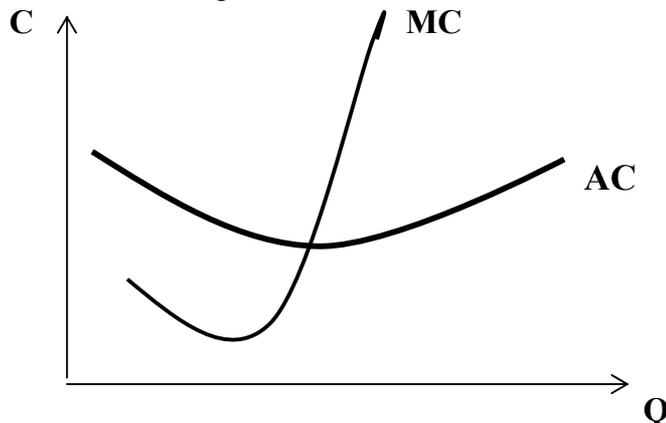
**LRAC:** Is made up of all the lowest points on the SRAC curves.

*or*

The aim of any firm is to maximise its profits so the firm will produce where unit costs of production are cheapest i.e. along LRAC.

**13 (6+3+4) marks.**

(ii) the short run average cost curve and marginal cost curve.



When MC is <b>greater than</b> AC then AC is <b>rising</b>
When MC is <b>less than</b> AC then AC is <b>falling</b>
When MC <b>equals</b> AC then AC is <b>at a minimum</b> / constant

**12 (6+6) marks.**

**2012 Q4 Continued**

(b) Economic factors to be considered by a firm when deciding where to locate its operations. (25)

**Within countries**

**Transport infrastructure** Firm may require good efficient transport infrastructure to get their goods to the market, source raw materials etc. This may include a good road network and possible closeness to a seaport and/or airport.

**Access to water supplies / power**

A manufacturing firm will require the uninterrupted supply of power and the supply of clean water.

**Land for expansion / cost of land**

If the firm plans to extend it will require land at a reasonable price for expansion.

**Planning permission**

Firms must ensure that appropriate planning permission is available from the local authority.

**Environmental regulations**

A particular industry may be subject to certain environment regulations and these must be checked with the appropriate authority.

**Workforce availability**

The firm will require a skilled / English speaking workforce.

**Government incentives**

There may be tax incentives / grants towards location available if the firm locates in certain areas of the country.

The rate of Corporation Profits Tax in Ireland is one of the reasons why MNCs locate here.

Other incentives may be available to attract firms i.e. less restrictive planning permission etc.

**Proximity to the market**

A firm which relies on a steady flow of consumers must locate close to the market i.e. a boutique.

**Proximity to the raw materials**

A firm which requires the usage of large amount of raw materials must locate close to the availability of these e.g. a power generating station.

**Other: Availability of social infrastructure / availability of back-up services (insurance / banking etc) / Government regulatory framework (bureaucratic red-tape, regulations).**

**Across Countries****Access to EU market / Member of the euro currency**

Firms will locate where they have access to free movement of their goods within the EU. Membership of the euro makes payment for international transactions within the euro zone easier.

**Good industrial relations**

Firms want industrial peace so that production can continue uninterrupted by industrial action.

**Attractiveness of return on investments**

Firms will locate where the rate of return on their investment is sufficiently good to attract them to a particular location.

**Stable economic climate / economic growth**

Countries that are performing well / are experiencing economic growth offer increased business confidence, larger domestic markets and this may encourage firms to locate there.

**Low wage / production costs**

Firms may locate to regions where wage rates are low and / or production costs are low.

**5 at 5 marks each.**

**2012 Q4 Continued**

(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 marks)

(i) Short run:

	€
Raw Materials	2,000
Labour	1,600
Total variable costs	<u>3,600</u>
	2
Minimum price per boat	1,800

**Explanation:** a firm must cover its variable costs in the short run

**15 (9+6) marks.**

(ii) Long run:

	€
Raw Materials	2,000
Labour	1,600
<b>Rent</b>	<b>1,200</b>
<b>Normal profit</b>	<b>1,000</b>
Total costs	<u>5,800</u>
	2
Minimum price per boat	2,900

**Explanation:** a firm must cover all its costs in the long run

**10 (6+4) 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 4<sup>th</sup> 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)

**(i) 12 marks**

- The **marginal cost** of producing the 4<sup>th</sup> unit

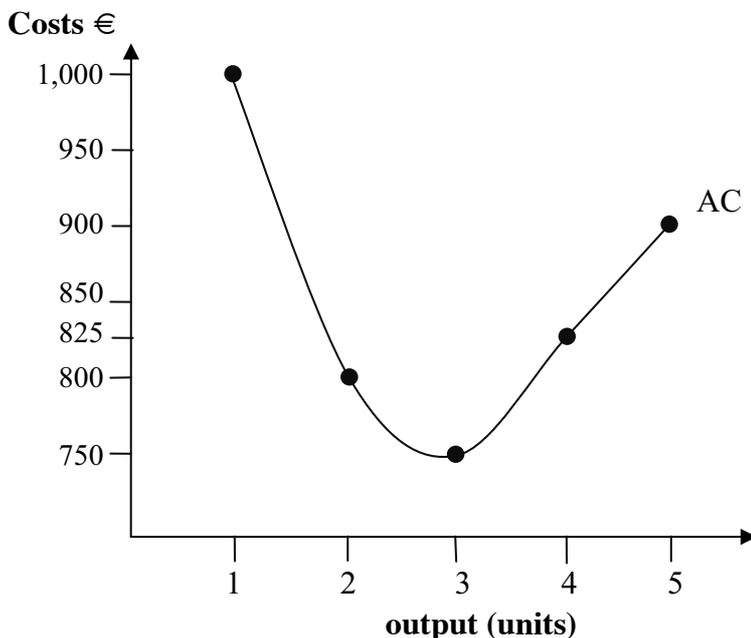
$$€3,300 - €2,250 = €1,050$$

- The **average cost** of producing 5 units

$$\frac{€4,500}{5} = €900$$

- The **profit** earned by the firm selling 5 units of output at €1,200 per unit

$$5 \times €1,200 (\text{€}6,000) - €4,500 = €1,500$$

**(ii) Diagram: 12 marks. Explanation: 6 marks**Slopes downward:

- Declining FC per unit / FC spread over a larger number of units of output

*or*

- Specialisation of labour: helps reduce cost per unit

Slopes upward:

- Increasing VC per unit because of the Law of Diminishing Marginal returns

## **2011 Q4 Continued**

- (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)

- (i) Discuss the economic advantages of falling costs of production **for the Irish economy**.

### **1. Increased competitiveness**

With lower costs prices may fall for Irish goods and exports may become cheaper.

### **2. Lower prices**

With lower prices inflation may fall and this may entice consumers to purchase more goods.

### **3. Increased demand**

Businesses may have increased demand resulting in increased sales, profits and a more secure future. Tax revenue to the government may also increase.

### **4. Increased employment**

With rising demand businesses may increase their demand for labour / maintain existing labour.

### **5. Attract investment / Improve international reputation**

Lower costs for businesses will encourage expansion and attract foreign firms into Ireland.

### **6. Profits may increase**

As a result of lower costs business profits may increase, leading to an increase in CPT revenues.

### **3 points x 5 marks each**

- (ii) Outline possible restrictions on the growth of businesses in the Irish economy at present.

### **1. Limited availability of credit**

The banking crisis has resulted in a lack of credit, which is a major obstacle to the expansion of business.

### **2. Reduction in domestic demand**

The continuing recession has resulted in a major drop in spending resulting in a drop in domestic demand and less opportunities for business.

### **3. Restrictive wage agreements**

The existence of the minimum wage; the existence of JLC agreements limits the ability of firms to hire labour which restricts the ability of firm to expand/ grow.

### **4. Legislative requirements / framework**

Permission may have to be obtained from the local authority; state body etc. For example if a person wants to extend a restaurant then certain requirements must be fulfilled.

### **5. Merger / takeover legislation**

Some businesses wishing to expand may face an investigation under EU (Irish) merger and takeover legislation. The proposed takeover of Aer Lingus by Ryanair was prohibited under EU laws.

### **6. High costs of production.**

Businesses find it difficult to expand due to high operating costs e.g. rates; utility costs; insurance costs; costs of raw materials; and high interest rates makes borrowing more expensive.

### **3 points x 5 marks each**

**2011 Q4 Continued**

- (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. (15)

<b>Costs for BP – Private costs</b>	<b>Costs to society – Social costs</b>
<b>Cost of repairing the defective oil rig</b> BP must pay for the equipment, labour and other associated costs.	<b>Environmental damage</b> Society suffers due to the damage to the waters, wildlife and natural beauty of the area.
<b>Clean-up costs</b> They must pay for the clean-up of the affected waters and the shoreline.	<b>Cost of investigation / clean-up</b> Taxpayers must pay for the costs of the investigation into the disaster and clean-up costs to communities.
<b>Compensation costs</b> For those fishermen and businesses who lost business due to the oil spill.	<b>Disruption to local communities / tourism</b> The spill has resulted in a downturn in economic activity in the affected communities / leading to job losses.
<b>Reduction in share price / asset value</b> The market value of the company fell and shareholders must bear this cost.	<b>Damage to food chain</b> The oil spill may result in restricted supply of (fish) thereby forcing prices upwards.
<b>Reduction in profits</b> Lost production resulted in reduced sales and lower profits.	<b>Higher oil prices</b> The reduction in supply led to shortages and higher international oil prices.
<b>Lost oil</b> Until the well was capped BP lost tons of oil which cost the company.	
<b>Reputational damage</b> The company gained a lot of bad publicity which has adversely affected the image of the company.	
<b>Fines by government</b> The company faces major fines from the US government for breaches of safety and the resulting damage.	

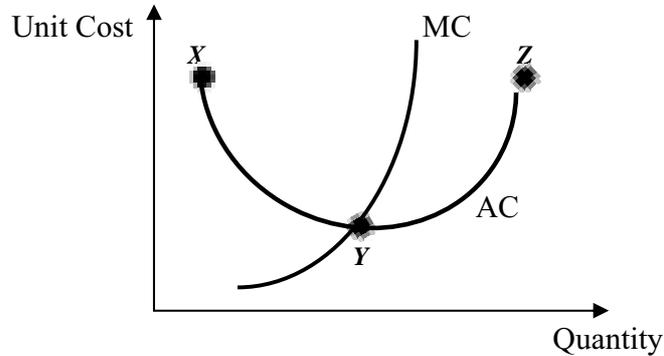
**15 marks (4+4+4+3)**

**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 below:

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



Downward sloping from X to Y	Upward Sloping from Y to Z
<ul style="list-style-type: none"> <li>• <b>Specialisation:</b> Specialists may be employed or existing workers become more efficient resulting in lower unit costs.</li> <li>• <b>Fixed Costs spread over larger output:</b> As the number of units produced increases the unit cost falls.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>The Law of Diminishing Marginal Returns.</b> This law will apply after a certain point resulting in an increase in the amount of variable factors used per unit produced, resulting in higher unit costs. <i>or</i> Example to illustrate why costs increase.</li> </ul>
<b>ONE point @ 7 marks graded</b>	<b>ONE point @ 6 marks graded</b>

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

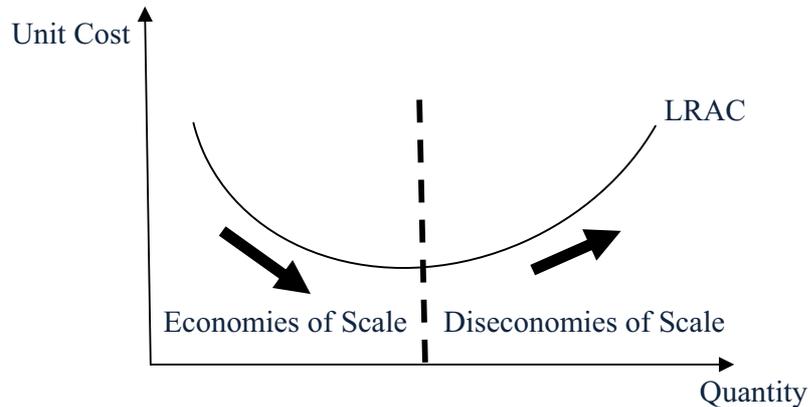
- When MC is greater than AC then AC is rising.
- When MC is less than AC then AC is falling.
- When MC is equal to AC the AC is at its minimum point/constant.

**3 points @ 4 marks each graded**

**2009 Q3 Continued**

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

(i) Explain this statement, with the aid of a clearly labelled diagram.



- LRAC slopes downwards due to increasing returns to scale;
- LRAC slopes downwards because economies of scale are dominant over this range of output.
- LRAC slopes upwards due to decreasing returns to scale;
- LRAC slopes upwards because diseconomies of scale are dominant over this range of output.

**6 marks graded**

(ii) Define **Internal Economies of Scale** and **External Economies of Scale**.

Internal Economies of scale:

These are forces **within** a firm which cause the average / unit costs of that firm to decline as the firm grows in size.

External Economies of scale:

These are forces **outside** a firm which cause the average / unit costs of that firm to decline as the industry grows in size.

**2 @ 6 marks each graded**

**2009 Q3 Continued**(iii) State and explain **two** examples of **each** economy.

<b>INTERNAL</b>	<b>EXTERNAL</b>
<b>1. Increased use of specialised machinery</b> A firm may be able to buy/use more specialised equipment/machinery resulting in a reduction in unit costs/machinery fully utilised	<b>1. Better infrastructure.</b> As roads / communications etc. improve they will benefit all firms.
<b>2. Labour economies / Greater specialisation of workers</b> If a particular job can be separated into separate and distinct components it may result in a reduction in costs.	<b>2. Bulk purchasing of raw materials by the industry.</b> As an industry expands firms require more materials / components. These may become cheaper as suppliers expand to meet increased demand.
<b>3. Construction economies</b> Large plants cost less per cubic foot than smaller ones.	<b>3. Development of specialist firms</b> Some of the jobs, which a firm once performed may be contracted out to specialist firms at reduced costs e.g. the supply of linen to hotels.
<b>4. Buying economies</b> Larger quantities bought may result in bigger discounts.	<b>4. Development of separate R &amp; D units</b> As industry becomes very large, R&D agencies may set up to provide facilities for individual firms / the costs of research may be shared between firms <i>or</i> with a public body like Teagasc.
<b>5. Economies in distribution</b> Lower unit cost of delivery.	<b>5. Suppliers of Machinery</b> Manufacturers of machinery will be encouraged to design, develop and produce machines for expanding industry. These advanced machines will help reduce costs.
<b>6. Financial economies</b> Larger firms may avail of lower interest rates/larger firms better chance of acquiring a loan	<b>6. Development of Training Courses</b> Workers in expanding industries may be provided with training courses by VECs, FÁS thereby helping them become more efficient.
<b>7. Managerial economies</b> As a firm grows, management costs may not grow in proportion to the growth in the firm.	<b>7. Supports from Public Bodies.</b> Some public bodies help particular industries e.g. Failte Ireland / FAS may help firms in the tourism industry.
<b>8. Production Process economies.</b> A large firm may be able to run one process into the next without costly discontinuities	<b>8. Subsidiary Trades may develop</b> As an industry grows subsidiary trades may develop to service the expanding industry e.g. Hotels, B&B's located close to airports etc.
<b>9. Indivisibility problem reduced.</b> If the volume of production increases, the unit cost may be lower e.g. glass-making furnaces may operate around the clock to save costs of cooling and re-heating/ full capacity used	<b>Internal</b> <b>2 @ 3 marks each.</b> <b>External</b> <b>2 @ 3 marks each.</b>
<b>10. Marketing economies</b> Savings in the cost of advertising e.g. NIKE advertising globally/ bigger firms bigger advertising campaigns.	

## **2009 Q3 Continued**

- (c) ‘The Irish government should encourage initiatives that will prevent further cost increases and in turn sustain employment in small firms’.  
Suggest with reasons **two** actions the government could take to improve the competitiveness of small firms.

- **Reduce the minimum wage / wage restraint.**

Employers would be able to get cheaper labour and therefore reduce costs.

By negotiations for example through lowering direct taxes, the government could reach agreement with the social partners to limit pay rises

- **Reduce utility charges.**

A reduction in costs for electricity, gas, postage, waste charges etc. or any state service provided for small businesses would help reduce costs of production.

- **Reduce taxation.**

A decrease in indirect taxes e.g. VAT or excise duty on fuel or raw materials would reduce costs to small business.

A decrease in direct taxes e.g. CPT would help firms reduce their costs.

A reduction in income tax may encourage wage moderation thus helping firms to lower their costs.

- **Reduce bureaucracy.**

Eliminate restrictions and excessive paperwork, thereby reducing administrative costs.

- **Subsidies to firms.**

By reducing the rate of employer’s PRSI it becomes cheaper to employ labour.

By subsidising training costs / export credit insurance a firm’s costs may decrease making them more competitive.

- **Develop infrastructure.**

Traffic gridlock/lack of broadband and poor infrastructure generally increase costs for small business. By improving the infrastructure it should become more efficient and therefore less expensive to move goods and services around the country.

**2 points @ 10 marks each graded**

**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)*****(i) Law of Diminishing Marginal Returns**

**As more units of a variable factor of production are added to other (constant) factors of production the returns to the variable factor will eventually fall.**

**Correct definition: 9 marks graded****The point after which Diminishing Returns set in:****When the 4th person is employed / After the 3rd person****3 marks****Explanation:****Because marginal output has declined (from 20 units to 14 units)****3 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)***

<i>Downward sloping</i>	<i>Upward sloping</i>
<b><u>1. Specialisation reduces unit costs</u></b> - specialists may be employed or - existing workers become more efficient. <i>or</i> <b><u>2. Fixed Cost per unit falls</u></b> as the no. of units produced increases	<b><u>1. The Law of Diminishing Marginal Returns.</u></b> This law will apply after a certain point resulting in an increase in the amount of variable factors used per unit produced, resulting in higher unit costs <i>or</i> Example to illustrate why costs increase.
<b><u>7 marks graded</u></b>	<b><u>8 marks graded</u></b>

**2004 Q3 Continued**

(c) It is generally agreed that the long-run average cost curve initially slopes downward due to economies of scale and 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)

**(c) (i) : 2 definitions x 4 marks graded.**

<b>Economies of Scale</b>	<b>Diseconomies of Scale</b>
<ul style="list-style-type: none"> <li>• These result in a reduction in the LRAC of production</li> <li>• as the firm/ industry increases its size of operation</li> </ul>	<ul style="list-style-type: none"> <li>• These result in an increase in the LRAC of production</li> <li>• as the firm /industry increases its size of operation</li> </ul>

**(c) (ii) : 2 definitions x 3 marks graded.**

<b><i>Economies of Scale</i></b>	
<b>INTERNAL</b>	<b>EXTERNAL</b>
<ul style="list-style-type: none"> <li>• Forces within a firm which decrease its costs</li> <li>• as the firm grows in size.</li> </ul>	<ul style="list-style-type: none"> <li>• Forces outside a firm which decrease its costs</li> <li>• as the industry grows in size.</li> </ul>

**2004 Q3 Continued**

<b>Examples: 4 x 4 marks graded. [2 internal + 2 external]</b>	
<b>INTERNAL</b>	<b>EXTERNAL</b>
<p><b><u>1. Increased use of specialised machinery</u></b> A firm may be able to buy/use more specialised equipment/machinery resulting in a ↓ in unit costs</p>	<p><b><u>1. Better infrastructure.</u></b> As roads / communications etc. improve these will benefit <u>all</u> firms.</p>
<p><b><u>2. Labour economies / greater specialisation of workers</u></b> If a particular job can be separated into separate and distinct components it may result in a reduction in costs.</p>	<p><b><u>2. Bulk purchasing of raw materials by the industry.</u></b> As an industry expands firms require more materials / components. These may become cheaper as suppliers expand to meet ↑ demand.</p>
<p><b><u>3. Construction economies</u></b> Large plants cost less per cubic foot than smaller ones.</p>	<p><b><u>3. Development of specialist firms / Disintegration of the production process</u></b> Some of the jobs, which a firm once performed may be, contracted out to specialist firms at reduced costs e.g. the supply of linen to hotels.</p>
<p><b><u>4. Buying economies</u></b> Larger quantities bought ⇒ bigger discounts</p>	<p><b><u>4. Development of separate R &amp; D units</u></b> As industry becomes very large R&amp;D agencies may set up to provide facilities for individual firms / The costs of research may be shared between firms or with a public body like Teagasc.</p>
<p><b><u>5. Economies in distribution</u></b> Lower unit cost of delivery.</p>	<p><b><u>5. Suppliers of Machinery.</u></b> Manufacturers of machinery will be encouraged to design, develop and produce machines for expanding industry. These advanced machines will help reduce costs.</p>
<p><b><u>6. Financial economies</u></b> Larger firms may avail of the possibility of lower interest rates.</p>	<p><b><u>6. Development of Training Courses.</u></b> Workers in expanding industries may be provided with training courses by VEC's, FÁS helping them become more efficient.</p>
<p><b><u>7. Managerial economies</u></b> As a firm grows, management costs may not grow in proportion to the growth in the firm.</p>	<p><b><u>7. Supports from Public Bodies.</u></b> Some public bodies help particular industries in general e.g. Bord Failte / FAS may help such firms in the tourism industry.</p>
<p><b><u>8. Production Process economies.</u></b> A large firm will may be able to run one process into the next without costly discontinuities.</p>	<p><b><u>8. Subsidiary Trades may develop</u></b> As an industry grows subsidiary trades may develop to service the expanding industry e.g Hotels, B&amp;B's locating close to airports,seaports</p>
<p><b><u>9. Indivisibility problem reduced.</u></b> If the volume of production increases the unit cost may be lower e.g. glass-making furnaces may operate around the clock to save costs of cooling and re-heating.</p>	
<p><b><u>10. Marketing economies</u></b> Savings in the cost of advertising e.g. NIKE advertising globally.</p>	
<p><b><u>11. Reduction in Waste.</u></b> Large firms, with more lines, may reduce waste.</p>	

## **2004 Q3 Continued**

(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)

### **1. Small size of market / Scale of operation**

The restricted size of the market may not facilitate the operation of large scale business e.g. in a rural area a small shop may be viable while a large supermarket may not.

### **2. Personal services**

Consumers may desire personal attention in the provision of goods or services and a small firm may be the only type of business which can provide this e.g. a plumber providing repair services to households.

### **3. Consumer loyalty**

A small firm may have built up a reputation over the years in the provision of goods and services to its customers and consumers may respond by their loyalty to that firm – making it difficult for other firms to gain a foothold.

### **4. Desire of citizens to maintain their community as viable.**

Citizens in smaller communities may support local business so that the continuity of supply is ensured, thus helping to maintain a viable community e.g. in many areas throughout Ireland communities wish to maintain the existence of ‘community’ hospitals.

### **5. Traditional / Niche markets**

- The type of product / service being supplied might make it more suitable for a small firm. Examples include: wedding planners; handmade/ craft products; perishable products etc.
- A small firm may find that it finds it easier to locate close to the market where it might be difficult for a larger firm to do so e.g. roadside sellers of local produce can be flexible in choosing their location.

### **6. Exclusive nature of the commodity being provided**

Heavy goods which are costly to transport may be manufactured locally on a small scale to supply nearby markets e.g. the manufacture of concrete blocks in areas which service local markets.

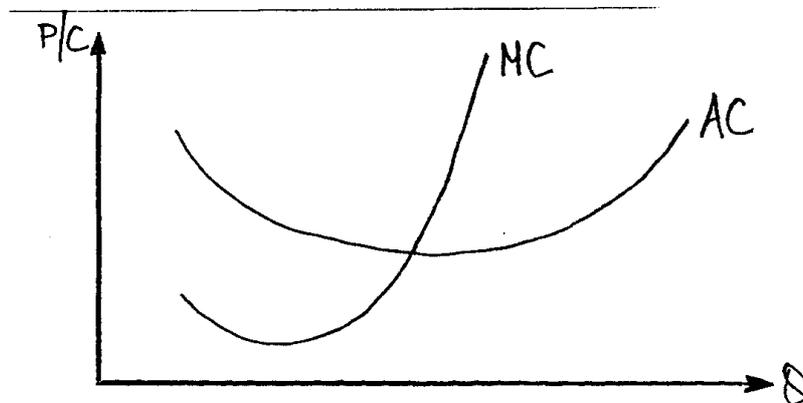
### **7. Availability of capital**

Small firms may find it very difficult to get the finance to expand their operations and hence the business remains small.

### **8. Membership of voluntary groups.**

Some firms producing on a small scale may offset the disadvantage they have in competition with large producers by a joint marketing strategy with other small suppliers – hotel groups, individually owned grocery shops trading under a shared name (Spar, Centra etc)

<p style="text-align: center;"><b><u>Marking Scheme</u></b> <b>3 x 5 marks each graded.</b></p>
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**2002 Q2****(a) (i) DIAGRAM : 10 MARKS****Cost /Price axis:****Quantity axis :****SRAC curve :****MC curve:****(ii) Relationship between AC and MC****10 marks**When  $MC > AC$  then AC is rising :When  $MC < AC$  then AC is falling :When  $MC = AC$  then AC is at a minimum / constant.**(b) (i) 2 definitions x 4 marks each****8 marks**

<b>Economies of Scale</b>	<b>Diseconomies of Scale</b>
Result in a <b>reduction</b> in the AC of production as the firm/ industry increases its size of operation.	Result in an <b>increase</b> in the AC of production as the firm /industry increases its size of operation

**2002 Q2 Continued**

(b) (ii) 2 definitions x 3 marks each

**6 marks**

<b>INTERNAL</b>	<b>EXTERNAL</b>
Forces within a firm, which lower its costs as the firm grows in size.	Forces outside a firm, which lower its costs as the industry grows in size.
<b>Examples: 4 x 4 marks graded 2 Internal/External</b>	
<b>INTERNAL</b>	<b>EXTERNAL</b>
<b>1. <u>Increased use of specialised machinery</u></b> A firm may be able to buy/use more specialised equipment / machinery resulting in a reduction in unit costs.	<b>1. <u>Better infrastructure.</u></b> As roads / communications etc. improve, benefits will accrue to <u>all</u> firms.
<b>2. <u>Labour economies / greater specialisation of workers</u></b> If a particular job can be split into separate and distinct components, it may result in a reduction in costs.	<b>2. <u>Bulk purchasing of raw materials by the industry.</u></b> As an industry expands, firms require more materials and components. These may become cheaper as suppliers expand to meet increased demand.
<b>3. <u>Construction economies</u></b> Large plants cost less per cubic foot than smaller ones.	<b>3. <u>Development of specialist firms.</u></b> Some of the jobs, which a firm once performed may be, contracted out to specialist firms at reduced costs i.e. the supply of linen to hotels.
<b>4. <u>Buying economies</u></b> Larger quantities bought ⇒ bigger discounts	<b>4. <u>Development of separate research &amp; development industries / units.</u></b> The costs of research may be shared between firms or with a public body like Teagasc.
<b>5. <u>Economies in distribution</u></b> Lower unit cost of delivery.	<b>5. <u>Suppliers of Machinery.</u></b> Manufacturers of machinery will be encouraged to design, develop and produce machines for expanding industry. These advanced machines will help reduce costs.
<b>6. <u>Financial economies</u></b> Larger firms may avail of the possibility of lower interest rates.	<b>6. <u>Development of Training Courses.</u></b> Workers in expanding industries may be provided with training courses by VEC's/ FÁS thus helping them become more efficient.
<b>7. <u>Managerial economies</u></b> As a firm grows, management costs may not grow in direct proportion to the growth in the firm.	<b>7. <u>Supports from Public Bodies.</u></b> Some public bodies help particular industries in general e.g. Bord Failte / FAS may help firms in the tourism industry.
<b>8. <u>Production Process economies.</u></b> A large firm may be able to run one process into the next without costly discontinuities.	
<b>9. <u>Indivisibility problem reduced.</u></b> If the volume of production increases the unit cost may be lower e.g. glass-making furnaces may operate around the clock to save costs of cooling and re-heating.	
<b>10. <u>Marketing economies</u></b> Savings in the cost of advertising e.g. NIKE advertising globally.	
<b>11. <u>Reduction in Waste.</u></b>	

**2002 Q2 Continued****(c) The possible social costs & social benefits of the new roads being constructed in Ireland.****Possible Social Benefits**

- 1) Traffic congestion:  
With the new roads traffic congestion in an area may ease.
- 2) Less stress:  
With fewer delays, stress for travellers may be reduced.
- 3) Shorter travelling times:  
Better roads may make it possible for shorter commuting time to work/school.
- 4) Improvement of infrastructure:  
With the infrastructure improving, attracting new industry may be easier.
- 5) Enhanced environment:  
If the new roads by-pass towns it may allow the towns re-develop and enhance their physical environment to the benefit of all citizens.
- 6) Toll Roads / revenues :  
If the roads are toll roads this will bring revenue to the government through VAT receipts and eventually ownership may pass to state.
- 7) Improved Safety:  
Newer roads may improve safety and help reduce fatalities on roads.

**Possible Social Costs**

- 1) More pollution :  
Greater noise and increased emissions for those who live in close proximity to the new roads.
- 2) Payment for the use of the road / Need for increased tax revenues:  
If the roads are toll roads then all road users must pay for their use which until now had been at no cost.
- 3) Increase in land prices:  
Land prices adjacent to those new roads may increase, causing difficulty to those who may wish to buy land.
- 4) Damage to the local environment:  
The landscape through which the new roads are constructed may be disfigured.
- 5) Disruption to local communities  
The new roads may affect the nature of the community life for existing communities.

**4 points: 7 + 6 + 6 + 6 marks graded****Minimum of 2 Social Costs / Social Benefits.**