

Mark Scheme (Results) Summer 2010

GCE

GCE ECONOMICS (6EC01) Paper 01

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NB: candidates may achieve up to 3 marks for explaining three incorrect options (provided three different reasons are offered and each option key is explicitly rejected).

Questio	Answer	Mark
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Number		
1	Answer C (1)	
	• Definition of production possibility frontier (the maximum output combinations an economy can achieve when all its resources are fully / efficiently employed) (1)	
	• Definition of opportunity cost (the value of the next best alternative foregone) (1)	
	• Diagrammatic analysis or explanation of opportunity cost, e.g. depicting a movement along the production possibility frontier and showing the loss of output for one good and gain of another good (1+1)	
	Rejection marks	
	• Option A is incorrect since external costs are those costs not taken into account by the price mechanism and are not shown on a production possibility frontier. (1)	
	 Option B or D incorrect since producer surplus / equilibrium price is shown by use of a demand and supply diagram. (1) 	(4)

Questio	Answer	Mark
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Number		
2	Answer D (1)	
	• A decrease in the machinery costs means a decrease in production costs for mining gold. (1)	
	 Increase in incentives to produce (1) 	
	• Award for a correctly labelled diagram depicting an increase in supply and a fall in market price (1+1) OR identifying that the supply of gold will increase. (1)	
	 Rejection marks Option A is incorrect since an increase in national income will shift the demand curve outwards / to the right / increase the price of gold. (1) 	
	• Option B is incorrect since a decrease in the price of silver will cause a decrease / shift inwards in the demand for gold - a substitute good. (1)	(4)

• Option C is incorrect since an increase in wages of gold miners will lead
to a decrease / inward shift in the supply curve for gold so price
increases. (1)

Questio	Answer	Mark
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Number		
3	Answer B (1)	
	• Definition of consumer surplus (the difference between the price one is	
	prepared to pay for a good and the actual price / market price paid) OR	
	(the area above the equilibrium price and below the demand curve). (1)	
	 Identification of original consumer surplus as £500 / further 	
	development using a numerical example(1)	
	• Definition of VAT (a tax placed on the expenditure / a tax set as a	
	percentage of the price of a good) or indirect tax (1)	
	Further that a substitution is MAT will us done the automotion of an iso	
	• Explanation that a reduction in VAT will reduce the price of cruise	
	nolidays and so lead to an increase in consumer surplus. (1)	
	• Diagrammatic analysis denicting an outward shift in supply surve (either	
	• Diagrammatic analysis depicting an outward smith in supply curve (either showing the original consumer surplus / the new level of consumer	
	showing the original consumer surplus $/$ the new level of consumer surplus $/$ the change in consumer surplus $(1+1)$ (accept parallel shift in	
	surplus / the change in consumer surplus (1+1) (accept paramet shirt in surplus)	
	suppry)	
	Rejection marks	
	\circ Option A is incorrect since an increase in wages to cruise holiday	
	workers will increase production costs / possibly raise the price of cruise	
	holidays - reducing consumer surplus. (1)	
	\circ Option C is incorrect since an increase in price of cruise holidays to	
	£3000 will eliminate Neringa's consumer surplus. (1)	
	\circ Option D is incorrect since a decrease in the number of companies in the	
	industry may shift the supply curve inwards and so raise the price of	(1)
	Caribbean cruise holidays (1).	(4)

Questio	Answer	Mark
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Number		
4	Answer C (1)	
	 Definition of a subsidy (Government grant to firms to increase production / reduce price of a good) (1) 	
	•Unit subsidy × quantity is £3 × 150 = £450 (accept other methods of calculating subsidy) (2)	

Annotation of diagram to show subsidy area (but must be labelled)(1)	
• Award for identifying unit subsidy as the vertical difference between the supply curves OR £3 (1)	
Rejection marks • Option B is incorrect as this is the consumer subsidy. (1)	(4)
• Option D is incorrect as this is the total consumer expenditure on the good plus the government subsidy. (1)	

Questio	Answer	Mark
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Number		
5	Answer C (1)	
	• Definition or formula of cross elasticity of demand (the responsiveness in demand for one good due to a change in price of another good or % Δ QD good B ÷ % Δ P good A) (1)	
	• Games console and software games are complementary goods / joint demand. (1)	
	• Complementary goods have a negative cross elasticity of demand. (1)	
	• A fall in price of games consol will cause an increase in the demand for computer software games. (1)	
	Rejection marks	
	• Option A is incorrect since lamb and chicken are substitutes with a positive cross elasticity of demand / a decrease in price of one will cause a decrease in demand for the other. (1)	
	• Option B is incorrect since bus travel and potatoes are likely to be unrelated goods / inferior goods / they have a zero cross elasticity of demand. (1)	
		(4)
	• Option D is incorrect since leather and beef are in joint supply. (1)	

Question Number	Answer	Mark
6	Answer D (1)	
	• Definition / understanding of tradable pollution permits, e.g. an allowance on the amount of pollution firms may emit which can be bought and sold in the market. (1)	
	• Relevant diagrammatic analysis which shifts the supply curve for carbon permits inwards and so increases its price (1+1) OR written explanation that a decrease in the supply of permits will lead to a rise in price. (1)	

• Higher price of permits increase the cost of polluting or act as an incentive for firms to reduce their pollution. (1)	
• A low market price means firms have little incentive to reduce pollution / it might be cheaper to purchase additional permits rather than fund cleaner technology / install clean production methods. (1+1)	
 Rejection marks Option A is incorrect since an excess supply of pollution permits is likely to lead to a fall in price and so firms have less incentive to reduce pollution emissions. (1) 	
• Option B is incorrect since major polluting industries such as air travel should be included in the carbon trading scheme so that less pollution is emitted. (1)	
• Option C is incorrect since some firms may deliberately exceed / ignore their carbon permits as there is little chance of paying for it. (1)	(4)

Questio	Answer	Mark
n		
Number		
7	Answer A (1)	
	• Explanation of the free rider problem (difficulty in charging people for consuming a good once it is provided) NB: Only award if reference made to the inability for charging consumers. (1)	
	 The free rider problem leads to under-provision of a good and so is market failure. (1) 	
	 Definition of public goods (non-excludable and non-rivalry) (1) 	
	• Example of a public good, for example, light house, pavements, street lighting, flood defence scheme, national defence and public firework display. (1)	
	Rejection marks	
	• Option B is incorrect since taxation of public goods will lead to a further reduction in their provision / increase market failure. (1)	
	 Option C is incorrect since luxury goods are private goods and so not relevant. (1) 	
	• Option D is incorrect since subsidies to goods which yield high external costs will increase market failure / increase the gap between the market equilibrium and social optimum position / examples of goods which yield external costs such as tobacco smoking, alcohol consumption or private motoring. (1)	(4)

Question	Answer	Mark
Number		
8	 Answer B (1) Definition of market failure (the price mechanism fails to allocate resources efficiently / inefficient allocation of resources / the price mechanism leads to a welfare loss) (1) 	
	• Definition of external benefits (benefits external to an exchange / positive third party effects / benefits outside of a transaction / difference between social and private benefits / benefits the price mechanism ignores) (1)	
	 Identification of under-consumption of education / explanation of this e.g. a more productive workforce. (1) 	
	 Social benefit exceeds social cost of university education for QeQ1 students (1) 	
	 Identification of welfare gain or loss triangle is ZYX or annotation of diagram (1) 	
	 Identification of market equilibrium position MPB=MPC / identification of social optimum equilibrium position MSB=MSC (1+1) NB: Just identifying market equilibrium at output Qe and social optimum at output Q1 without reference to MSB/MSC/MPB/MPC then award 1 mark 	(4)
	Rejection marks • Option A is incorrect since the free market quantity 0Qe is less than the	

social optimum number of students 0Q1. (1)
• Option C is incorrect since the triangle of welfare gain is ZYX. (1)
• Option D is incorrect since the marginal external benefit increases / pivots as the quantity of students increase. (1)

Question Number	Answer	Mark
9(a)	 Direct reference to food price increase in Figure 1 e.g nominal price rise from 100 to more than 200 / real price rise from 100 to 160. (1) The increase in price of food caused by: Increase in demand due to global population growth / increase in incomes in developing countries (1+1) Either of these points may be developed to achieve 2 marks, e.g. reference to positive income elasticity of demand for food / normal good. NB: 2 marks available for explaining increased demand. Decrease in supply due to increased costs of production / e.g. rising fuel prices, farm machinery and animal feed (1+1). NB: 2 marks available for explaining decreased supply. Accept a reference to inelasticity of supply and/or demand (1). NB: Award a maximum of 5 marks for explanation / data reference. 	



Question	Answer	Mark
Number		
9(b)	 Award up to 4 marks for KAA Low income households likely to be hit the hardest since: Price elasticity of demand is inelastic / basic necessity / so an increase in food price will cause an increase in total spending on food (1+1) They spend a higher proportion of their income on food than other income groups / consequently spend less on other goods. (1+1) The extract refers to a 'shortage of affordable food' / suggesting it is the basics which are rising in price such as bread, potatoes, vegetables, rice and fruit. (1+1) 	
	• Demand for food is income inelastic / the percentage change in spending	

on food is less than the percentage change in income (1+1)	
Evaluation (2 marks)	
• Magnitude of the increase in food prices / significant increase of more than 100%.	
Discussion of real income falling.	
• Discussion of households switching to inferior goods / lower priced alternatives.	
Composition / size of household.	
 It depends on the meaning of 'households on low incomes'. 	
• An increase in price of luxury foods may have little impact on low income households who are unlikely to purchase these types of food.	
 Government may respond by offering food subsidies / additional welfare payments. 	(6)

Question	Answer	Mark
	Award up to 4 marks for KAA:	
	• Definition / understanding of price elasticity of demand. (1)	
	• Understanding of price inelastic demand (the proportionate change in demand is less than the proportionate change in price). This may be shown by a diagram. (1)	
	 Food likely to be price inelastic in demand as a whole since essential good / necessity. (1) 	
	• No substitute for food (1)	
	• Numerical application of price inelastic demand. (1)	
	 Food is price inelastic in demand as spending on it comprises relatively small proportion of total income (1) 	
	Evaluation (2)	
	• Depends on type of food / luxury items such as caviar / eating out at restaurants may be price elastic in demand.	
	• Discussion of broad and narrow definition of food (food as a whole is price inelastic in demand).	
	 Comparison of different income groups / depends on whether a developed or developing country. 	(6)
Question Number	Answer	Mark
9(d)	Award up to 6 marks for KAA:	
	• Definition of minimum price (e.g. the minimum price below which the price of a good cannot fall / a floor price)(1)	
	Price	



Question	Answer	Mark
Number		
9(e)(i)	 Maximum of 2 marks available for private costs 	
	Definition of private costs: (1+1)	
	Costs internal to an exchange or a transaction / costs which the price	
	mechanism take into account / costs to the consumer or producer	
	directly for a good or service / financial cost or monetary cost to consumers or producer.	
	Identification of an example of private cost e.g. wages, raw materials,	(4)
	rent and purchase of machinery (1).	
	NB: 'cost to the individual or firm' is not enough for awarding a mark.	
	Maximum of 2 marks available for external costs	
	 Definition of external costs (1+1) 	
	• Costs external to an exchange or transaction / costs which the price	
	mechanism fail to take into account / negative third party effects / difference between social costs and private costs	
	• Identification of an example of external costs e.g. pollution	
	congestion (1)	
	• Diagram showing private, external and social costs (1).	

Questio	Answer	Mark
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Number		
9(e)(ii)	Award up to 6 marks for KAA	
	NB: No marks for definitions of private costs and external costs as these have already been awarded in Q9e(i)	
	• Application of private costs of intensive farming / GM farming e.g. research and development costs / labour costs / raw materials / machinery costs (1+1).	
	• Application of external costs e.g. worse quality of food / public health issues / reduction in bio diversity / animal welfare / pesticides in rivers (1+1 marks).	



	surplus and help low income groups / provide surpluses for people in developing countries / increase farm revenues and stabilise food prices / less pressure on grazing land in developing world.	
	 Discussion of imperfect market knowledge / uncertainty over long-term impact of GM farming. 	
	 Discussion on whether costs outweigh benefits / cost-benefit analysis may be needed. 	
	 Discussion of government regulations on GM farming to protect consumers. 	
	 UK only produces 48% of its food so intensive / GM farming may be a necessary evil. 	
	• Intensive / GM farming may not have to be undertaken if people are more careful on consuming food they buy rather than throw so much away as mentioned in extract (lines 22 & 23); one-third of all food is thrown away.	

Questio	Answer	Mark
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Number		
10(a)(i)	 Explanation of a decrease in sales up to 6 marks KAA: Total revenue likely to decrease (do not award for stating decrease in demand)(1) Data reference to Figure 1 e.g. fall in car sales from 2.4 million (2007) to 2.26 million (2008) or 2.16 million (2009). Be prepared to accept reference to falling car sales of 21.8% in the first 3 months of 2009. (1) 	
	 This is because price decreases and quantity decreases (1) Definition of total revenue (total revenue gained by selling a given quantity of cars or price × quantity) (1) 	



Question	Answer	Mark
Number		
10(a)(ii)	Explanation KAA up to 4 marks	
	 Demand for car workers will decrease (1) 	
	• Decrease in employment of car workers (1)	
	 Decrease in wage rate of car workers or pay freeze (1) 	
	NB: Alternatively this may be shown by diagrammatic analysis of the labour market depicting an inward shift in the demand for labour / lower wages and employment (award 3 marks). Do not double award for both explanation and diagram.	

NB: If two diagrams are shown - one for the car market and one for the car worker labour market which shows a decrease in demand for both (award 4 marks).	
 Labour is a derived demand / demanded not for its own sake but for the goods it produces (1+1). 	
• Data reference e.g. Nissan announced 1200 redundancies / Toyota has halved production shifts / Honda has reduced wages / GM may close its plants (1).	
 Change in working conditions e.g. shorter working week / flexible hours / sabbaticals / enforced holidays through temporary closure / underemployment (1+1). 	(6)
Evaluation (2 marks)	
 Magnitude of decrease in demand - very significant here. It may require retraining to provide new skills for car workers so they can move into different occupations. 	
 Short run and long run implications e.g. Vauxhall may be seeking to hold on to its workforce by offering sabbaticals in anticipation of an upturn in sales. 	
 Discussion on elasticity of demand or supply of labour. 	
 Accept idea of an increase in demand for second hand car sales people or car mechanics. 	
 Accept idea that wage rates may not fall too much due to the national minimum wage / strength of trade unions. 	
Government grants / loans may reduce impact of job losses.	

Question	Answer	Mark
Number		
10(b)	Explanation of KAA up to 6 marks	
	Candidates may refer to both geographical and occupational mobility / immobility of labour.	

	• Explanation / understanding of geographical immobility / mobility of labour (difficulty in relocating to other regions to take available work) (1)
	 Geographical mobility of labour will depend on individual e.g. age / family circumstances / knowledge of available jobs in other localities / house price differentials and rental differentials / removal costs (1+1+1).
	• Data reference e.g. Magna motor vehicle plants at Luton and Ellesmere Port - areas of high unemployment and so a labour immobility problem (1).
(6)	• Explanation / understanding of occupational immobility / mobility of labour (difficulty in car workers taking available work in different occupations) (1)
	 Occupational mobility may be quite low as car work is highly specialised / occupational mobility is low and so retraining courses may be required for car workers / lack of government funds available for retraining / discussion on transferable skills (1+1+1).
	• Discussion on temporary plant closures - which may have little effect on mobility of labour if they reopen (1).
	Use of real life example (1)

Questio	Answer	Mark
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Number		
10(c)	Explanation KAA up to 4 marks:	
	• Definition or formula of income elasticity of demand (responsiveness of	
	demand for a good due to a change in income). (1)	
	• Demand for new cars appear income elastic since proportionate change in demand is greater than the proportionate change in income / OR YED is greater than 1 / OR use of figures (1)	
	• Reference to the data: 1% fall in income has lead to a 21.8% fall in demand (1).	
	 Calculation of income elasticity of demand is 21.8 (1). NB Do not award if answer states 21.8% 	
	 Cars are a normal good (accept luxury) / they have a positive income elasticity of demand (1). 	
	• Diagram depicting income elastic demand for new cars (1)	
	Evaluation (2)	
	• Depends on type of car e.g. luxury cars may have a different income elasticity of demand than smaller cars.	
	 Discussion of second hand cars which may be less income elastic in demand. They may even be inferior goods. 	(6)
	• YED for cars may change over time.	
	 People unlikely to purchase new car if uncertainty over future employment prospects and lack of consumer confidence (income elastic). 	
	 Other factors e.g. the availability of finance might also be significant in determining changes in demand. 	

Questio	Answer	Mark
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10(d)	Explanation KAA of positive economic effects up to 6 marks $(2+2+2 \text{ or } 3+3)$:	
10(u)		
	NB Candidates may present either positive or negative effects of the car scrappage scheme for KAA marks. Accept presentation of the alternative view as evaluation.	
	 Benefits to motor vehicle firms include increase in sales, revenue and profits. Prevention of closure of factories. 	
	• Benefits to motor vehicle scrap dealers.	
	 Benefits to motor vehicle workers include saving jobs or reducing the amount of redundancies. 	
	 Benefits to consumers include cheaper prices and more consumer surplus. 	
	• Benefits to government or macroeconomic arguments e.g. include less expenditure on unemployment-related benefits if redundancies reduced / possible fiscal neutral scheme as car sales bring in tax revenue.	
	 Benefits to environment shown in Figure 2 in reduced CO2 emissions / less external costs. 	
	Evaluation (2+2+2 or 3+3)	
	This may refer to the costs of the scheme or reasons why the positive effects are not so significant / limitations of the car scrappage scheme.	
	 Benefits not so significant since motor vehicle firms have to pay half of the grant to consumers / this could reduce profit margins and future investment. 	
	 Domestic car manufacturers may not benefit much since eight out of ten cars purchased are imported / however, UK car component suppliers may benefit more. 	
	• The more expensive car models are unlikely to benefit much from increased demand e.g. Jaguar and Land Rover, compared to the smaller, cheaper models of Ford Fiesta and Toyota Yaris.	
	• Limited funding of scheme (just £300 million compared to the German	

	government's £4.49 billion) / limited time span / job losses still being announced in motor vehicle industry.	
	• Consumers are already receiving price discounts / so these could be simply transferred to the scrappage scheme. Some consumers may have bought new cars without the scheme / danger that firms raise prices and then lower them again so no real change in car prices.	(12)
	 Opportunity cost to government: taxpayers may lose out in form of higher taxes. 	
	 There are significant CO2 emissions in the production of motor vehicles / it may be more environmentally friendly to use existing cars rather than scrap for new ones 	
Questio	Answer	Mark
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Number	Explanation KAA up to 6 marks	
10(8)	• Definition of fuel duty / indirect tax (tax on expenditure of fuel) (1)	
	• Explanation of diagram, e.g. decrease in motoring costs /encourage more consumption and production (1)	
	 Price Pe Pice Pe Pice Pice Pice Pice Since Since<th></th>	
	Note: If MPC, MSC and MB diagram used with tax being shown, award up to 4 marks.	

 Reference to public transport, where there may be an increase or decrease in demand (1) Fuel and cars are complementary goods / a fall in price of fuel will increase demand for cars (1+1) Benefit to the motor vehicle industry, e.g. more revenue and profits (1) Lower fuel prices may increase mobility of labour (1) Benefit to low income motorists (1) Accept macroeconomic argument, e.g. increased employment and incomes via the multiplier, impact on inflation (up to 2 marks) 	
Evaluation (2+2+2 or 3+3)	
Candidates may refer to positive and negative effects of the fuel tax decrease for evaluation.	
 Magnitude of tax decrease. Tax still comprises the majority of fuel price at the pump. 	
 Discussion of price elasticity of demand for fuel; it may be price inelastic and so have little impact for motorists. 	
 Discussion of a reduction in possibility of fuel tax protests. Less disruption to economy. 	
 Impact on economic recovery. It could increase investment in motoring industry / road transport industry. 	
 Other factors may affect the impact of falling fuel prices, e.g. availability of loans to purchase cars. 	
 Increase road traffic congestion. This could lead to higher transport costs in long run / increased negative externalities such as air and noise pollution. 	(12)
 Impact on government finances, e.g. it may worsen since demand for fuel is price inelastic. 	

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