Question 1

Mr Traynor©

Economics
Exam Prep • Leaving Cert

Shorts

1.

Define a mixed economy. State **two** examples of economic activity which supports the view that Ireland is a mixed economy.

Definition: _____

_____

Example 1: _____

Example 2: _____

(16 marks)

2.

A consumer buys 20 units of Good A when the price of Good B is €8. When the price of Good B rises to €10 (the price of Good A remaining unchanged) the consumer buys 12 units of Good A.
Using an appropriate formula, calculate this consumer's cross elasticity of demand for Good A.
(Show your workings.)

WORKINGS

Answer:
_____

Is Good A a substitute for, or a complement to, Good B? Explain you answer.
_____

_____

(17 marks)

3.

A consumer spends €200 monthly on Product A when its price is €2 and continues to spend €200 monthly when its price increases to €2.50. Calculate the consumer's price elasticity of demand. (See Formulae and Tables Booklet p.28) **Show all your workings and explain your answer.**

Workings:

Answer:
_____

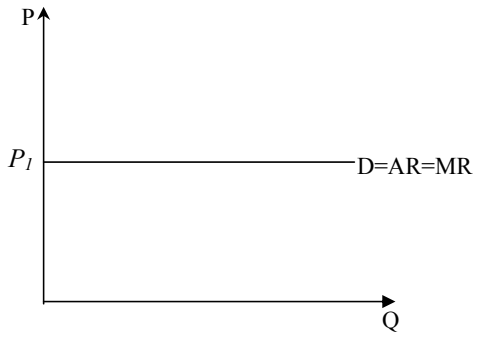
Explanation:
_____

_____

(16 marks)

4.

The diagram below represents the demand curve facing a firm in Perfect Competition.



This demand curve is; **(✓ correct answer)**

- Unitary Elastic ☐
- Perfectly Inelastic ☐
- Perfectly Elastic ☐

State the reason for your choice:

_____

_____

(16 marks)

5.

Ireland has a mixed economy. What do you understand by the underlined term? State **one** economic advantage and **one** economic disadvantage of this type of economic system.

Explanation: _____

_____

Advantage: _____

Disadvantage: _____

(16 marks)

6.

(a) State the **Law of Diminishing Marginal Utility**:_____

_____

_____

(b) The table below illustrates the Law of Diminishing Marginal Utility.

Number of units consumed	**1**	**2**	**3**	**4**	**5**	**6**
Total Utility in units	**30**	**65**	**85**	**100**	**110**	**115**
Marginal Utility in units	**30**					

Complete the table and state the point after which diminishing utility sets in.

_____

(17 marks)

7.

Define a **Free Enterprise** economic system and state **one** economic advantage of this system.

Definition: _____

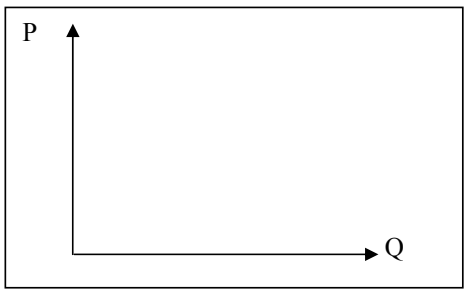
_____

Advantage: _____

(16 marks)

8.

China will host the Beijing Olympic Games in August 2008 and 7 million tickets are available for the event. On the diagram below draw the supply curve for tickets and explain the reason for its shape.



Explanation:

_____

_____

_____

(17 marks)

9.

Consumers buy 50 units of a product when the price is €1.50. When the price is reduced to €1 consumers buy 90 units. Using an appropriate formula, calculate the consumers' **price elasticity of demand. Show your workings and explain your answer.**

Workings

Explanation:

_____

_____

_____

_____

(16 marks)

10.

'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.

_____

_____

_____

(17 marks)

11.

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

Definition: _____

_____

Example (i): _____

Example (ii): _____

(16 marks)

12.

In equilibrium a consumer buys 8 bars of chocolate at €1.00 each and 12 sandwiches at €4.00 each. The marginal utility of the eighth bar of chocolate is 10 utils.
Using the Equi-Marginal Principle of Consumer Behaviour **calculate the marginal utility of the twelfth sandwich**.

Show all your workings.

Workings

Answer:

_____

(17 marks)

13.

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

_____

_____

_____

_____

(16 marks)

14.

Explain what is meant by **Consumer Surplus.**

_____

_____

_____

(16 marks)

15.

A consumer in equilibrium buys 10 cups of coffee at €2 each and 10 phone cards at €6 each. The marginal utility of the cups of coffee is 5 utils. What is the marginal utility of phone cards? **Show your workings.**

Workings	Answer: _____

(16 marks)

16.

Outline **FOUR** factors that affect **the supply of a good**, other than the price of the good itself.

(i) _____

(ii) _____

(iii) _____

(iv) _____

(16 marks)

17.

Define the **Law of Diminishing Marginal Utility** and state **TWO** assumptions underlying the law.

Definition:_____

_____

_____

Assumption (i): _____

Assumption (ii): _____

(17 marks)

18.

"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)

19.

Using the diagram, explain how higher consumers' incomes (other factors unchanged) may affect the demand curve for mobile phones in Ireland.

20.

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

_____

_____

The table below illustrates the Law of Diminishing Marginal Returns.

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

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

_____

(17 marks)

21.

What is meant by the concept *'consumer surplus'*?

.....

.....

.....

(16 marks)

2011

(a) (i) Define the economic terms: **individual (consumer) demand; market demand.**
(ii) Explain, with the aid of labelled diagrams, the relationship between individual (consumer) demand and market demand. *(20)*

(b) (i) Distinguish between the economic meanings of a 'movement along a demand curve' and a 'shift in a demand curve' for concert tickets.
Illustrate your answer using diagrams.
(ii) State and explain **two** factors that would cause a shift in a demand curve for concert tickets. In **each** case explain how the factor affects the demand curve. *(30)*

(c) The Law of Diminishing Marginal Utility states that as more of a product is consumed, eventually each additional unit of the good provides less additional utility (marginal utility).

(i) Explain **two** assumptions underlying the Law of Diminishing Marginal Utility.

A consumer in equilibrium buys 6 health bars at €0.80 each and 9 cartons of juice at €1.50 each. The marginal utility of the 6th health bar is 40 utils.

(ii) Using the **Equi-Marginal Principle of Consumer Behaviour** calculate the marginal utility of the ninth carton of juice. (Show all your workings.)

(25)

[75 marks]

2010

(a) The data below represents the market demand and the market supply schedules for the soft drink 'Quencher'.

Price €	Quantity Demanded ('000 units)	Quantity Supplied ('000 units)
2.00	40	5
2.25	30	10
2.50	20	20
2.75	10	30
3.00	5	40

(i) Using the above data, draw the diagram showing the market demand and market supply curves for the soft drink 'Quencher'. Clearly mark the **point of equilibrium** and the **equilibrium price and quantity**.

(ii) Explain what it means for the market '**to be in equilibrium'**.

(iii) Assume costs of production fell, resulting in an extra 20,000 units supplied at each of the above listed prices. With reference to your diagram in **1(a)** (i) above and assuming that demand remains unchanged, draw the **new** supply curve. Clearly indicate the new point of equilibrium and the new equilibrium price and quantity.

(*30 marks)*

(b) (i) Outline **four** factors which affect price elasticity of demand (PED).
(ii) The PED for the soft drink 'Quencher' has been calculated at **-3.8**
Using your knowledge of PED, explain the economic meaning of this figure.

(30 marks)

(c) Many health advisors wish to reduce the consumption of soft drinks. Advise the Minister for Health and Children on possible economic actions that the Government could take to reduce the consumption of soft drinks.

(15 marks)
[75 marks]

2009

(a) (i) Show, by means of a labelled diagram, the market demand and supply curves for games consoles e.g. Xbox, PlayStation, Nintendo DS. Identify and explain the market equilibrium position.

(ii) Explain, with the aid of a separate diagram in **each** case, the effects which **each** of the following is most likely to have on the above equilibrium position:

- 50% reduction in the price of computer games used with the games console;
- Quota placed on the quantity of games consoles entering Ireland;
- Government introduce a 2% levy (tax) on all income earned. *(30 marks)*

(b) (i) Define income elasticity of demand **and** price elasticity of demand.

(ii) Which figure stated below is most likely to represent each of the following:

- **Income** elasticity of demand for low price cuts of meat;
- **Income** elasticity of demand for Apple iPhones;
- **Price** elasticity of demand for Petrol.

- 1.6 - 0.1 + 4.3

Give reasons for your choice in **each** case. *(30 marks)*

(c) Assume **Income** elasticity of demand for games consoles is **+ 2.5** and total sales in 2008 were 100,000 units.

Calculate the expected total sales for the year if consumers' incomes are expected to fall by 8% in 2009. Show your workings.

(15 marks)
[75 marks]

2008

(a) **(i)** Explain, with the aid of an example, the '**Law of Demand**'.
(ii) State and explain **three** exceptions to the 'Law of Demand'. *(20 marks)*

(b) The data below represents the market demand and supply schedules for MP3 Players.

Price €	Quantity Demanded (units)	Quantity Supplied (units)
20	100	20
30	80	40
40	60	60
50	40	80
60	20	100

(i) Using the above data, draw the diagram showing the market demand and supply curves for MP3 Players.
(ii) Show on your diagram the price and quantity of MP3 Players at which this market is in equilibrium.
(iii) Using this data, calculate the **price elasticity of demand** when price changes from €40 to €50. (Show all your workings).
For this price change, is demand for MP3 Players elastic or inelastic? Explain your answer.

(30 marks)

(c) **(i)** With reference to your diagram in **1(b) (i)**, assume that consumer demand for MP3 Players increases by 40 units at each price listed above, while supply remains unchanged, draw the **new** demand curve for this situation and show the new equilibrium price and quantity.
(ii) Explain **two** possible reasons for the shift in the demand curve.

(25 marks)
[75 marks]

2007

(a) **(i)** Define the economic terms: **individual (firm) supply; market supply**.

(ii) Explain, with the aid of labelled diagrams, the relationship between individual (firm) supply and market supply.

(20 marks)

(b) Explain, with the aid of a labelled diagram, the supply curve of an individual firm in **each** of the following circumstances. State one example in **each** case.

(i) A firm is willing to increase supply as price rises, but there is a minimum price below which the firm will not supply at all.

(ii) A firm can supply only up to a maximum production capacity.

(iii) The product is fixed in supply (e.g. perishable good) and a firm is operating in the short run.

(30 marks)

(c) Outline **FOUR** factors, other than price, which affect the supply curve of an individual firm. In each case explain how the factor affects the supply curve.

(25 marks)
[75 marks]

2006

(a) For analytical purposes economists make certain assumptions about consumer behaviour. State and explain **FOUR** principal assumptions.

(15 marks)

(b) A manufacturer of three different products calculates the price elasticity of demand for each product as follows:

Product X: -1.5 Product Y: -1.0 Product Z: -0.3

The company wishes to maximise its revenues. Explain in respect of **each** of these products, what change, if any, the company should make in the prices currently being charged to enable it to achieve its aim.

(30 marks)

(c) A consumer buys 10 units of Good A when the price of Good B is €5.
When the price of Good B rises to €6 (the price of Good A remaining unchanged) the consumer buys 14 units of Good A.

(i) Define **cross elasticity of demand**.
(ii) Using an appropriate formula, calculate this consumer's cross elasticity of demand for Good A. Show your workings.
(iii) Is Good A a substitute for, or a complement to, Good B? Explain your reasoning.

(30 marks)
[75 marks]

2005

(a) State and explain **FIVE** factors which affect a consumer's demand schedule. *(25 marks)*

(b) (i) Show, by means of a labelled diagram, the market demand and supply for a product. Indicate the equilibrium price and quantity in this market.

(ii) Explain, with the aid of a separate diagram in each case, the effects which **each** of the following may have on the above equilibrium position:

- A successful advertising campaign in favour of the product is introduced;
- A tariff on imports of the product is removed. *(30 marks)*

(c) Assume that the average spending on energy by a low-income family is €40 weekly. The price of energy rises by 20% so that the same consumption by a low-income family would now cost €48 weekly.
The government is considering introducing one of the following policy measures to assist low-income families:

- giving low- income families an increased allowance of €8 weekly (income supplement);
- subsidising the producers of energy so that energy can continue to be sold at the initial price (price subsidy).

Which policy measure would you advise the government to take? Explain the economic reasons for your answer.

(20 marks)
[75marks]

2004

(a) Define the following types or degrees of **price** elasticity of demand:
- **(i)** Perfectly elastic demand;
- **(ii)** Perfectly inelastic demand;
- **(iii)** Elastic demand;
- **(iv)** Unitary elastic demand.

(20 marks)

(b) State and explain **FIVE** factors that affect **price** elasticity of demand. *(25 marks)*

(c) A consumer spends €120 per month on a product when its unit price is 80c, and continues to spend €120 per month on this product when its unit price increases to €1.

(i) Using the formula below, calculate the consumer's price elasticity of demand. Show all your workings.

$$\frac{\Delta Q}{\Delta P} \times \frac{P_1 + P_2}{Q_1 + Q_2}$$

(ii) Is demand for this product elastic, inelastic or unitary elastic?

(iii) Should the seller make any changes in the selling price of this commodity to increase overall revenue? Explain your answer.

(30 marks)

[75 marks]

2003 Q2

(a) Define (i) *price elasticity of demand* and (ii) *cross elasticity of demand*. In each case, state the formula by which it is measured. (20 marks)

(b) When the price of good X is €27 the quantity demanded of good Y is 1,200 units. When the price of Good X falls to €23 (the price of Good Y unchanged) the quantity demanded of good Y falls to 800 units.

(i) Using the cross elasticity of demand formula, calculate the cross elasticity of demand for Good Y. Show all your workings.
(ii) Is good Y a substitute for or complement to good X? Explain your choice.

(c) A firm has the following price elasticities of demand for two goods, Good X and Good Y: (30 marks)

Good X = -2.0 Good Y = -0.5

What changes, if any, should the firm make in the selling price of each of the goods to increase overall revenue? Explain your answer.

2003 Q3

(a) (i) State and explain **FOUR** factors which affect a consumers' demand schedule, other than the price of the good itself.
(ii) Explain the economic rationale for assuming that a person's demand curve for a normal good slopes downward. (30 marks)

(b) For something to be considered an *economic good,* it must possess certain characteristics. State and explain **THREE** of these characteristics. (20 marks)

(c) A consumer spends all income on two goods, Good A and Good B. Both goods are normal goods but they are not complementary goods. The price of Good A is reduced and the price of Good B remains unchanged. The consumer continues to spend all income on the two goods. Distinguish between the substitution effect and the income effect of the price reduction in Good A.
(25 marks)

2002

(a) Define (i) Income Elasticity of Demand.
(ii) Cross Elasticity of Demand. (15 marks)

(b) (i) "Income elasticity of demand is usually positive but sometimes negative". Explain, giving examples, the meaning of this statement.

(ii) A consumer spends 40% of income on a certain good. After the consumer's income doubles (everything else remaining unchanged), only 30% of income is spent on the good. State whether this good is a normal or inferior good and explain your answer.
(20 marks)

(c) Which of the figures stated below is likely to represent:

(i) **Income** elasticity of demand for potatoes;
(ii) **Income** elasticity of demand for designer clothes;
(iii) **Price** elasticity of demand for airline seats.

-2.8, -0.1, + 2.5

Explain **each** of your choices. (30 marks)

(d) Income elasticity of demand for a good is **+1.8** and sales in Year 1 are 20,000 units. If consumers' incomes are expected to rise by 5% in Year 2, calculate the expected level of sales. Show your workings.
(10 marks)

[75 marks]

2001 Q2

(a) Define what is meant by price elasticity of demand. (10 marks)

(b) A consumer buys 80 units of a good when the price is £1.50. The price increases to £1.75 and the consumer now buys 70 units.

(i) Using the formula below, calculate the consumer's price elasticity of demand. Show all your workings.

$$\frac{\Delta Q}{\Delta P} \times \frac{P_1 + P_2}{Q_1 + Q_2}$$

(ii) Is demand for this good elastic, inelastic or unitary elastic?

(iii) The seller of the above good wishes to earn maximum revenue. What changes, if any, should the seller make in the selling price of the good to earn maximum revenue? Explain your answer.
(35 marks)

(c) State and explain **FOUR** factors that affect price elasticity of demand. (30 marks)
[75 marks]

2001 Q3

(a) State **FOUR** factors that affect the supply of a good, other than the price of the good itself, and explain how each factor affects supply. (25 marks)

(b) State and explain the principal economic assumptions made about consumer behaviour. (25 marks)

(c) The law of diminishing marginal utility states that as additional units of a good are consumed the marginal utility of this good will eventually decline.

(i) State and explain the assumptions underlying the law of diminishing marginal utility.

(ii) Give **TWO** examples of commodities which do not comply with this law. Justify each choice with a brief explanation.

(25 marks)
[75 marks]

Answers (Short Questions)

1.

Define a mixed economy. State **two** examples of economic activity which supports the view that Ireland is a mixed economy.

Definition: An economy that incorporates elements of both central planning (government involvement) and private enterprise in its economic system.

Two Examples:

1. **Existence of Social Partnership**
   Allows for the involvement of the government and other social partners in setting and achieving targets, over a specified period of time.
2. **Existence of semi-state bodies and private enterprise**
   Both producing goods and supplying services in areas like transport, energy and communications.
3. **Government Departments / Regulators**
   Regulate economic activities through their actions e.g. the financial services regulator.
4. **Legislation passed by Government**
   Controls the activities of individuals / firms, such as the various labour laws e.g. Minimum Wage Law / Planning Laws / Companies Acts etc.
5. **Use of taxation / government expenditure**
   The use of fiscal policy by the government affects economic activity and can alter market outcomes.

2.

A consumer buys 20 units of Good A when the price of Good B is €8. When the price of Good B rises to €10 (the price of Good A remaining unchanged) the consumer buys 12 units of Good A.
Using an appropriate formula, calculate this consumer's cross elasticity of demand for Good A.
(Show your workings.) Is Good A a substitute for, or a complement to, Good B? Explain you answer.

$$\frac{\Delta Q_A}{\Delta P_B} \times \frac{P_{B1} + P_{B2}}{Q_{A1} + Q_{A2}}$$

$$\frac{-8}{€2} \times \frac{€8 + €10 \quad (18)}{20 + 12 \quad (32)}$$

$$= -2.25$$

Good A is a **Complement**. It has a negative **CED**.

3.

A consumer spends €200 monthly on Product A when its price is €2 and continues to spend €200 monthly when its price increases to €2.50. Calculate the consumer's price elasticity of demand. Show all your workings and explain your answer.

Workings:

Quantity 1: €200 / €2 = 100 units.
Quantity 2: €200 / €2.50 = 80 units.

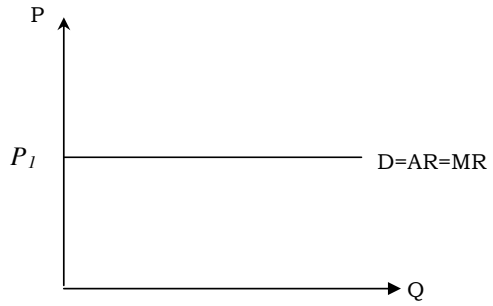
$$-\frac{20^*}{50^*} \times \frac{€2 + €2.50\ (4.50)^*}{100 + 80\ \ (180)^*} = -^* 1.0^*$$

6 * at 2 marks each = 12 marks

This good is a normal good because it has a minus sign / obeys the law of demand.
This good is unit elastic because PED = 1.

4.

. The diagram below represents the demand curve facing a firm in Perfect Competition.



This demand curve is; **(✓ correct answer)**

- Unitary Elastic ☐
- Perfectly Inelastic ☐
- **Perfectly Elastic** ☑

State the reason for your choice:

- Any deviation in price from P_1 will result in quantity demand falling to zero.

5.

Ireland has a mixed economy. What do you understand by the underlined term? State **one** economic advantage, and **one** economic disadvantage of this economic system.

Explanation:

An economy that incorporates elements of both central planning (government involvement) and private enterprise in its economic system.

Advantage:

- Benefit from efficiency encouraged by free enterprise with regulation from central government.
- Entrepreneurial talent is encouraged.
- Ensures a fairer distribution of wealth within the country.
- Regulation by the government is essential to limit possible abuses of the market.
- Provision of essential services may be provided by government.

Disadvantage:

- The government may be forced to financially support unsuccessful enterprises in the short-term which will cost the public in the long-term.
- A large public sector and private sector may be politically divisive which could affect how economic problems are solved.
- State intervention may results in higher taxes / bureaucracy /inefficiencies.

6.

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

This law states that as a consumer consumes additional units of a good the marginal utility/ extra satisfaction derived from each additional unit consumed will eventually decline.

Definition @ 9 marks

(b) The table below illustrates the Law of Diminishing Marginal Utility.

Number of units consumed	1	2	3	4	5	6
Total Utility in units	30	65	85	100	110	115
Marginal Utility in units	30	**35**	**20**	**15**	**10**	**5**

5 figures @ 1mark each= 5 marks

Complete the table and state the point after which diminishing utility set in.

Diminishing utility sets in after the consumption of the 2nd unit/when the 3rd unit is consumed.

7.

Free Enterprise is defined as an economic system in which:

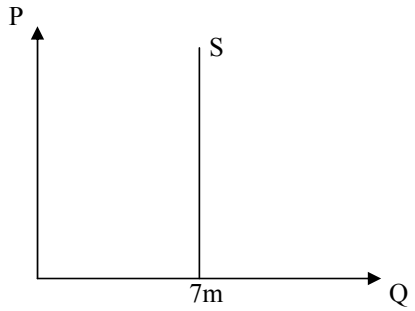
The market mechanism operates; the factors of production are privately owned; there is limited government interference; resources are allocated by a decentralised decision making process and citizens are motivated by self-interest.

One economic advantage of this system:

Choice: Consumers with income have a wide choice of goods and services.
Efficiency: Incentives exist for producers to be efficient. Those who are inefficient will be forced out by lower costs.
Innovation: Producers who are innovative will be rewarded through increased sales in the market.
Economic Growth: As all individuals are motivated by self-interest, each will strive towards their maximum efficiency and so aid economic growth.
Less Bureaucracy: As decisions are made by individuals within the society, the costs of a large administration to administer matters is significantly reduced.

8.

China will host the Beijing Olympic Games in August 2008 and 7 million tickets are available for the event. On the diagram below draw the supply curve for tickets and explain the reason for its shape.



Complete correct diagram: 5 marks graded.

Explanation:

The supply of tickets available for the Olympics is fixed at 7 million.
Regardless of price this seating capacity will remain unchanged.

9.

Consumers buy 50 units of a product when the price is €1.50. When the price is reduced to €1 the consumer buys 90 units. Using an appropriate formula, calculate the consumers' PED.
Show your workings and explain your answer.

$$\frac{40}{-0.50} \times \frac{1.50 + 1.00}{50 + 90} \quad \left[\frac{2.50}{140}\right] = -/\mathbf{1.43}$$

9 marks graded.

PED is elastic. Why? Because the PED is greater than 1.
Normal good. Why? The PED is negative.

10.

'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.

11.

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.

12.

In equilibrium a consumer buys 8 bars of chocolate at €1.00 each and 12 sandwiches at €4.00 each.
The marginal utility of the eight bar of chocolate is 10 utils.
Using the Equi-Marginal Principle of Consumer Behaviour -
calculate the marginal utility of the twelfth sandwich. Show all your workings.

$$\frac{\text{Marginal Utility of Chocolate}}{\text{Price of Chocolate}} = \frac{\text{Marginal Utility of Sandwiches}}{\text{Price of Sandwiches}}$$

$$\frac{10\ *}{€1.00\ *} = \frac{MU_S}{€4.00\ *} \quad \text{so} \quad \mathbf{MU}_S = \boxed{\mathbf{40\ utils}}$$

13.

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.

14.

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.

15.

A consumer in equilibrium buys 10 cups of coffee at €2 each and 10 phone cards at €6 each. The marginal utility of the cups of coffee is 5 utils. What is the marginal utility of phone cards? Show your workings.

$$\frac{\text{Marginal Utility of coffee}}{\text{Price of Coffee}} = \frac{\text{Marginal Utility of Phone Cards}}{\text{Price of Phone Cards}}$$

$$\frac{\mathbf{5}}{€2} = \frac{\mathbf{MU_{PC}}}{€6} \quad \text{so} \quad \mathbf{MU_{PC}} = \boxed{\mathbf{15\ utils}}$$

16.

1. Outline FOUR factors that affect the supply of a good, other than the price of the good itself.

1. The cost of producing the product.
2. The state of the firm's production technology.
3. The price of related / other goods.
4. Unplanned factors.
5. Government Policy such as: rates of taxation / availability of state subsidies.
6. Number of sellers in the industry.
7. Objectives of the firm.

17.

Define the **Law of Diminishing Marginal Utility** and state **TWO** assumptions underlying the law.

Definition: ***9 marks graded***
Assumptions: ***8 marks: 2 x 4 marks each***.

The law of diminishing marginal utility states that as a consumer consumes additional units of a good their marginal utility for this good will eventually decline.

Assumptions:

1. It applies only after a certain point called the origin.
2. It does not apply to addictive goods.
3. Sufficient time has not elapsed for circumstances to change i.e. change in tastes / change in incomes/ change in the nature of the product/ no gap in time between the consumption of successive units.

18.

"**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).

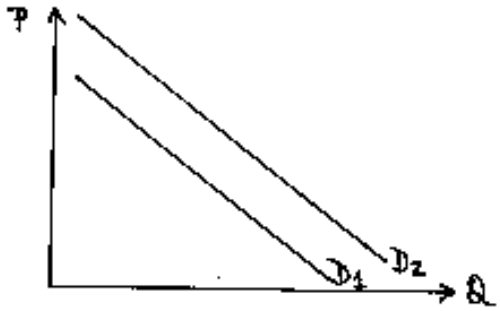
Correct Answer: False: ***1 mark***
Explanation: ***16 marks graded*.**

The asset could be sold and the money invested *or*
The asset could be rented out and an income earned

19.

Using the diagram, explain how higher consumers' incomes (other factors unchanged) may affect the demand curve for mobile phones in Ireland.

Complete Diagram



As consumers' incomes grow, the increased purchasing power will give 'new' consumers the ability to purchase mobile phones,
and/or existing customers the ability to update their models.

20.

7. (a) **State the 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.

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

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

4 correct figures x 1 marks each

State the point after which Diminishing Returns set in.

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

21.

1. What is meant by the concept 'consumer surplus'? 16 marks

This is the difference between what the consumer actually pays for the good & what he/she would be willing to pay for the good, rather than do without the good.

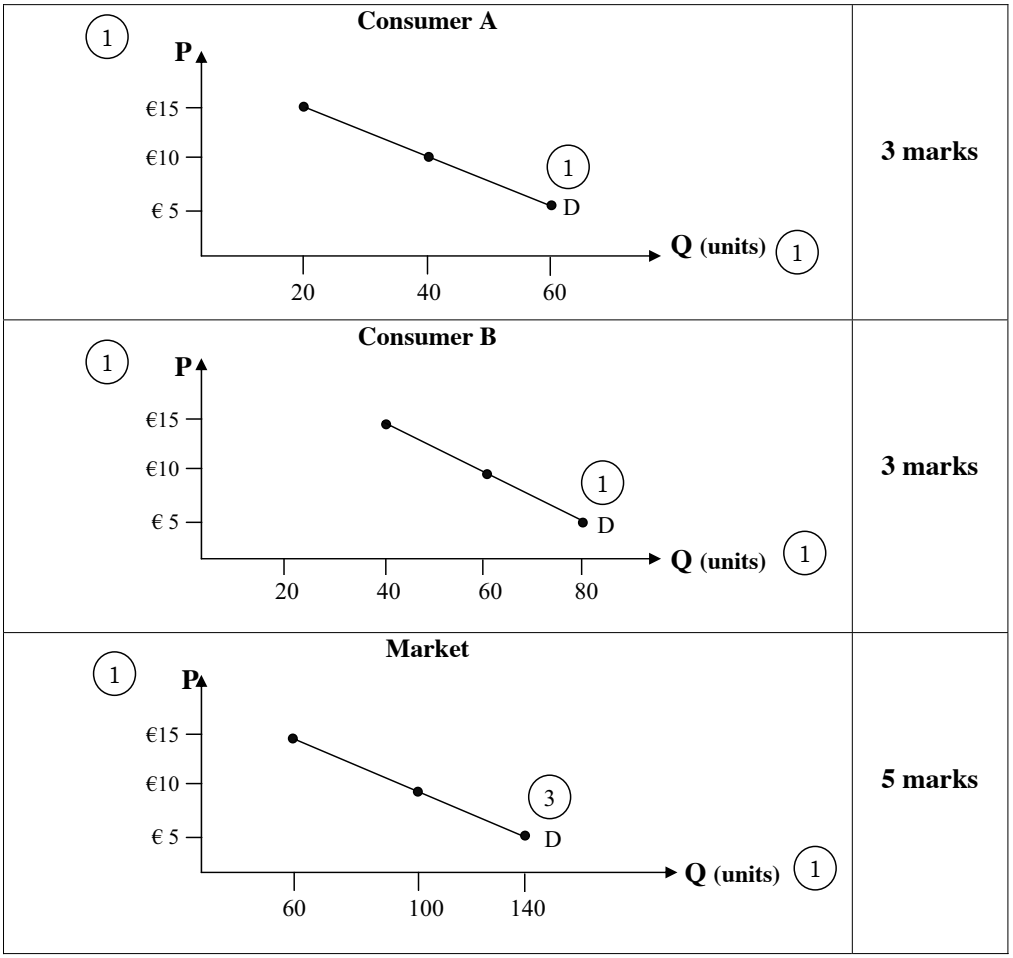
2011

Q1 Demand, Utility, Equi- Marginal Principle of Consumer Behaviour

(a) (i) Define the economic terms: **individual (consumer) demand; market demand.**
(ii) Explain, with the aid of labelled diagrams, the relationship between individual (consumer) demand and market demand. *(20)*

(i) **6 marks**

Individual demand: the quantity of a good an individual consumer demands at different prices.
Market demand: total quantity of a good that all consumers demand at different prices.



2 diagrams x 3 marks each: Graduated P axis; Graduated Q axis; labelled D/C (1 mark each)
Market diagram: 5 marks: Graduated P axis; Graduated Q axis (1 mark each)
Correct cumulative D/C: 3 marks

To derive the market demand add the quantity demanded by each individual consumer at each price to calculate the overall quantity demanded by the market at each price.

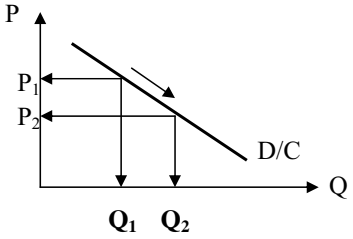
3 marks

(b) (i) Distinguish between the economic meanings of a 'movement along a demand curve' and a 'shift in a demand curve' for concert tickets. Illustrate your answer using diagrams.
(ii) State and explain **two** factors that would cause a shift in a demand curve for concert tickets. In **each** case explain how the factor affects the demand curve. *(30)*

(i) Movement along a demand curve: **8 marks**

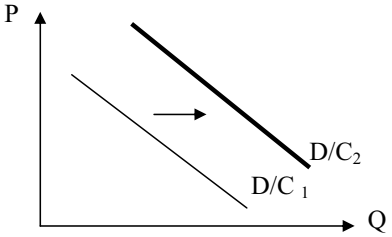
Caused by a change in the selling price of the good itself, ceteris paribus/all other things being equal.

Diagram:



Shift in a demand curve: **8 marks**

If any of the factors other than the price of the good itself change this will result in a shift in the demand curve.



(ii) Two factors that would cause a shift in a demand curve for concert tickets:

Factor	**How this factor affects the demand curve -The demand curve shifts to the right**
Income levels	If income rises then the demand for concert tickets will increase, assuming concert tickets is a normal good.
Taste / Preference	If the consumer's preference for the artist/event becomes stronger then the demand for concert tickets will increase.
Expectations about the future	If consumers expects the performance not to repeated they may increase their demand. If they expect ticket price to rise in the future they may buy the ticket now and demand will increase.
Unplanned events	Factors such as the weather may influence the current demand for tickets e.g. good weather may increase demand for an outdoor event.
Change in price of substitute good	If the price of tickets for an alternative concert increased then demand for tickets for this concert may increase.
Change in price of complementary good	If the price of hotel accommodation near the concert venue decreased then demand for the concert tickets may increase.
2 x 7 marks each	

(c) The Law of Diminishing Marginal Utility states that as more of a product is consumed, eventually each additional unit of the good provides less additional utility (marginal utility).

(i) Explain **two** assumptions underlying the Law of Diminishing Marginal Utility.

A consumer in equilibrium buys 6 health bars at €0.80 each and 9 cartons of juice at €1.50 each. The marginal utility of the 6th health bar is 40 utils.

(ii) Using the **Equi-Marginal Principle of Consumer Behaviour** calculate the marginal utility of the ninth carton of juice. (Show all your workings.) *(25)*

(i) Assumptions underlying the Law of Diminishing Marginal Utility.

1. Applies after a certain point called the origin.
The origin is the minimum quantity of the commodity which can be used effectively and until this stage has been reached, marginal utility may not diminish.

2. It does not apply to Addictive goods.
The consumer may gain increasing marginal utility by consuming each additional unit of an addictive good.

3. Time lapse between consumption of successive units. Sufficient time has not elapsed between the consumption of successive units.
If a person eats a number of oranges, each additional orange consumed will give diminished marginal utility. However, if a person eats one on a Monday, one on a Thursday and one on Sunday, because of the time which has elapsed between the consumption of each extra orange marginal utility may not diminish.

4. 'Other factors' affecting utility do not change.
The law is based on the assumption that other factors which may affect a consumer's utility do not change including income levels, the nature of successive units of the commodity; and the consumer's taste for the commodity.

2 x 6 marks each

(ii) The marginal utility of the ninth carton of juice. (Show all your workings.)

$$\frac{40}{80} = \frac{X}{150}$$

= **75** utils

13 marks (9+4)

2010

Question 1 Markets, Elasticity, Soft Drinks consumption.

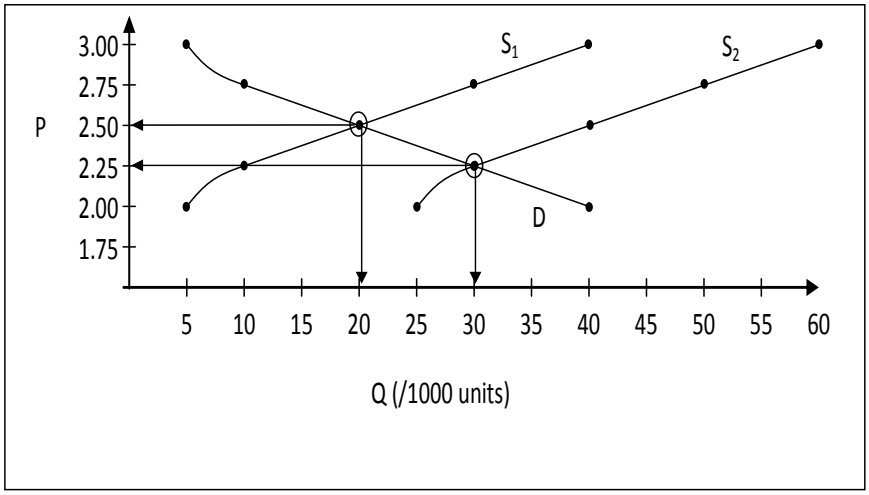
(a) The data below represents the market demand and the market supply schedules for the soft drink 'Quencher'.

Price €	Quantity Demanded ('000 units)	Quantity Supplied ('000 units)	**New Quantity Supplied ('000 units)**
2.00	40	5	**25**
2.25	30	10	**30**
2.50	20	20	**40**
2.75	10	30	**50**
3.00	5	40	**60**

(i) Using the above data, draw the diagram showing the market demand and the market supply curves for the soft drink 'Quencher'. Clearly mark the **point of equilibrium** and the **equilibrium price and quantity.**

(ii) Explain what it means for the market **'to be in equilibrium'.**

(iii) Assume costs of production fell, resulting in an extra 20,000 units supplied at each of the above listed prices. With reference to your diagram in 1(a) (i) above and assuming that demand remain unchanged, draw the **new** supply curve. Clearly indicate the new point of equilibrium and the new equilibrium price and quantity. (30)



(i) D/C: 5 points at 1 mark each + Correct label at1 mark. (6)
S/C: 5 points at 1 mark each + Correct label at1 mark. (6)
Equilibrium point + Equilibrium price + Equilibrium Quantity: 3 at 1 mark each. (3) **[15]**

(ii) To be in equilibrium:
where quantity demanded equals/meets quantity supplied and there is no tendency for prices to change. **[7]**

(iii) New S/C: 5 points at 1 mark each (5)
Equilibrium point + Equilibrium price + Equilibrium Quantity: 3 at 1 mark each. (3) **[8]**

(b) (i) Outline **four** factors which affect price elasticity of demand (PED).
(ii) The PED for the soft drink 'Quencher' has been calculated at **- 3.8**
Using your knowledge of PED, explain the economic meaning of this figure. **(30 marks)**

1. The availability of close substitutes.

- When a good has a close substitute and its price is increased the demand for the good will be elastic because people will switch to the cheaper substitute.
- Where a good has no substitutes and its price is increased there is no substitute to switch to and so it will be inelastic.
- The closer the substitutability between goods the more consumers will tend to switch their purchasing behaviour in response to a change in relative prices and thus the greater will be PED.

2. Complementary goods.

- If the good in question is the cheaper of two goods, which are in joint demand, then the demand for it is likely to be relatively inelastic in response to changes in its own price.

3. Is the commodity a luxury or necessity?

- It is not vital that one should possess luxuries and therefore the PED for them will be relatively elastic.
- Necessities are vital for life – people must buy them even when their price is increased, so their PED will be relatively inelastic.

4. The proportion of income which is spent on the commodity.

- In general the greater the proportion of income which is spent on a good, the more elastic the demand for it is likely to be, in response to a change in its own price. A rise of 50% in the price of a box of matches is unlikely to have a significant effect on its demand.

5. The durability of the commodity.

- The more durable the commodity, the more elastic is the demand for it likely to be in response to a change in its own price.
- If products such as motorcars increase in price, it is likely that the public will extend the life of their existing model and postpone the purchase of a replacement.

6. Expectations as to future changes in price.

- If, in the face of a price reduction, the public considers that prices are likely to fall even further, they may wait for the further reduction in price, in which case demand may not be very elastic on the initial price reduction.

7. The length of time allowed for adjustment to price changes.

In the long run, demand is more elastic as consumers have time to adjust to a change in price.

- If the price of electricity rose by 80% a consumer may economise on the use of various appliances in the short term. In the long term the consumer will have to consider substituting other forms of energy. The demand will at first be highly inelastic but as time goes on will become more elastic

8. Consumer habits / brand loyalty.

- A consumer may become strongly attached to a particular product through habit or loyalty to that brand. An increase in price for that good will not cause him/her to consume less of the product or to switch to cheaper substitutes. The demand for such goods will therefore be price inelastic.

9. Number of alternative uses the good has.

- A commodity which has a large number of uses will usually have a relatively elastic demand. For example sugar is used in direct consumption, sweetening purposes, baking, food processing etc. Any increase in the price of sugar may only result in a small fall in its demand in each of these markets but the total drop overall may be significant.

4 points at 5 marks each: State: 2 marks. Explain: 3 marks.

(ii) The PED for the soft drink 'Quencher' has been calculated at **- 3.8**
Using your knowledge of PED, explain the economic meaning of this figure. **10 marks**

-3.8	Sign is minus	This is a normal good	As price increases, demand will fall / obeys the law of demand
		2 marks	**3 marks**
	Value is 3.8	This is a price elastic good	The percentage change in quantity demand is greater than then the percentage change in price
		or	
		This is a luxury good	Because when price rises the demand will fall by a greater percentage, indicating that the good is not a necessity.
		2 marks	**3 marks**

(c) Many health advisors wish to reduce the consumption of soft drinks. Advise the Minister for Health and Children on possible economic actions that the Government could take to reduce the consumption of soft drinks. (15 marks)

Statement	Explanation
Taxation: Increase taxes on soft drinks	By increasing indirect taxes (e.g. VAT) the price will increase which may cause demand to fall.
Education: Education / Awareness campaign	The government could increase spending on advertising campaigns to raise awareness of the problems which may result from the consumption of soft drinks. It could insist on more stringent product labelling.
Legislation: Introduce legislative changes	It could ban the sale of soft drinks in schools and colleges / ban their sale in vending machines. It could place a quota on imports of such drinks.
Subsidisation: Subsidise the price of substitute goods / Reduce VAT rates on substitute goods	By doing this the prices of substitute goods may be more attractive and this may lead to a drop in the demand for soft drinks e.g. the subsidisation of milk in schools.

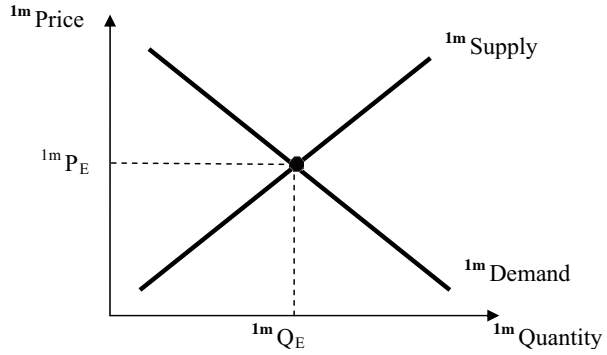
3 points at 5 marks each. State: 2 marks. Explain: 3 marks.

2009

Question 1 Demand, Supply & Elasticity

(a) (i) Show, by means of a labelled diagram, the market demand and supply curves for games consoles e.g. Xbox, PlayStation, Nintendo DS. Identify and explain the market equilibrium position.

Labelled Diagram: 6 marks



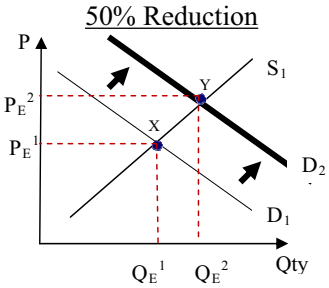
Marking Diagram	
Price:	1m
Quantity:	1m
Supply Curve:	1m
Demand Curve:	1m
PE:	1m
QE:	1m

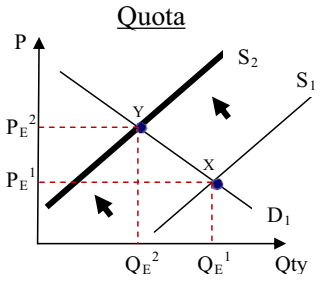
Explanation: 3 marks

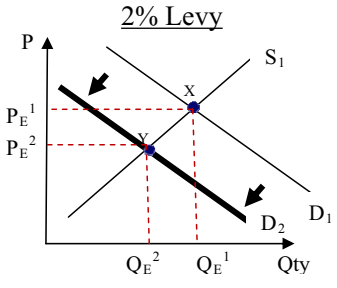
The firm is in equilibrium where the market demand curve equals the market supply curve and there is no tendency for the price to change.

(ii) Explain, with the aid of a separate diagram in **each** case, the effects which **each** of the following is most likely to have on the above equilibrium position:

- 50% reduction in the price of computer games used with the games console;
- Quota placed on the quantity of games consoles entering Ireland;
- Government introduce a 2% levy (tax) on all income earned.







- D/C shifts to the right (D_2)
  Explanation:
- Because the complementary good is now cheaper
- New **higher** P_E^2
- New **higher** Q_E^2

7 marks graded

- S/C shifts to the left (S_2)
  Explanation:
- Because less Consoles can be imported
- New **higher** P_E^2
- New **lower** Q_E^2

7 marks graded

- D/C shifts to the left (D_2)
  Explanation:
- Because consumer income has fallen
- New **lower** P_E^2
- New **lower** Q_E^2

7 marks graded

(b) (i) Define income elasticity of demand **and** price elasticity of demand. **6 marks**

Income Elasticity of Demand measures
The percentage / proportionate change in the demand for a good caused by the percentage / proportionate change in income.

Price Elasticity of Demand measures
The percentage / proportionate change in the demand for a good caused by the percentage / proportionate change in the price of that good.

(ii) Which figure stated below is most likely to represent each of the following:

- **Income** elasticity of demand for low price cuts of meat;
- **Income** elasticity of demand for Apple iPhones;
- **Price** elasticity of demand for Petrol.

- 1.6 - 0.1 + 4.3

Give reasons for your choice in **each** case.

Category	Answer	Reason
Income elasticity of demand for low price cuts of meat	**- 1.6**	• low price cuts of meat is an **inferior good** so it has a **negative** YED. • low price cuts of meat is **not a necessity** so it is **income elastic** (>1)
Income elasticity of demand for Apple iPhones	**+4.3**	• Apple iPhones are a **normal good** so they have a **positive** YED. • Apple iPhones are a **luxury** so they are **income elastic** (>1).
Price elasticity of demand for Petrol	**- 0.1**	• Petrol is a **normal good** so it has a **negative** PED. • Petrol is a **necessity** so it is **price inelastic** (<1).

3 answers @ 8 marks each = 24 marks

(b) Assume **Income** elasticity of demand for games consoles is **+ 2.5** and total sales in 2008 were 100,000 units. Calculate the expected total sales for the year if consumers' incomes are expected to fall by 8% in 2009. Show your workings.

- If income decreases by 8% then sales will decrease by (8% x 2.5) = 20%.
- Sales will fall by 20% of 100,000 units = 20,000 units.
- Sales in 2009 will equal 100,000 – 20,000 = 80,000 units.

15 marks graded

2008

Q1 Demand, Elasticity

(a) (i) Explain with the aid of an example, the **'Law of Demand'**.
(ii) State and explain **three** exceptions to the 'Law of Demand' (20 marks)

(i) The Law of Demand states that an increase in price leads to a decrease in quantity demanded, or a decrease in price leads to an increase in quantity demanded.

Example
If price of a bar chocolate increased by 5c per bar then quantity demanded or purchased would fall.

Explanation and example: 5 marks graded.

(ii) State and explain **three** exceptions to the 'Law of Demand'

1. Giffen Goods
For certain necessities a rise in price causes an increase in demand while a fall in price causes a fall in demand. Goods of lower quality make up a large part of the spending of low income families. As the price falls, real incomes increase and families buy less of these goods and purchase more better quality goods. As the price rises they have less income to spend on other types of goods so they tend to increase their demand for these goods.

2. Status Symbols / Snob items / Ostentatious Goods / Goods of Conspicuous Consumption
Some commodities by their exclusiveness or expensiveness are attractive to some buyers. A rise in price makes them more exclusive, and therefore, more attractive to those with the incomes to purchase them. A fall in price may lead to a fall in quantity demanded as they may no longer appear as exclusive to the rich and are still outside the price range of the poor.

3. Goods the purchase of which is influenced by expectations as to future prices / Speculative goods
If prospective buyers think that prices are likely to be even higher in the future, the current level of demand may not fall even if prices increase e.g. if a person is considering buying a house the possibility that prices are likely to be even higher in the future will probably stimulate demand at current prices.

4. Goods of Addiction
In the case of those goods to which a person becomes addicted e.g. drugs, they no longer act rationally. They become so addicted to the drug that in order to get the same 'buzz' from consumption of the drug, demand for the commodity may increase, even when the price of the commodity increases.

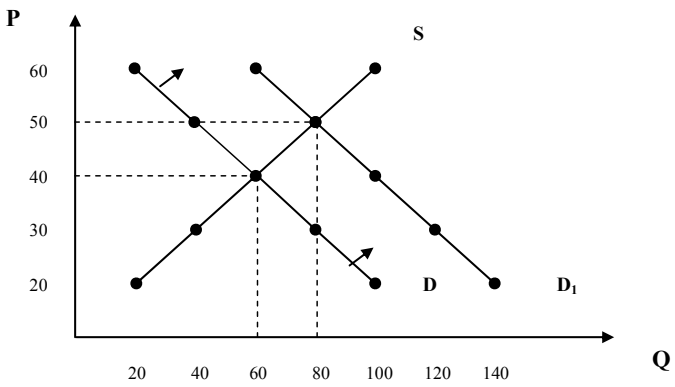
3 exceptions at 5 marks each graded.

(b) (i) Using the data, draw the diagram showing the market demand and supply curves for MP3 Players.

(ii) Show on your diagram the price and quantity of MP3 Players at which this market is in equilibrium.

(iii) Using this data, calculate the price elasticity of demand when price changes from €40 to €50. (Show all your workings).
For this price change is demand for MP3 players elastic or inelastic? Explain your answer.
(30 marks)

(i)



(i) Diagram
- Correctly labelled demand curve
- Correctly labelled supply curve
- Correctly labelling Price and Quantity axes
- Correctly labelling demand and supply curves **14 marks graded.**

(ii) Correctly identifying equilibrium on diagram:
Equilibrium price €40
Equilibrium quantity 60 units **2 marks.**

(iii) Elasticity

$\frac{\Delta Q}{\Delta P} \times \frac{P1 + P2}{Q1 + Q2}$
$\frac{-20}{10} \times \frac{€40 + €50 \ (90)}{60 + 40 \ (100)}$
- 1.8
Price Elastic
Because the PED is greater than 1

14 marks graded.

(c) (i) Demand increases by 40 units at each price, so the new demand is as follows:
(ii) Explain **two** possible reasons for the shift in the demand curve. (25 marks)

Price - €	New Quantity Demanded
20	**140**
30	**120**
40	**100**
50	**80**
60	**60**

Diagram

- Correctly labelled **new** demand curve
- Correctly showing new equilibrium price and equilibrium quantity
  - Equilibrium price €50
  - Equilibrium quantity 80 units

11 marks graded.

(c) (ii) Explain **two** possible reasons for the shift in the demand curve.

1. **Increase in consumers' incomes**
   With higher incomes people can now afford to buy MP3 players.

2. **Improvements in services available /Change in Tastes**
   The range of services available for MP3 users are being expanded and consumers who wish to keep up-to-date are buying MP3s e.g. increase in downloading radio broadcasts.

3. **Technological advances**
   With improvements in technology, manufacturers are now offering new models with advanced features, thereby attracting consumers to upgrade/CD's are becoming obsolete.

4. **More convenient than other available substitute goods**
   People prefer the convenience of MP3s. They are small and light. Music can be downloaded by the user at their convenience. Is portable and can be plugged into home entertainment devices. MP3s make it easier to share music

5. **Prices of Complementary goods decreased**
   Downloading music, relative to buying conventional CDs, is cheaper and this makes them attractive. PCs are also cheaper attracting more people to buy both.

2 reasons at 7 marks each graded.

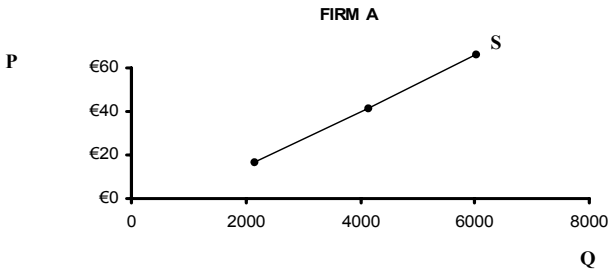
2007

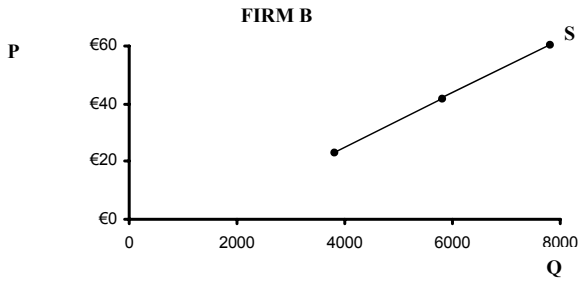
Q1 Supply

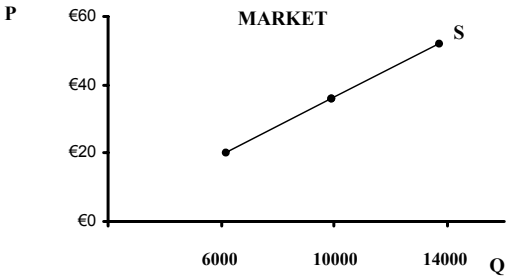
(a) (i) Define the economic terms: **individual (firm) supply; market supply**.
(ii) Explain, with the aid of labelled diagrams, the relationship between individual (firm) supply and market supply. (20 marks)

(i) **Individual supply**: the quantity of a good an individual firm is willing to supply at different prices.
Market supply: the total quantity of a good that all firms are willing to supply at different prices.

(ii)





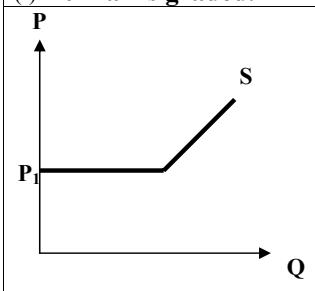
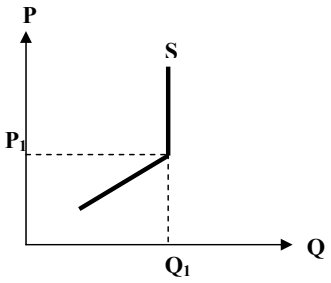
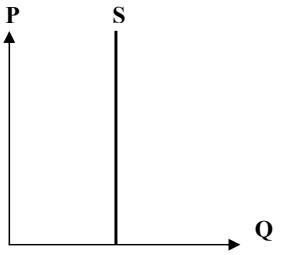


To derive the market supply we add the quantity supplied by each individual firm at each price to calculate the overall quantity supplied to the market at each price.

20 marks graded.

(b) Explain, with the aid of a labelled diagram, the supply curve of an individual firm in **each** of the following circumstances. State one example in **each** case.

(i) A firm is willing to increase supply as price rises, but there is a minimum price below which the firm will not supply at all.
(ii) A firm can supply only up to a maximum production capacity.
(iii) The product is fixed in supply (e.g. perishable good) and a firm is operating in the short run. (30 marks)

(i) **10 marks graded.**	(ii) **10 marks graded.**	(iii) **10 marks graded.**
		
• **Supply of labour**	• **ESB Power Plant** • **Mining Plant** • **Output is limited by plants productive capacity**	• **Supply of fresh fish** • **Supply of land** • **Seating capacity of a sports stadium**
• Below P_1 nothing is supplied • At prices above P_1 as price increases, quantity supplied increases.	• As price increases up to P_1 output increases up to a maximum level Q_1. • As price increases above P1 quantity supplied will not increase.	• Any change in price will not bring about any change in supply. • Entire daily supply must be sold, regardless of the prevailing price because the commodity cannot be held over for sale the following day.

(c) Outline **FOUR** factors, other than price, which affect the supply curve of an individual firm. In each case explain how the factor affects the supply curve. (25 marks)

1. The cost of producing the product.
If there is an increase in costs of factors of production, which a firm uses in the production of their good, then it will be more costly to manufacture the good. They will not continue to supply the same quantity of the good at the old prices – there will be a reduction in the quantity supplied.

2. The state of the firm's production technology.
As new machinery is invented, as labour becomes more specialised and efficient the factors of production become more efficient. It becomes possible to increase their output even thought the payments they receive remain the same.

3. The price of related goods.
If there is an increase in the selling price of other goods, which the manufacturer could produce through using his existing factors of production, he may switch from producing the present commodity to that for which the price has increased.

4. Unplanned factors.
There may be changes in the quantity supplied, which were never intended by the producer.
Examples include agriculture – due to changes in the weather; diseases etc.
In industry there may be shortages of raw materials, strikes etc.

5. Taxation / Subsidy.

- If the government were to reduce the rates of taxation on the raw materials used in the manufacture of a commodity, this represents a reduction in the cost of production and hence quantity supplied would increase.
- If a subsidy is granted on the raw materials or on the labour employed by the firm, this has the effect of reducing costs and thereby resulting in an increase in the quantity supplied.

6. Number of sellers in the industry.
If the number of firms in the industry decreased e.g. due to rationalisation then the overall quantity supplied to the market would decrease.

7. Objectives of the firm.
If the objectives of the firm changed from that of profit maximisation to a deliberate reduction in output by firms in the industry then quantity supplied would fall.

7 + 6 + 6 + 6 = 25 marks graded.

2006

Question 1 – Consumer Behaviour and Elasticity

(a) For analytical purposes economists make certain assumptions about consumer behaviour. State and explain these **FOUR** principal assumptions. *(15 marks)*

1. The consumer has a limited income.

The consumer's income is not large enough to satisfy his/her needs and wants, therefore the consumer must choose between those goods he wishes to buy.

2. The consumer aims to gets maximum satisfaction / utility from that income.

A consumer will spend his/her limited income in such a way that he/she will achieve the most satisfaction / best value for money.
He will obey the Equi-Marginal Principal of Consumer Behaviour.

3. The consumer acts rationally.

The consumer acts in that manner consistent with his preferences. If the person sees an identical commodity priced differently in two adjoining shops they will but it at the lower price.

4. The consumer is subject to the law of diminishing marginal utility.

As a consumer consumes additional units of a good his/her marginal utility for this good will eventually decline.

(4+4+4+3 graded)

(b) A manufacturer of three different products calculates the price elasticity of demand for each product as follows:

Product X: - 1.5 **Product Y: -1.0** **Product Z: -0.3**

The company wishes to maximise its revenues. Explain in respect of **each** of these products, what change, if any, the company should make in the prices currently being charged to enable it achieve its aim. (30 marks)

	Product X: - 1.5	**Product Y: -1.0**	**Product Z: -0.3**
Type of Elasticity	**Elastic** because PED > 1	**Unit Elastic** Because PED = 1	**Inelastic** because PED < 1
Price Change	**Decrease** price	Leave price **unchanged**	**Increase** price
Comparison	Because: the **%** ↑ in demand exceeds the **%** ↓ in price	Because: the % Δ in demand equals the % Δ in price	Because: the % ↑ in price exceeds the % ↓ in demand
Effect on Total Revenue	This will increase	Will remain unchanged	This will increase
	10 marks graded	**10 marks graded**	**10 marks graded**

(c) A consumer buys 10 units of Good A when the price of Good B is €5.
When the price of Good B rises to €6 (the price of Good A remaining unchanged) the consumer buys 14 units of A.
(i) Define **cross elasticity of demand**.
(ii) Using an appropriate formula, calculate this consumer's cross elasticity of demand for Good A. Show workings.
(iii) Is Good A a substitute for, or complement to, Good B? Explain your choice. *(30 marks)*

(i) **Cross Elasticity measures**

The percentage / proportionate change in the demand for one good,
caused by the percentage / proportionate change in the price of other goods. **10 marks graded**

(ii)

$\frac{\Delta Q_A}{\Delta P_B} \times \frac{P_{B1} + P_{B2}}{Q_{A1} + Q_{A2}}$	$\frac{\Delta Q_A}{\frac{1}{2}(Q_{A1} + Q_{A2})} \div \frac{\Delta P_B}{\frac{1}{2}(P_{B1} + P_{B2})}$
$+\frac{4}{1} \times \frac{5 + 6}{10 + 14}$ (44) (24)	$\frac{+4}{\frac{1}{2}(10 + 14)} \div \frac{+1}{\frac{1}{2}(5 + 6)}$
+ 1.83	**+ 1.83**
15 marks graded	

(iii) Good A is a **substitute** good:
It has a + sign. This means that as the price of Good B increased the consumer switched from Good B to the cheaper alternative, Good A.

5 marks

2005

Question 1 – Demand, Markets and Government Intervention in markets

(a) State and explain FIVE factors that affect a consumer's demand schedule *(25 marks)*

The factors which influence a consumer's demand schedule: $D_A = f(P, P_{OG}, Y, T, E, G, U)$

(i) Price of the good itself.
Generally as the price of a good falls consumers will buy more of that good – consumers are getting better value for their money.

(ii) Prices of complementary and substitute goods.
If the price of a complementary good rises then demand for this good falls - e.g. an increase in the price of petrol will result in a drop in the demand for large cars, as consumers may be tempted to use alternative modes of transport. If the price of a substitute good rises then demand for this good rises, as it has become relatively cheaper.

(iii) Income of the consumer.
For normal goods as disposable income rises the demand for them increases and vice versa e.g. smaller quantities of goods are bought when a person becomes unemployed.

(iv) Consumer tastes or preferences.
When a commodity comes into fashion or into season there is an increase in the quantity demanded at each price. Advertising attempts to influence taste in favour of the good.

(v) Expectations concerning future prices .
If a consumer expects that future prices are likely to be greater than they are at present, then there may be an increase in the demand for the good at each price.

(vi) Government regulations.
If the government initiates a programme to curtail consumption of a particular product then it may affect the demand for a good e.g. a health education campaign to curtail cigarette consumption.

(vii) Unplanned factors.
If there was a sudden heatwave this may result in an increase in the demand for suncream / icecream.

5 points at 5 marks graded.

(b) (i) Show, by means of a labelled diagram, the market demand and supply for a product. Indicate the equilibrium price and quantity in this market.

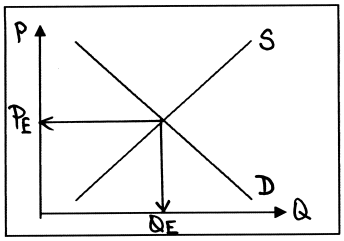


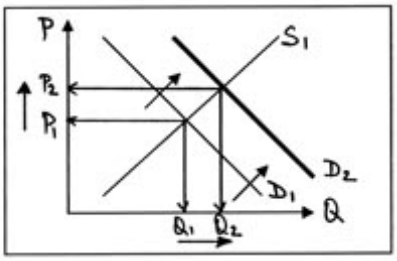
Diagram: P, Q, D/C and S/C:
Equilibrium P_E and Q_E

6 marks graded.

(b) (ii) Explain, with the aid of a separate diagram in each case, the effects which **each** of the following may have on the above equilibrium position.

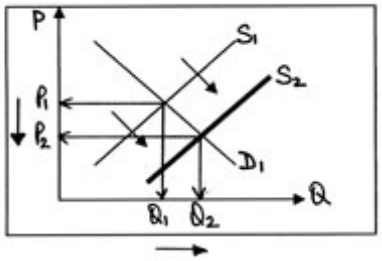
- A successful advertising campaign is favour of the product is introduced;
- A tariff on imports of the product is removed.

A successful advertising campaign is favour of the product is introduced – 12 marks graded.



Effect: The **D/C** will shift to the right.
Why? Consumers are enticed to buy more due to the successful advertising campaign
Equilibrium: both price and quantity increase.

A tariff on imports of the product is removed – 12 marks graded.



Effect: The **S/C** will shift to the right.
Why? The removal of the tariff will result in an increase in the quantity of imports into the market resulting in an increase in supply.
Equilibrium: Price falls and quantity increases.

(c) Assume that the average spending on energy by a low income family is €40 weekly.
The price of energy rises by 20% so that the same consumption by a low income family would now cost €48 weekly.
The government is considering introducing one of the following policy measures to assist low-income families:

- giving low income families an increased allowance of €8 weekly (income supplement);
- subsidising the producers of energy so that energy can continue to be sold at the initial price (price subsidy)

Which policy measure would you advise the government to take? Explain the economic reasons for your answer. *(20 marks)*

Giving low income families an increased allowance of €8 weekly (income supplement).

1. Cost efficient.
As the income supplement specifically targets low-income families it is cost efficient and cheaper for the government than the price subsidy.

2. Purchasing power maintained / No change to standard of living.
Low-income families will now receive an additional €8 weekly income.
The family now have a choice in deciding how to allocate this. It can maintain existing energy consumption or economise on the use of energy and use the €8 in some alternative way.

3. Efficient use of state scarce revenues.
As government revenue is limited and there are many demands on it the specific targeting of low income families could lead to more efficient use of these scarce revenues.

4. Efficient use of scarce resources by consumers.
As the price of energy rises, consumers seeing this may economise on energy use thus saving scarce resources.

OR

Subsidising the producers of energy so that energy can continue to be sold at the initial price (price subsidy).

1. Protecting employment.
By using a price subsidy the demand for energy will remain unchanged and so employment is protected.

2. Prevent an increase in inflation / maintain competitiveness.
The government may use the price subsidy so that energy prices remain unchanged hence maintaining price stability and ensuring that our competitiveness is not affected, subject to EU rules.

3. Pressure on employees for greater cost efficiencies / maintain partnership agreements.
The government may use this price subsidy as leverage for achieving cost reductions within the industry. This could involve: encouraging employees to face cutbacks / rationalisation; encouraging employees and trade unions to continue with Partnership Agreements, in return for maintaining price stability.

2 points at 10 marks graded.

2004

Question 2: ELASTICITY

(a) Define the following types or degrees of price elasticity of demand:
(i) Perfectly elastic demand.
(ii) Perfectly inelastic demand.
(iii) Elastic demand.
(iv) Unitary elastic demand.

(20 marks)

Marking Scheme: 4 points x 5 marks graded

(i) **Perfectly elastic demand**.
- This occurs when consumers are prepared to buy all they can of a good at a given price, while any increase in price above this given price will result in quantity demanded to fall to zero.

(ii) **Perfectly inelastic demand**
- The percentage change in price causes no change in the quantity demanded.

(iii) Elastic demand
- The percentage change in demand is greater than the percentage change in the price of the good

(iv) **Unitary elastic demand**.
The percentage change in demand is equal to the percentage change in the price of the good

(b) State and explain FIVE **factors that affect price elasticity of demand.** ***(25 marks)***

Marking scheme
5 points at 5 marks graded.

1. The availability of close substitutes.
- **When a good has a close substitute and its price is increased the demand for the good will be elastic because people will switch to the cheaper substitute.**
- **Where a good has no substitutes and its price is increased there is no substitute to switch to and so it will be inelastic.**
- **The closer the substitutability between goods the more consumers will tend to switch their purchasing behaviour in response to a change in relative prices and thus the greater will be PED.**

2. Complementary goods.
- **If the good in question is the cheaper of two goods, which are in joint demand, then the demand for it is likely to be relatively inelastic in response to changes in its own price.**

3. Is the commodity a luxury or necessity?

- **It is not vital that one should possess luxuries and therefore the PED for them will be relatively elastic.**
- **Necessities are vital for life – people must buy them even when their price is increased – and so their PED will be relatively inelastic.**

4. The proportion of income which is spent on the commodity.

- **In general the greater the proportion of income which is spent on a good, the more elastic is demand for it likely to be in response to a change in its own price – because the more important is a change in its own price.**
- **A rise if 50% in the price of a box of matches is unlikely to have a significant effect on the demand for them.**

5. The durability of the commodity.

- **The more durable the commodity, the more elastic is the demand for it likely to be in response to a change in its own price.**
- **If products such as motorcars are increased in price, it is likely that the public will extend the life of their existing model and postpone the purchase of a replacement.**

6. Expectations as to future changes in price.

- **If, in the face of a price reduction, the public considers that prices are likely to fall even further, they may wait for the further reduction in price, in which case demand may not be very elastic to the initial price reduction.**

7. The length of time allowed for adjustment to price changes.

- **The longer any price change persists, the greater will be the PED.**
- **If the price of electricity rose by 80% a consumer may economics on the use of various appliances in the short term. In the long term the consumer will have to consider substituting other forms of energy. The longer the time period available to figure out possible changes, the more electricity will be saved. The demand will at first be highly inelastic but as time goes on will become more elastic.**

8. Consumer habits / brand loyalty.

- **A consumer may become strongly attached to a particular product through habit or loyalty to that brand. An increase in price for that good will not cause him/her to consume less of the product or to switch to cheaper substitutes. The demand for such goods will therefore be price inelastic.**

9. Number of alternative uses the good has.

- **A commodity which has a large number of uses will usually have a relatively elastic demand. For example sugar is used in direct consumption, sweetening purposes, baking, food processing etc. Any increase in the price of sugar may only result in a small fall in its demand in each of these markets but the total drop overall may be significant.**

(c) A consumer spends €120 per month on a product when its unit price is 80c, and continues to spend €120 per month on this product when its unit price is increased to €1.

(i) Using the formula below, calculate the consumer's price elasticity of demand.
Show all your workings.

$$\frac{\Delta Q}{\Delta P} \times \frac{P_1 + P_2}{Q_1 + Q_2}$$

(ii) Is demand for this product elastic, inelastic or unitary elastic?

(iii) Should the seller make any changes in the selling price of this commodity to increase overall revenue? Explain your answer. (30 marks)

Quantity demanded of the product:

Price	Workings	Quantity Demanded
When the unit price is 80c	€120 / 80 cent	150 units
When the unit price is €1	€120 / €1	120 units

(i) Calculate the Price Elasticity of Demand: ***12 marks graded.***

Correct Answer
$\frac{-30}{+0.20c} \times \frac{0.80c + €1}{150 + 120}$
$\frac{-30}{+0.20} \times \frac{1.80}{270}$
- 1.00

(ii) Is demand for this product elastic, inelastic or unitary elastic?: Unitary elastic: ***3 marks***

(iii) Should the seller make any changes in the selling price to increase revenue? ***15 marks*** **graded**

	Unit elastic
Price Change	The price of the product should be left unchanged
Effect on Demand	Hence the quantity demanded will remain unchanged unchanged.
Effect on Revenue	Thus there will be no effect on the revenue of the firm.
Reason	*Because* The percentage change in quantity demanded equals the percentage change in the price of the product..

2003 Q2

Question 2 Elasticity

(a) Define (i) *price elasticity of demand* and (ii) *cross elasticity of demand*.
In each case, state the formula by which it is measured. (20 marks)

(i) Price Elasticity of Demand measures:

- the percentage / proportionate change in the quantity demanded for a good caused by the percentage / proportionate change in the price of that good.

Formula: $\frac{\Delta Q}{\Delta P} \times \frac{P1 + P2}{Q1 + Q2}$

Definition + Correct Formula: 10 marks graded

(ii) Cross Elasticity of Demand measures:

- the percentage / proportionate change in the demand for one good caused by the percentage / proportionate change in the price of other goods.

Formula : $\frac{\Delta QX}{\Delta PY} \times \frac{PY1 + PY2}{QX1 + QX2}$

Definition + Correct Formula: 10 marks graded

(b) When the price of good X is €27 the quantity demanded of good Y is 1,200 units.
When the price of Good X falls to €23 (the price of Good Y unchanged) the quantity demanded of good Y falls to 800 units.

(i) Using the cross elasticity of demand formula, calculate the cross elasticity of demand for Good Y. Show all your workings.
(ii) Is good Y a substitute for or complement to good X? Explain your choice.

(25 marks)

(i) Formula : $\frac{\Delta Q_X}{\Delta P_Y} \times \frac{P_{Y1} + P_{Y2}}{Q_{X1} + Q_{X2}}$

$\frac{-400}{-4} \times \frac{27 + 23}{1200 + 800} \quad \frac{(50)}{(2000)} = +2.5$

6 correct figures at 2 marks each:**12 marks**/Correct Sign:**2 marks**/Correct answer: **4 mks**

(ii) Good Y is a substitute good. ***7 marks graded***

This means that as the price of good X decreased, consumers switched from Good Y to the cheaper alternative, Good X.

(c) A firm has the following price elasticities of demand for two goods, Good X and Good Y: (30 marks)

Good X = -2.0 Good Y = -0.5

What changes, if any, should the firm make in the selling price of each of the goods to increase overall revenue? Explain your answer.

	Good X: -2.0	**Good Y: -0.5**
Type of Good	Normal because it has a – PED.	Normal because it has a – PED.
Comment	Elastic because PED > 1	Inelastic because PED < 1
Price change	Decrease price	Increase price
Effects on demand	Demand will rise	Demand will fall
Comparison	Because: the % increase in demand exceeds the % decrease in price	Because: the % increase in price exceeds the % decrease in demand
Effect on Total revenue	This will increase	This will increase
	15 marks graded	***15 marks graded***

<u>In cases where candidates assumed that the sign for Good X and Good Y was +</u>

	Good X: + 2.0	**Good Y: + 0.5**
Type of good	<u>Giffen</u> because It has a + PED or as P↑ → Q_D↑	<u>Giffen</u> because It has a + PED or as P↑ → Q_D↑
Comment	Elastic because PED > 1	Inelastic because PED < 1
Price change	Increase price	Increase price
Effects on demand	Demand will rise	Demand will rise
Effect on Total revenue	This will increase	This will increase
	15 marks graded	***15 marks graded***

2003 Q3

Question 3 Demand and Consumer Behaviour

(a) (i) State and explain **FOUR** factors which affect a consumers' demand schedule, other than the price of the good itself.
(ii) Explain the economic rationale for assuming that a person's demand curve for a normal good slopes downward. (30 marks)

(i) The factors, which influence a consumer's demand schedule:

$$DA = f(POG, Y, T, E, G, U)$$

(a) the prices of complementary and substitute goods
If the price of a complementary good rises then demand for this good falls - e.g. an increase in the price of petrol will result in a drop in the demand for large cars.
If the price of a substitute good rises then demand for this good rises, as it has become relatively cheaper.

(b) the income of the consumer
For most goods as income rises the demand increases and vice versa
e.g. smaller quantities of goods are bought when a person becomes unemployed.

(c) the consumers' tastes or preference for a commodity
When a commodity comes into fashion or into season there is an increase in the quantity demanded at each price. Advertising attempts to influence taste in favour of the good.

(d) The expectations concerning future prices, availability of income
If a consumer expects that future prices are likely to be greater than they are at present, then there will be an increase in the demand for the good at each price.

(e) government regulations
If the government initiates a programme to curtail consumption of a particular product then it may affect the demand for a good
e.g. a health education campaign to curtail cigarette consumption.

(f) Unplanned factors
If there was a sudden heatwave this may result in an increase in the demand for suncream / ice cream etc.

4 points x 6 marks graded

(ii) The reason a person's demand curve for a normal good slopes downward:

as the price of a good falls the consumer buys more of this cheaper good, because **the marginal utility per cent spent on this good increases** and the consumer aims to maximise his/her total utility.

6 marks graded

(b) For something to be considered an *economic good,* it must possess certain characteristics. State and explain **THREE** of these characteristics. (20 marks)

(i) It must command a Price.
Supply must be scarce in relation to the demand for it.
If not people will not be prepared to pay a price to obtain it.

(ii) It must provide Utility.
The commodity must provide a feeling of satisfaction.
Anything which is a nuisance or irritant does not, and so is not an economic good.

(iii) It must be transferable.
For an item to be considered an economic good it must be capable of being transferred from one person to another.

3 points: 7 +7 + 6 marks graded

(c) A consumer spends all income on two goods, Good A and Good B. Both goods are normal goods but they are not complementary goods. The price of Good A is reduced and the price of Good B remains unchanged. The consumer continues to spend all income on the two goods. Distinguish between the substitution effect and the income effect of the price reduction in Good A.

(25 marks)

Substitution Effect	**Income Effect**
Demand for Good A	**Demand for Good A**
Increases	Increases
Good A is now relatively cheaper. Hence the consumer is getting increased marginal utility for this good.	Consumer has additional income, due to the reduction in price of Good A As good A is a normal good the demand for this good will increase.
13 marks graded	***12 marks graded***

2002

Q3 Elasticity

(a)

(i) Income Elasticity of demand

Measures the percentage change in/responsiveness of the demand for one good caused by the percentage change in the consumer's income.

(ii) Cross Elasticity of Demand

Measures the percentage change in/responsiveness of the demand for one good caused by the percentage change in the price of other goods.

2 definitions: 8 + 7 marks graded

(b) (i)

YED is usually positive **5 marks graded**

- This means that as income increases, quantity demanded rises
- These goods are normal goods.
- e.g.YED for foreign holidays is positive.

YED is sometimes negative **5 marks graded**

- This means that as income rises, quantity demanded falls
- These goods are inferior goods.
- e.g. YED for potatoes is negative.

(b) (ii) **10 marks graded**

- This good is a normal good
- Let the consumer's income = €100. S/he spends €40 on the good.
  The consumer's income is doubled. S/he now spends €60 on the good

(c)

3 x 10 marks graded = 30 marks

Category	Answer	Explanation
YED for potatoes	**- 0.1**	- Potatoes are an **inferior good** – so they have a negative YED - Potatoes are a necessity – so they are inelastic.
YED for designer clothes	**+2.5**	- Designer clothes are a **normal good** - so they have a **positive YED** - Designer clothes are a **luxury** – so they are **income elastic**.
PED for airline seats	**- 2.8**	- Airline seats are a **normal good** so they have a **negative PED** - Demand for airline tickets **is responsive to price changes** – so they are **price elastic.**

(d) YED =+1.8 and Sales in Year 1 = 20,000 units. Consumers income rises by 5%

- For the 5% rise in income, sales will rise by 1.8 x 5 = **9%.**
- Sales will rise by **9% x 20,000 units = 1,800 units**.
- Thus sales in Year 2 = 20,000 + 1,800 = **21,800 units**. **10marks graded**

2001 Q2

(a) Define what is meant by price elasticity of demand. (10 marks)

Price Elasticity of Demand measures the

- percentage / proportionate change in the quantity demanded for a good caused by the percentage / proportionate change in the price of that good.

- Responsiveness of QD to changes in the price of the good itself.

Marking Scheme
10 marks graded

(b) A consumer buys 80 units of a good when the price is £1.50. The price increases to £1.75 and the consumer now buys 70 units.
(i) Using the formula below, Calculate the consumer's price elasticity of demand. Show all your workings.

$$\frac{Q}{P} \times \frac{P1 + P2}{Q1 + Q2}$$

(ii) Is demand for this good elastic, inelastic or unitary elastic?
(iii) The seller of the above good wishes to earn maximum revenue. What changes, if any, should the seller make in the selling price of the good to earn maximum revenue? Explain your answer. (35 marks)

(i) $\frac{-10}{+25p}$ $\frac{[£1.50 + £1.75]}{[80 + 70]}$ [or] $\frac{-10}{+25p}$ $\frac{£3.25}{150}$

4 figures @ 4 marks each = 16 marks

Answer, PED = - 0.866

Correct Sign: 3 marks Correct value: 3 marks

(ii) Demand for this good is inelastic: 3 marks

(iii)

1. The seller should increase the price of the good.
2. This will cause the demand for the good to decrease.
3. However the percentage drop in the demand for the good is small relative to the price change in percentage terms. The revenue gained from the rise in price outweighs the revenue lost from the subsequent fall in demand.
4. Total revenue will increase.

Marking Scheme	
• Increase in price:	3 marks
• Decrease in demand:	3 marks
• % increase in P exceeds % drop in demand:	2 marks
• so Total revenue will increase:	2 marks

(c) State and explain FOUR factors that affect price elasticity of demand (30).

1. The availability of close substitutes.

- When a good has a close substitute and its price is increased, the demand for the good will be elastic because people will switch to the cheaper substitute.
- Where a good has no substitutes and its price is increased there is no substitute to switch to and so it will be inelastic.
- The closer the substitutability between goods the more consumers will tend to switch their purchasing behaviour in response to a change in relative prices and thus the greater will be PED.

2. Complementary goods.

- If the good in question is the cheaper of two goods, which are in joint demand, then the demand for it is likely to be relatively inelastic in response to changes in its own price.

3. Is the commodity a luxury or necessity?

- It is not vital that one should possess luxuries and therefore the PED for them will be relatively elastic.
- Necessities are vital for life – people must buy them even when their price is increased – and so their PED will be relatively inelastic.

4. The proportion of income which is spent on the commodity.

- In general the greater the proportion of income which is spent on a good, the more elastic is demand for it likely to be in response to a change in its own price – because the more important is a change in its own price.
- A rise if 50% in the price of a box of matches is unlikely to have a significant effect on the demand for it.

5. The durability of the commodity.

- The more durable the commodity, the more elastic is the demand for it likely to be in response to a change in its own price.
- If products such as motorcars increase in price, it is likely that the public will extend the life of their existing model and postpone the purchase of a replacement.

6. Expectations as to future changes in price.

- If, in the face of a price reduction, the public considers that prices are likely to fall even further, they may wait for the further reduction in price, in which case demand may not be very elastic to the initial price reduction.

7. The length of time allowed for adjustment to price changes.

- The longer any price change persists, the more elastic will be demand.
- If the price of electricity rose by 80% a consumer may economise on the use of various appliances in the short term. In the long term the consumer will have to consider substituting other forms of energy. The longer the time period available to figure out possible changes, the more electricity will be saved. The demand will at first be highly inelastic but as time goes on will become more elastic.

8. Consumer habits / brand loyalty.

- A consumer may become strongly attached to a particular product through habit or loyalty to that brand. An increase in price of that good will not cause him/her to consume less of the product or to switch to cheaper substitutes. The demand for such goods will therefore be price inelastic.

9. The number of alternative uses the good has.

- A commodity, which has a large number of uses, will usually have a relatively elastic demand. For example sugar is demanded for direct consumption, sweetening purposes, baking, food processing etc. Any increase in the price of sugar may only result in a small decrease in its demand in each of these markets but the total overall drop in demand could be significant.

Marking scheme
4 points: 8 + 8 + 7 + 7 = 30 marks.
State: 4 x 3 marks each. Explain: 5 + 5 + 4 + 4 marks.
The explanation must state whether PED is elastic/inelastic as a result of the factor identified.

2001 Q3

(a) State FOUR factors that affect the supply of a good, other than the price of the good itself, and explain how each factor affects supply. (25 marks)

1.The cost of producing the product.
If there are increases in costs of factors of production, which a firm uses in the production of its good, then it will be more costly to manufacture the good. The firm will not continue to supply the same quantity of the good at the old price – hence there will be a reduction in the quantity supplied.

2.The state of the firm's production technology.
As new machinery is invented, as labour becomes more specialised and efficient the factors of production become more efficient. It becomes possible to increase their output even though the payments they receive remain the same. A technological improvement means that the supplier can use inputs more efficiently, and the cost of producing a unit of output falls.

3. The price of related goods.
If there is an increase in the selling price of other goods, which the manufacturer could produce by using his existing factors of production, he may switch from producing the present commodity to that for which the price has increased.

4.Unplanned factors.
There may be changes in the quantity supplied, which were never intended by the producer. Examples include agriculture – due to changes in the weather; diseases etc. In industry there may be shortages of raw materials, strikes etc.

5. Taxation / Subsidy. (Either bulleted point)

- If the government were to reduce the rates of taxation on raw materials used in the manufacture of a commodity, this represents a reduction in the cost of production and hence quantity supplied could increase.
- If a subsidy is granted on the raw materials or on the labour employed by the firm, this has the effect of reducing costs and thereby could result in an increase in the quantity supplied.

6. Number of sellers in the industry.
If the number of firms in the industry decreased e.g. due to rationalisation then the overall quantity supplied to the market would decrease.

7. Objectives of the firm.
If the objectives of the firm changed from profit maximisation to a deliberate reduction in output by firms in the industry then quantity supplied would fall.

8. Time period available to adjust supply.
The longer the time available the more elastic is supply e.g. in the short term the supply of fresh fish caught daily is totally inelastic but over time it becomes more elastic.

Marking Scheme: 4 points: 7 + 6 + 6 + 6 = 25
State: 4 at 3 marks = 12mks. Explain 4 points clearly at 4 + 3 + 3 + 3

(b) State and explain the principal economic assumptions made about consumer behaviour. (25 marks)

1. The consumer has a limited income.

- The consumer's income is not large enough to satisfy all his/her needs and wants.
- Therefore the consumer must choose between those goods he/she wishes to buy.

2. The consumer seeks to gets maximum satisfaction [utility] from that income / obeys the Equi-Marginal Principle of Consumer Behaviour.

- Consumers will spend their limited income in such a way that they will achieve the most satisfaction / best value for money.

3.The consumer acts rationally.

- The consumer acts in that manner consistent with his / her preferences e.g. if the person sees an identical commodity priced differently in two adjoining shops they will buy it at the lower price.

4.The consumer is subject to the law of diminishing marginal utility.

- As consumers consume additional units of a good, their marginal utility for this good will eventually decline.

Marking Scheme: 3 points : 9 + 8 + 8
State: 3 points at 5 marks each = 15 marks.
Explain clearly : 3 points at : 4 + 3 + 3

c) The law of diminishing marginal utility states that as additional units of a good are consumed the marginal utility of this good will eventually decline.

(i) State and explain the assumptions underlying the law of diminishing marginal utility

(ii) Give TWO examples of commodities, which do not comply with this law.

Justify each choice with a brief explanation. (25 marks)

(i) Assumptions underlying the law of diminishing marginal utility:

1.It applies only after a certain point called the origin.
The origin is the minimum quantity of the commodity, which can be used effectively, and until this stage has been reached marginal utility may not diminish.

2. Time has not elapsed for circumstances to change.
The law assumes that the consumer's taste do not change.
The nature of successive units of the commodity does not change.
If a person eats a number of oranges, each additional orange consumed will give diminished marginal utility. However, if a person eats one on a Monday, one on a Thursday and one on Sunday, because of the time which has elapsed between the consumption of each extra orange, marginal utility may not diminish.

3. It assumes that income doesn't change.
If income rises or falls then marginal utility may not decline as consumption increases.

4.It does not apply to addictive goods / medicine.
In the case of goods to which one becomes addicted the law does not apply.
The consumer may gain increasing marginal utility by consuming each additional unit.

Marking Scheme : 3 clearly stated points x 5 marks each = 15marks

(ii) Give TWO examples of commodities, which do not comply with this law.
Justify each choice with a brief explanation.

1. Medicine
The second dose may be just as important as the initial one.

2. Addictive Goods e.g. alcohol / cigarettes
The consumer's marginal utility will not decline because each extra unit consumed brings the consumer additional marginal utility.

3. Goods/services where consumers need to develop a taste for the commodity e.g. health foods

4. Goods that give increased marginal utility.
e.g. a unique stamp collection.

2 examples at 5 marks each = 10 marks
State: 2 at 3 marks = 6mks. Explain: 2 at 2 marks. = 4 marks.