

Economics Questions By Topic:

Government Intervention in Markets (1.4.1)

A-Level Edexcel Theme 1

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SECTION A

Write your answers in the spaces provided.

1	market. N	∕lucł lake	and Lake Naivasha in Kenya supplies 70% of the UK cut-rose flower of the water which the flower farms are dependent on is extracted a. This has resulted in damage to fish stocks and increasing competition	
			(Source: adapted from 'Flower Struggles', Matthew Wilson, House and Home, Financial Times, 28 February/1 March 2015)	
	(a) The ir exam	•	ct of the flower industry on workers in the fishing industry is an of:	(1)
	\times	A	private benefits	
	X	В	private costs	
	X	C	external costs	
	X	D	external benefits	
	•		ne measure the Kenyan government could use to reduce the impact of raction from Lake Naivasha.	(3)

(Total for Question 1 = 4 marks)

2	In 2010 the Scottish Government proposed a legal minimum price per unit of alcoholic drink. Other things being equal, a minimum price set above the market equilibrium price is likely to cause	(1)
	A an excess supply	
	B a fall in price	
	C an increase in consumption	
	D no effect in the market	
	Answer	
	Explanation	(3)

	(Total for Question 2 = 4 m	arks)

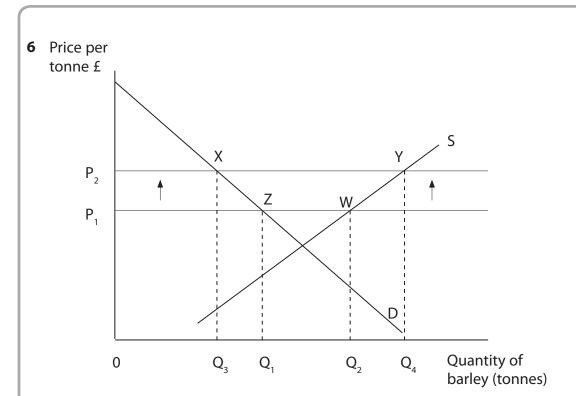


3		hich of the following methods of government intervention could help correct arket failure?	(1)
	A	State provision of healthcare	
	В	Taxation of goods which yield high external benefits	
	C	Abolition of the tradable pollution permit scheme	
	D	Provision of subsidies to goods which yield high external costs.	
	An	nswer	
	Ex	planation	(3)
		(Total for Question 3 = 4 mar	·ks)

4	Which of the following forms of government intervention could help to solve the free rider problem?	(1)
	A Provision of public goods	
	B Taxation on the consumption of public goods	
	C Banning the consumption of luxury goods	
	D Granting of subsidies to goods which yield high external costs.	
	Answer	
	Explanation	(3)
	(Total for Question 4 = 4 ma	rks)

5	Which of the following forms of government intervention could correct market		
_		ilure?	(1)
	Α	Rationing of public goods	(1)
		Taxation of goods which yield high external benefits	
		Banning the consumption of luxury goods	
		Granting of subsidies to goods which yield high external benefits.	
	Ar	nswer	
	Ex	planation	
			(3)
		(Total for Question 5 = 4 mai	·ks)
_		/ · · · · · · · · · · · · · · · · · · ·	•





The diagram shows the European Union (EU) barley market, where a minimum price scheme operates. The EU guarantees to purchase any surplus output at the minimum price. Initially the minimum price is at $0P_1$ and the EU purchases Q_1Q_2 of barley. If the minimum price is increased to $0P_2$ which of the following is correct?

(1)

- A Producer surplus decreases
- **B** Excess demand for barley increases
- **C** EU spending on the minimum price scheme for barley increases
- **D** Output of barley decreases.

Answer	
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Explanation

(3)

END OF SECTION A

(Total for Question 6 = 4 marks)

SECTION B

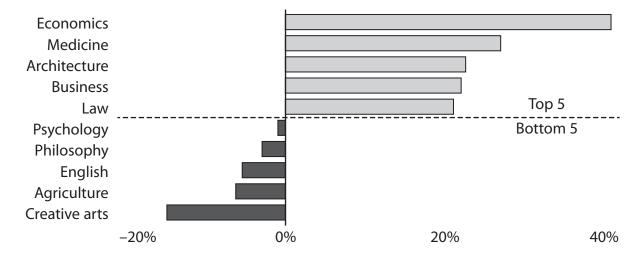
Read all figures/extracts before answering.

Write your answers in the spaces provided.

Ouestion 7

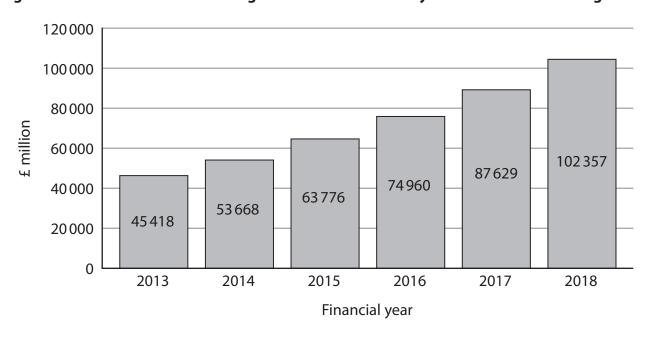
The market for higher education in the UK

Figure 1: Average graduate earnings, according to subject studied, compared to average non-graduate earnings (per cent) 2018 selected subjects.



(Source: adapted from https://www.ifs.org.uk/publications/13731 The impact of undergraduate degrees on early-career earnings, Research report, November 2018)

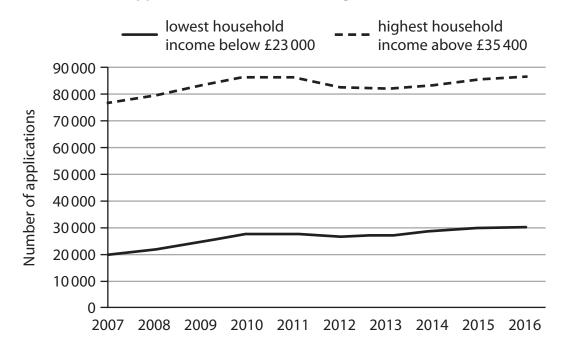
Figure 2: Student loans outstanding at the end of financial years 2013 to 2018 in England



(Source: adapted from https://www.slc.co.uk/official-statistics/ student-loans-debt-and-repayment/england.aspx)



Figure 3: Number of applications to UCAS according to median income of area



(Source: adapted from https://www.ucas.com/corporate/data-and-analysis/ucas-undergraduate-releases/2018-cycle-applicant-figures-january-deadline)

Extract A

Rethinking tuition fees

The value of a degree is significant. The latest data shows that the median university graduate income was £10000 more than the average non-graduate income in 2018. This 'graduate premium' means graduates will contribute significantly to the economy. In addition, the government will benefit greatly from additional tax revenues.

5

However, funding higher education continues to be a major issue. English universities charge some of the world's highest fees. Interest rates on student loans are now 6.3%. There are a large number of courses where graduates are likely to earn less than non-graduates, despite an average of £50000 of debt.

The Department for Education estimates that 45% of the value of loans will not be repaid. Outstanding student loans in England totalled more than £100 billion in 2018. By 2023 total outstanding student loans are forecast to rise to £120 billion.

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One option for revising student fees could be to charge higher fees for courses that are more expensive to teach or that have a better chance of higher earnings. That would make Science or Mathematics degrees more expensive to study than English or Philosophy.

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At most universities the level of fees is likely to be the same flat rate of £9 250 per year. However, science-based courses need more expensive equipment and courses such as medicine require more teaching time and personal instruction.

Tuition fees were introduced in 1998 at £1000 per year. They are currently £9250. Economists estimate that the price elasticity of demand for higher education is about –0.5.

20

Charging £9 250 a year for an undergraduate degree makes England very expensive by international standards. Scotland has no fees for Scotlish students, and fees in Wales and Northern Ireland are significantly lower. Much of Europe has low or no fees and Germany, which used to charge fees, has abolished them, replacing them with a graduate tax.

25

The only country with comparable fees is the United States. Top private colleges can charge more than the equivalent of £30 000 per year while state colleges can charge local students less than fees in England.

Despite this, student numbers at English universities have continued to increase from 450 000 in 1998 to over 700 000 in 2018. Students from all backgrounds are more likely to go to university than ever before.

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However, applicants from low-income areas are much less likely to go to university than applicants from high-income areas. The Universities and Colleges Admissions Service (UCAS) found that in the most deprived 10% of postal areas about 20% of young people went to university in 2018, compared with 50% in the highest income areas. Research by University College London revealed that even when candidates from low-income areas had the same exam results, they were much less likely to apply to university than candidates from high-income areas.

35

(Source: adapted from https://www.theguardian.com/education/2018/dec/16/change-in-student-loan-accounting-could-add-10bn-to-national-debt)



Extract B

Low-income university students twice as likely to drop out than high-income ones

The number of students from low-income areas who drop out of university before finishing their degree is at its highest in five years, indicating a considerable waste of scarce educational resources. This news comes at the same time as a drive to recruit students from poorer backgrounds, with universities spending a total of £725 million on access initiatives in the past academic year alone.

5

A number of top universities have started to lower their A level grade offers to students from low-income areas, in an attempt to encourage them to apply. However, there is a danger with 'enticing' disadvantaged students through lower grade offers, if universities are not going to provide ongoing support for them once they begin their courses.

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The latest figures show that 9% of disadvantaged undergraduates do not continue in higher education beyond their first year. In comparison, the average drop-out rate among students from the high-income backgrounds was less than 5%. The gap continues to widen.

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A report, published by the Office for Fair Access, concluded that: 'The significance of this for students is huge. Higher education can be a transformational experience that opens doors to rewarding careers and social mobility, but this is only the case if students achieve successful outcomes.'

(Source: adapted from https://www.telegraph.co.uk/news/2017/06/28/number-poor-students-droppinguniversity-highest-level-five/)



7 Evaluate whether government intervention is able to correct market failure in education.				
				(20)















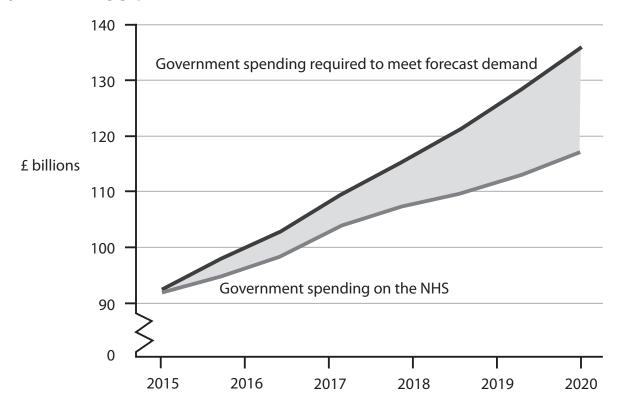
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Question 8

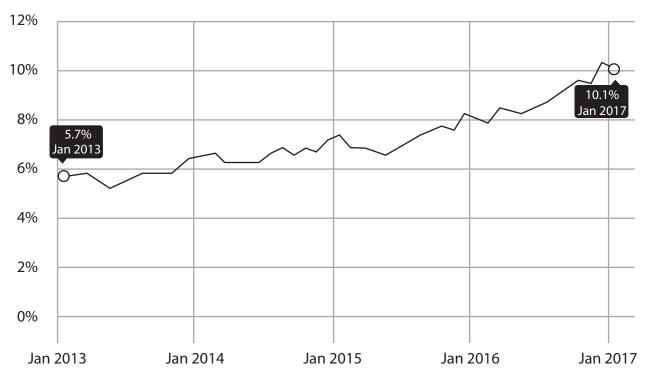
Health provision

Figure 1: National Health Service (NHS) in England: Government spending and projected funding gap, £ billions, 2015 to 2020



(Source: https://www.economist.com/news/britain/21706563-nhs-mess-reformers-believe-new-models-health-care-many-pioneered)

Figure 2: Percentage of NHS patients in England waiting over 18 weeks for non-emergency treatment



(Source: https://www.statista.com/chart/8813/more-and-more-people-made-to-wait-by-the-nhs/)

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Extract A

Hospitals already full

National Health Service (NHS) managers' warned that bed occupancy rates are approaching 99% in some parts of the country, compared with recommended levels of 85%. In 2017 the number of patients waiting for non-urgent treatment passed the four million mark, the highest figure for almost a decade.

The chief executive of the NHS suggested that waiting list targets for routine operations such as hip and knee replacements would have to be sacrificed in order to protect other services, including accident and emergency (A&E) and cancer care.

However, the government has insisted waiting time targets must still be met. Recently the Chancellor awarded the NHS £2.8 billion over three years, including £1.6 billion in 2018 - less than the £4 billion which NHS officials had asked for to keep up with an ageing population and new medical technologies.

NHS managers said there was now very little spare capacity in the system, warning of shortages of paramedics, doctors, A&E consultants and nurses.

(Source: adapted from http://www.telegraph.co.uk/news/2017/12/07/hospitals-already-full-bursting-pressures-mount-warn-nhs-chiefs/)

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Extract B

How health care is funded

Most countries have a mixed economy of health provision typically funded from taxation, patient fees and private health insurance.

The NHS was launched in the UK in 1948 to ensure direct state provision by the government of health care 'free at the point of use'. The NHS is mainly funded from general taxation. However, some NHS patients pay for some of their medical care, such as prescriptions to buy medicine.

5

In the ongoing debate about how best to fund the NHS, some people have proposed introducing a £12 charge for visiting a General Practitioner (GP) doctor. Proponents argue that such a charge would deter overuse of GP services by those who do not have genuine health needs. It would also raise additional money for the NHS and create incentives which will stimulate innovation and more choice.

10

Estimates suggested that a £12 charge on the 450 million visits a year to GPs could have raised enough to cover hospitals' overspend in 2016. Based on exemptions for prescriptions, 90% of patients will not be charged including the elderly, children and low income groups. There would also be administrative costs of collecting the charge and verifying exemptions. These arrangements would significantly reduce the amount a charge would generate, assuming no one paying would be dissuaded from visiting their GP.

15

The proportion of people in the UK taking out private health insurance (PHI) to pay for private health care has increased to 10.6%, despite significant increases in the prices of treatment in private hospitals. Some economists argue that the government should provide subsidies to encourage people to take out private health insurance. This would reduce the burden on the NHS by taking some people out of the state system. Furthermore it is argued that private health care increases choice for users, encourages competition and drives up standards of care.

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A typical PHI policy for a healthy 35-year-old costs about £650 a year but this rises steeply to £2300 for those aged 70, when claims are far more likely. The level of contribution is based on their risk of requiring health care. PHI also tends to incur high management and administrative costs due to the resources required to assess risk and claims. Also there is the possibility of market failure given asymmetric information.

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(Source: adapted from https://www.kingsfund.org.uk/publications/how-health-care-is-funded)



Extract C

Public parks are a public good

Public parks are places which people can use for free to exercise or to relax. Parkrun Limited organises free weekly runs in local parks attracting hundreds of joggers per park to enjoy healthy exercise. The government is proposing to ban local authorities charging Parkrun for the use of public parks to fund the maintenance of public parks. The government considers that it is appropriate for the public to pay a reasonable sum for the private use of a facility such as a tennis court or a football pitch which may be used exclusively. However, the government does not consider it appropriate for a local authority to charge a volunteer community group 'seeking to provide a free weekly event' for the use of a public park. Parkrun share the park with other park users. Although a running course may be marked out there is no restriction on other people using the park.

(Source: adapted from © Crown Copyright Running Free – Government consultation on preserving the free use of public parks, April 2017, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608372/Parkrun_ConDoc.pdf and http://www.telegraph.co.uk/news/2017/04/14/councils-banned-charging-runners-take-part-regular-saturday/)

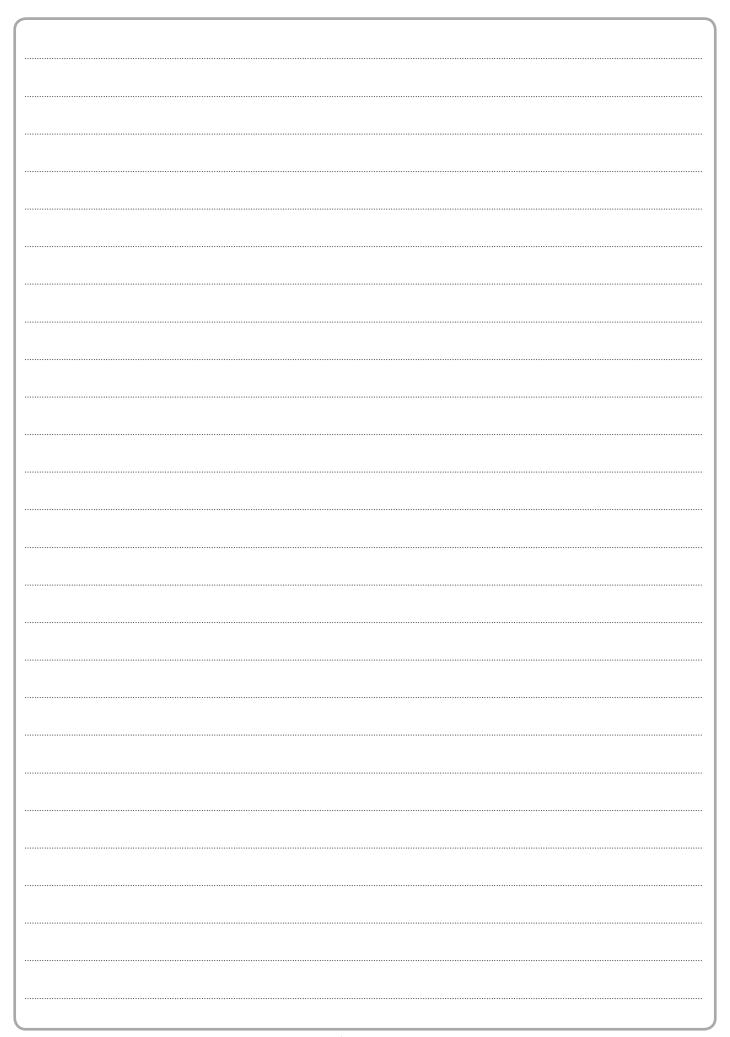
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10



8	Evaluate possible ways the government could intervene to reduce the excess demand for state-funded health care.		
		(20)	















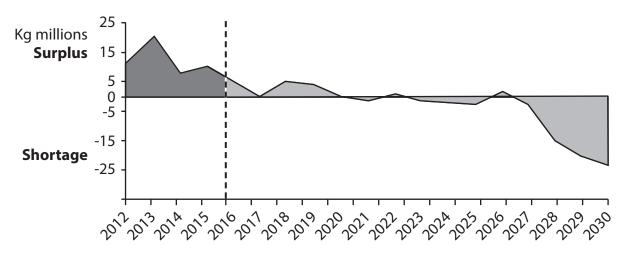
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Question 9

Energy markets

Figure 1: Annual surplus or shortage of uranium, measured in millions of kilograms



Figures from 2016 are forecast

(Source: adapted from http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

Extract A

Uranium: the unloved metal

Uranium is a fuel source for nuclear energy production. The price of uranium has fallen to a 13-year low. Uranium is a relatively common metal but locating it in the right concentrations can be difficult. Australia has the biggest known resource of uranium, followed by Kazakhstan. Kazakhstan's production has increased significantly since 2007, accounting for a large proportion of the surplus of this metal. Given the large stockpiles of uranium some firms have ceased production.

5

The biggest impact on the uranium market has been the devastating accident at the nuclear power station in Fukushima, Japan, in 2011. The accident caused a leak of radiation. The accident reduced confidence in the entire nuclear industry, as high doses of radiation leaks increase the risk of cancer. In addition the high cost of safely storing radioactive waste has delayed the building of new nuclear power stations. Japan initially closed all of its 50 nuclear power stations which reduced the demand for uranium. But it has since concluded that nuclear power must be part of its mix of energy suppliers.

10

Despite this setback in 2016 work started on a new uranium mine in Spain to meet the expected rise in demand for the metal. Uranium is a controlled material, so mining companies have to comply with many regulations before opening a new mine. When it opens in 2018, this will be the only uranium mine in Europe, producing 2.2 million kilos a year. It has been in development for more than a decade.

15

Most developed countries, with the notable exception of Germany, have concluded that nuclear power is an essential part of their energy supply. The US and UK are committed to building new nuclear power stations, the latter providing a £30 billion subsidy to build a new nuclear plant at Hinkley Point. China is also building a further 60 nuclear power stations.

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Supporters of nuclear power say it provides a reliable source of energy at a time when the world's population is increasing, unlike solar power and wind power which both vary with the weather. In addition they argue that no country can significantly reduce carbon emissions, which are causing climate change, without nuclear. France and the UK have committed themselves to shut down all coal-fired power stations by 2025. So demand for uranium over the next two decades seems guaranteed.

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(Source: adapted from Uranium: the unloved metal whose price is poised to go radioactive, Jon Yeomans, The Telegraph, 20 November 2016 http://www.telegraph.co.uk/business/2016/11/20/uranium-the-unloved-metal-whose-price-is-poised-to-go-radioactiv/)

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Extract B

Irrational consumers pay the price

The UK Government has announced that it might introduce maximum price controls on energy used by households.

The UK's largest energy suppliers are braced for what could be the industry's most significant government intervention following a decade of rising energy bills and low numbers of consumers switching between energy providers.

5

The Prime Minister promised to intervene because the energy market is "manifestly not working" for consumers. Energy prices have risen by 158% in the last 15 years, and four million households, especially those on low incomes, are still on the most expensive energy rates.

10

Some energy analysts have warned the Government against taking a highly interventionist approach that could undermine the energy market and leave customers paying higher prices in the future.

(Source: adapted from http://www.telegraph.co.uk/business/2017/03/22/governments-pledge-cut-energy-prices-risks-leaving-consumers/)

Extract C

The economics of climate change

Rising carbon dioxide emissions result from the increase in the use of coal, gas and oil in transport and for energy production. In addition, deforestation, food production and processing methods make the problem worse. These carbon emissions are causing a rise in global average temperatures, known as climate change. Climate change could cause hundreds of millions of people to suffer hunger, water shortages and coastal flooding.

5

Three elements of policy are required for an effective global response to reduce carbon emissions. The first is the pricing of carbon, implemented through tax, trading pollution permits or regulation. The second policy is to support innovation and the deployment of low-carbon technologies. And the third is action to remove barriers to energy efficiency, and to inform, educate and persuade individuals about what they can do to respond to climate change.

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(Source: adapted from www.sternreview.org.uk/)



a) Discuss the likely microeconomic effects of this decision on energy producers and consumers. Include a supply and demand diagram in your answer.				
consumers, include a si	appiy and demand diagram in ye	our answer.	(15)	

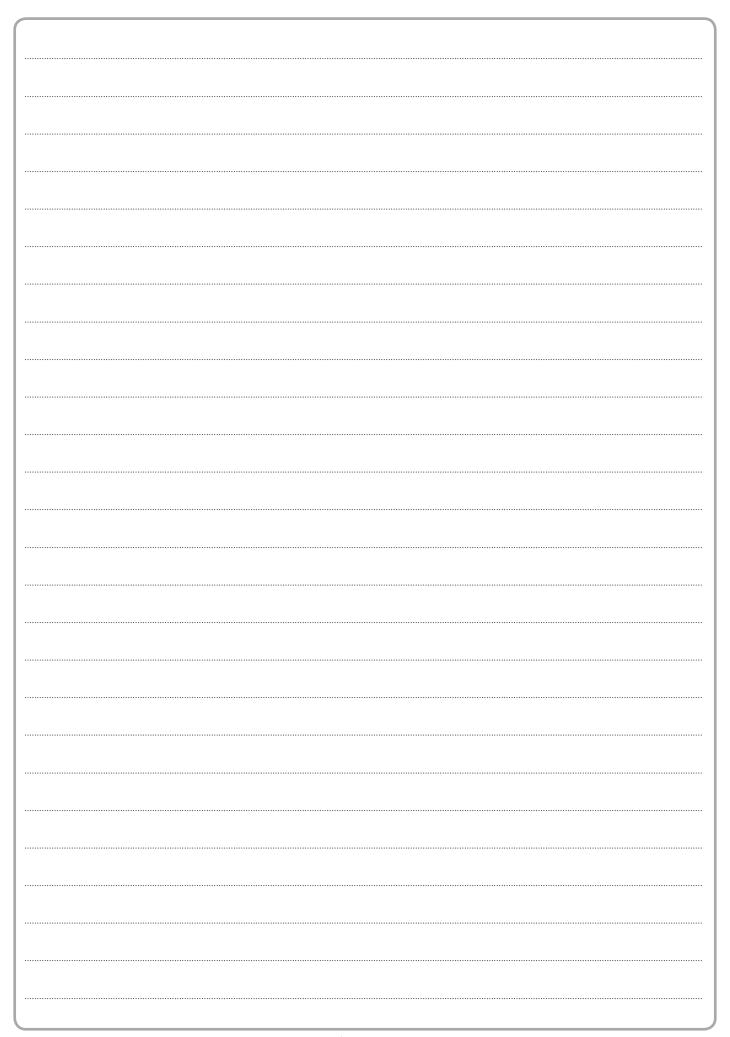














emissions. Use at least one appropr	lace diagram in your	unswen.	(20)















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Question 10

The market for cigarettes

Figure 1: Price elasticity of demand - a comparison between tobacco and e-cigarettes

Price of packet of 20 tobacco cigarettes	Price of e-cigarette kit	
£7.70-£9.50	£9.99-£19.99	
Average price per tobacco cigarette	Single cigarette equivalent price of an e-cigarette	
48p	7p	
Price elasticity of demand for tobacco cigarettes	Price elasticity of demand for e-cigarettes	
-0.35	-1.9	

(Source: adapted from https://www.blucigs.co.uk/united-kingdom/kits/all-kits)

Extract A

Government intervention on tobacco

There was a time when smoking was fashionable. Television and magazine advertisements glorified smoking. Everyone from your dad to your doctor smoked in all places – cars, restaurants and even hospitals.

Tobacco is still the single biggest cause of cancer in the world and the leading cause of preventable deaths. Nearly 80% of the 1 billion smokers worldwide live in low- and middle-income countries.

5

Bans on tobacco advertising, promotion and sponsorship can reduce tobacco consumption. Comprehensive smoking bans covering indoor workplaces, public places and public transport have been introduced in 48 countries.

Tobacco taxes are the most cost-effective way to reduce tobacco use, especially among the young and people in low-income groups. A tax increase that raises tobacco prices by 10% decreases tobacco consumption by 4% in high-income countries and 5% in low- and middle-income countries.

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However, some 8 million people are expected to die each year by 2030 – because they have smoked tobacco or have been exposed to passive smoking. The use of alternative products such as electronic cigarettes (e-cigarettes) are gaining in popularity but information about their effects is uncertain. Little research has yet been done about the long-term health effects of e-cigarettes and the nicotine dispensed by e-cigarettes is highly addictive. The illegal tobacco market still counts for 1 in every 10 cigarettes consumed globally. In addition, tobacco companies still spend tens of billions of dollars each year on advertising and promoting tobacco products and sponsoring events. They continuously challenge the regulatory measures governments are taking.

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(Source: adapted from http://www.who.int/topics/tobacco/en/ and http://www.who.int/mediacentre/commentaries/reducing-tobacco-use/en/)



Extract B

Free market approach

Are free markets incompatible with good health? If the solution to every problem involves banning advertising, raising prices and restricting availability, you might easily conclude that the free market is the disease and government regulation is the cure. From this perspective, the providers of food, alcohol and tobacco are determined to push the most unhealthy products on the public at the lowest prices.

5

Contrary to this viewpoint, the profit motive is not unhealthy. Businesses have an obvious incentive to keep their customers alive and customers have a strong incentive to seek out healthier options. Any company that can make a scientifically sound health claim gains a competitive advantage over its rivals. Health sells. In contrast, government regulation can lead to negative health outcomes. Markets can correct themselves long before government failures are even acknowledged. Over a million Britons, almost all of whom are smokers or ex-smokers, use e-cigarettes, as a less hazardous product than cigarettes and yet e-cigarettes face increased regulations and in many countries they are banned.

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It is neither consistent nor ethical to prevent smokers from switching to much safer alternatives. Efforts to regulate e-cigarettes are a far greater threat to public health than the products themselves.

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We argue that the interests of consumers are nearly always better advanced by the provision of accurate information and free choice than by prohibitions and regulations. The government policy of small but steady tax rises on tobacco and ever-larger warning labels is becoming less effective and leads to unintended consequences.

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(Source: adapted from http://www.iea.org.uk/blog/free-market-solutions-in-health-should-be-allowed-to-flourish, Christopher Snowdon, 11th July 2013)



10 Eval	uate the impact of gov	ernment interventior	n in the cigarette ma	20)







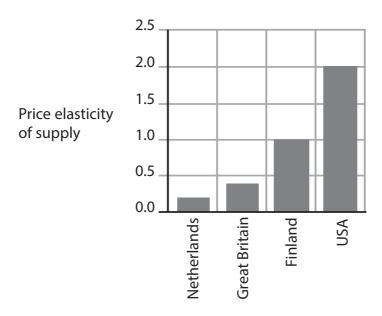
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Question 11

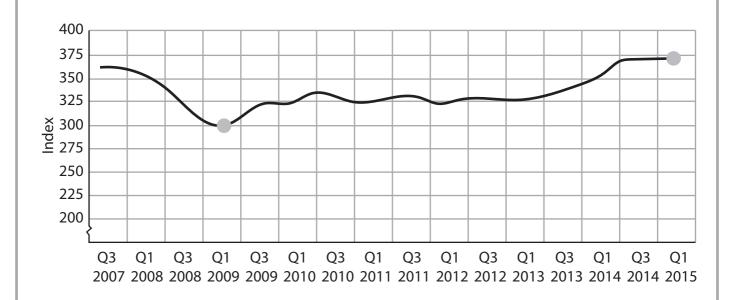
The market for housing

Figure 1 – Estimates of the price elasticity of supply of new housing, selected countries



(Source: adapted from Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", Figure 3, OECD Economics Department Working Papers, No. 837, OECD Publishing. http://dx.doi.org/10.1787/5kgk9ghrnn33-en)

Figure 2 – Index of UK house prices (1993 = 100)



(Source: http://www.nationwide.co.uk/about/house-price-index/download-data#~)

Extract A

Problems facing UK first time buyers

Over a third of aspiring first time buyers in the UK have given up hope of ever being able to save for a deposit to buy a property, new research has found. A deposit is the minimum amount that must be paid upfront when buying a property, which is a proportion of the price of the property.

The UK Government has a Help to Buy scheme designed to help people buy a home. The government subsidises the mortgage (loan) needed to buy a property, so buyers require a smaller amount saved as a deposit. Under this scheme, first time buyers need as little as a 5% deposit to qualify for a mortgage. This is due to end in the first few months of 2017. The research from mortgage insurer Genworth says this will mean a return to 20% deposits, which would see the average time needed to save for a deposit rise from three years to over 10 years.

"Trying to buy your first home in the current climate is like chasing a runaway train. Even with good salaries that could comfortably support a mortgage, thousands of aspiring first time buyers can only save modest sums, especially those who are already paying rent. This deposit trap is why many feel they are left with the all or nothing choice of borrowing from family or waving goodbye to ever owning a home," said Simon Crone, a vice president at Genworth.

"Help to Buy has significantly improved access to mortgages with deposits that are actually realistic to save. The numbers using the scheme may be modest, but it has made significant inroads in the short-term to boost access at the lower end of the property market," he pointed out.

(Source: adapted from http://www.propertywire.com/news/europe/uk-first-time-buyers-201409309641.html September 2014)

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Extract B

Housing and flood defences

A radical new approach to housing and a £2.3 billion of investment in flood defences were announced as part of the UK Government's new National Infrastructure Plan 2014.

One key proposal is for the government to plan, build and sell homes. An initial programme on a government-owned former airfield near Cambridge will see the development of 10 000 homes. This approach will fast track the development by providing certainty and making new homes available more quickly.

The government will make the initial investment but expects that later costs will be met through the sale of land and homes. It will also evaluate the feasibility and economic effects of rolling out this model on a wider scale, to support and accelerate housing supply.

The plan also commits to £2.3 billion of capital investment to over 1400 flood defence projects in a 6-year programme of investment. As a result, over 300 000 homes will be better protected and over £30 billion of economic damages prevented. Major projects that will benefit include £42 million for the Oxford Flood Alleviation Scheme, £80 million for the Humber Estuary and over £17 million for Tonbridge, Yalding and the surrounding communities.

(Source: adapted from https://www.gov.uk/government/news/ambitious-plans-for-housing-flood-defence-and-roads-set-out-in-national-infrastructure-plan-2014)



housing market.	(00)
	(20)













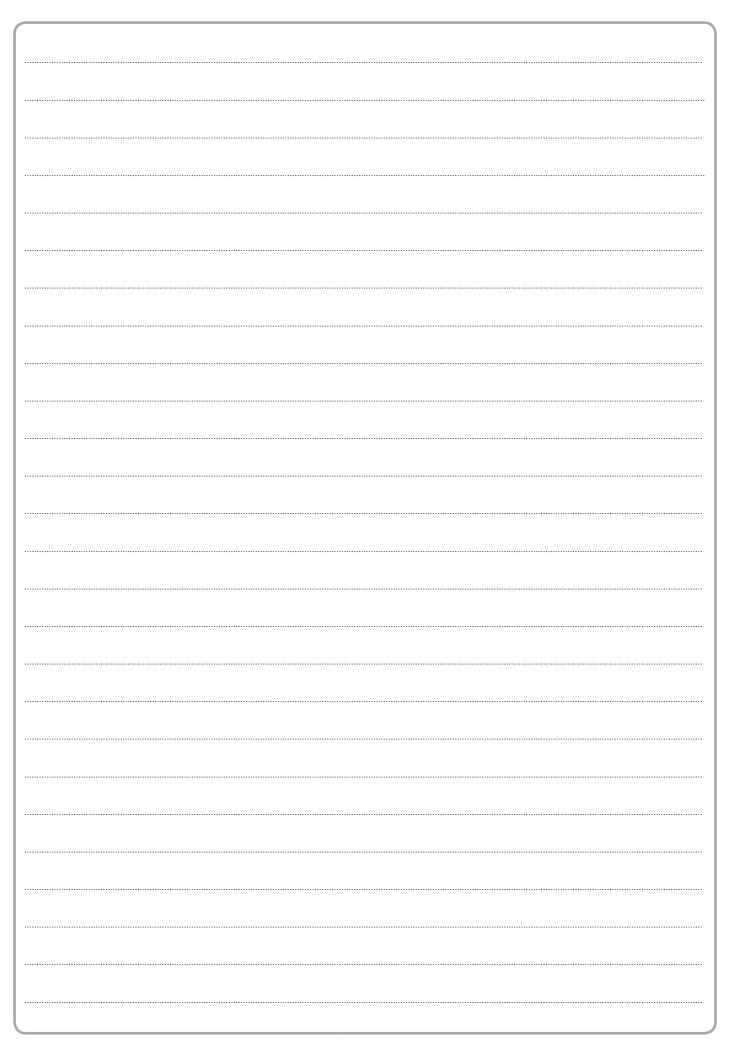


(b) Evaluate the case for government provision of goods and services such as flood defence schemes or housing.	(2.0)
	(20)











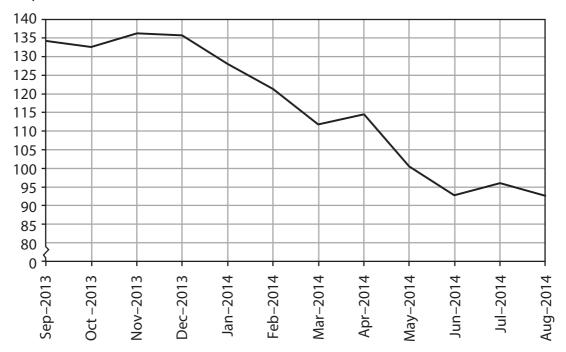
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12 The market for iron ore

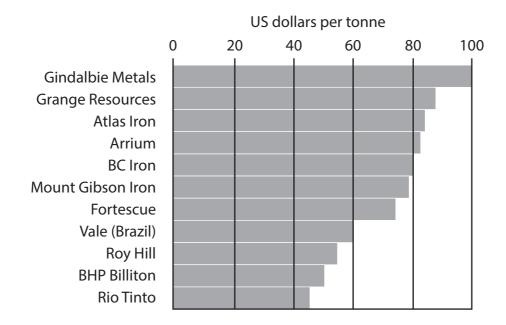
Figure 1 Price of iron ore (September 2013 – August 2014)

US dollars per tonne



(Source: http://www.indexmundi.com/commodities/?commodity=iron-ore&months=12)

Figure 2 Mining companies: cost of producing one tonne of iron ore



(Source: Reported in FT, 'Australia's iron ore producers steel themselves for casualties'

Jamie Smyth and Lucy Hornby, 14th September 2014,

http://www.ft.com/cms/s/0/9f3235d0-3a30-11e4-8aa2-00144feabdc0.html#axzz3TFuTxa6H)

5

Extract 1 Falling iron ore prices

The price of iron ore has fallen dramatically since September 2013 following a significant increase in production from the world's four largest miners of the commodity, Rio Tinto, BHP Billiton, Vale and Fortescue. This has come at a time of falling consumption of iron ore from China, the world's biggest customer. Iron ore is a key raw material in the production of steel.

The slump in iron ore prices is forcing high-cost iron ore producers to close down operations. Stockpiles of iron ore at Chinese steel mills are at record levels. Despite the fall in price, BHP Billiton has announced plans to increase annual production capacity of iron ore by 30% to 290 million tonnes by 2017. This follows Rio Tinto's plans to increase annual production capacity by 24% to 360 million tonnes by 2015.

Both companies have managed to increase efficiency and cut production costs, but this has not prevented their share prices from falling. They are confident that long term demand for iron ore will grow from India, China and other Asian countries.

(Source: adapted from 'Rio Tinto vows to slug it out with BHP in iron ore production war', by Jamie Smyth, *The Financial Times*, 9th October 2014, http://www.ft.com/cms/s/0/302943a4-4f7f-11e4-a0a4-00144feab7de.html#axzz3TFuTxa6H)



Extract 2 Tax on Australian iron ore

The Australian Government has criticised the mining companies' policy of increasing iron ore production that further reduces its price. Most of Rio Tinto's and BHP Billiton's iron ore is mined in Western Australia. Every \$1 per tonne fall in the iron ore price causes a \$300 million fall in the Australian Government's indirect tax revenue from sales of iron ore. The Government warned that it may be forced to raise taxes on each tonne of iron ore extracted.

(Source: adapted from 'Tumbling iron ore prices a concern for miners and the Treasury alike',

The Guardian.com, 20th May 2014,

http://www.theguardian.com/business/2014/may/20/

tumbling-iron-ore-prices-a-concern-for-miners-and-the-treasury-alike)

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Extract 3 Emissions trading scheme scrapped in Australia

Plans to introduce an emissions trading scheme (tradable pollution permits) for Australia's biggest polluting companies have been scrapped by the Government following concerns over its costs to the mining industry and the impact on investment and jobs. Australia will no longer join with the European Union's emissions trading scheme. The country is one of the world's biggest carbon emitters on a population per head basis because of the significance of its mining sector. The Government has replaced the scheme with a policy called Direct Action where grants are available for companies which reduce their pollution emissions.

The decision to halt the introduction of tradable pollution permits creates uncertainty over how the country will achieve its 5% carbon reduction target by 2020 and raises questions over the Government's commitment to tackling climate change.

(Source: adapted from 'Australia abolishes tax on carbon emissions', Jamie Smyth and Pilita Clarke, *Financial Times*, 17th July 2014, http://www.ft.com/cms/s/0/d852822a-0d67-11e4-bcb2-00144feabdc0.html#axzz3TFuTxa6H)



2 With reference to Extract 3 and your own knowledge, assess the potential benefits of tradable pollution permits for reducing carbon emissions.	
	(14)





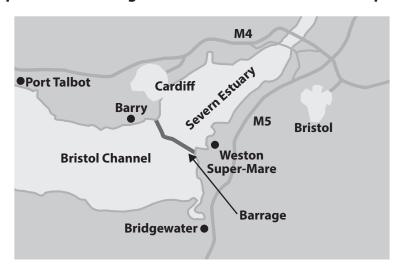


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13 Proposals for a tidal barrage in the Severn Estuary

Figure 1 The proposed tidal barrage between Cardiff and Weston-Super-Mare



(Source: © Crown copyright 2002)

Figure 2 The proposed Severn Barrage



Extract 1 Benefits and costs of the tidal barrage

Plans for an 11 mile tidal power barrage across the Severn Estuary have been proposed by private consortium Corlan Hafren. The scheme would generate around 5% of the UK's electricity needs and be funded by overseas investors. No UK government subsidy would be involved in funding the huge £34 billion cost of the scheme. However, consumers will be expected to pay higher prices for the electricity generated from this renewable energy source (to cover increased production costs) compared to non-renewable energy supplies such as gas and coal.

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The Severn Estuary has the world's second largest tidal range of almost 14 metres. Harnessing this energy would make a significant contribution to the government's target of generating 20% of the nation's energy from renewable sources by 2020. A tidal barrage, once complete, is carbon neutral. It would help diversify the UK's energy supply and operate for at least 120 years. This compares favourably with the lifespan of nuclear power plants (35 years) and wind turbines (25 years). These forms of renewable energy receive substantial government subsidies and planning restrictions are relaxed to promote their development.

More than 30 000 local jobs would be created from the scheme. This includes constructing road and rail links on top of the barrage to improve the transport infrastructure in the region. A factory to build the 200 giant turbines required for the tidal barrage and a deep water dock facility is also planned in Port Talbot.

The tidal barrage would also help reduce flooding along the river Severn floodplain. 20 In 2007 severe flooding in the area led to £3.2 billion of damage.

However, the tidal barrage will have a significant impact on wildlife and their habitats. The Royal Society for the Protection of Birds believes that the barrage would destroy huge areas of estuary marsh and mudflats used by 70 000 birds. It would also block the migration routes of fish including wild salmon. Corlan Hafren intends to reduce the negative effects by building turbines which rotate at slow speed to minimise damage to sea life.

(Source for Figure 2 and Extract 1: Adapted from 'UK Government considering new multi-billion plan for barrage across Severn Estuary, Western Mail, 7th December 2011)



13	Evaluate two measures, other than supporting the Severn Estuary tidal barrage, by which the Government could promote the generation of renewable energy.	(14)





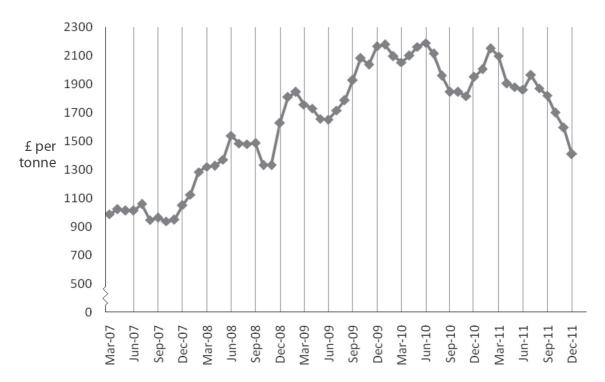


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14 The price of cocoa

Figure 1 Cocoa prices, March 2007 - December 2011



(Source: © U.S. Department of Agriculture)

Extract 1 Unstable cocoa prices

The price of cocoa fell sharply from £2 153 to £1 410 per tonne between February and December 2011. This follows a decrease in consumption from Europe - the world's largest consumer of the commodity - amid fears that it was entering a recession. At the same time there was a very good cocoa harvest in the Ivory Coast, the world's biggest producer, which supplies around 40% of global output.

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The supply of cocoa in 2012 is set to exceed demand by a record 400 000 tonnes, adding to producer stockpiles. There are fears that farmers will abandon looking after their cocoa trees, which take five years to grow to maturity, and switch to growing rubber. However, rubber prices have also decreased in recent years.

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Cocoa is subject to enormous price fluctuations: in June 2010 its price reached £2 190 a tonne. This was the highest price for 33 years, resulting from a disappointing crop caused by poor weather, ageing trees and a temporary export ban imposed by the newly elected President of the Ivory Coast. Price fluctuations create instability in income, employment and investment among cocoa farmers.

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To reduce the damaging effects of fluctuating cocoa prices, the Ivory Coast government has introduced a guaranteed minimum price scheme to support farmers. The success of this scheme will depend partly on the response of international cocoa buyers and whether or not they will seek to purchase from other major producers such as Ghana and Nigeria.

In the long term, as the emerging markets continue to grow, demand for cocoa from China and India is likely to increase. Consumers in these countries are developing a strong taste for chocolate. Cocoa is a key ingredient in making chocolate products such as Cadbury's Dairy Milk bar and Nestlé's Kit Kat bar. However, it only forms around 6% of the price of a bar of chocolate.

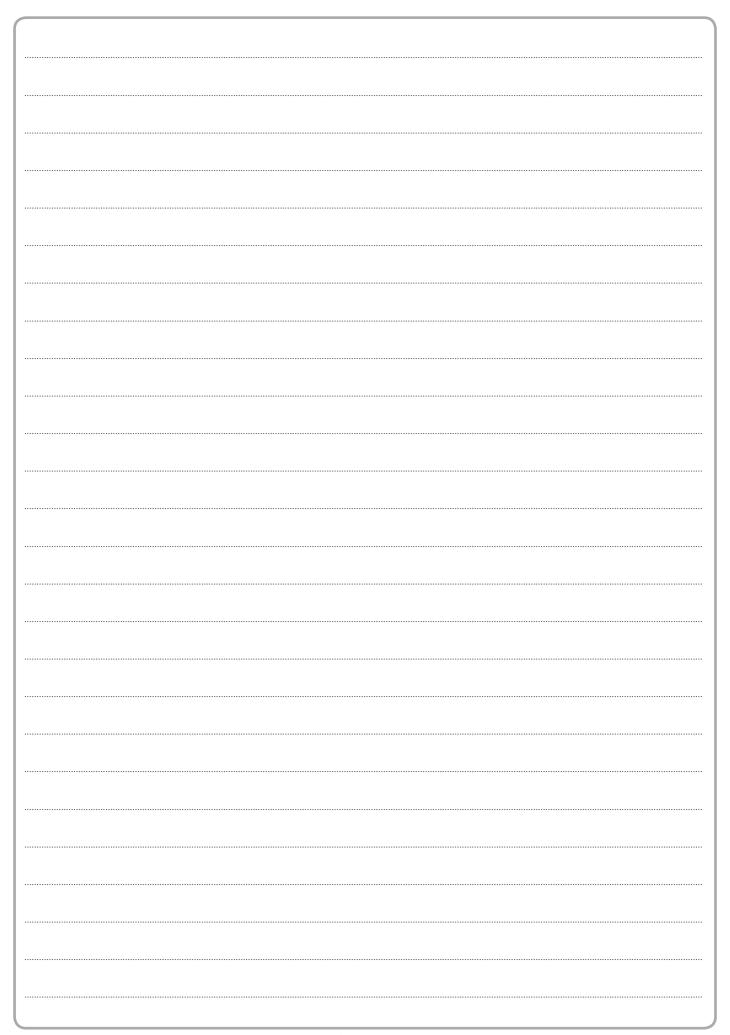
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(Source: adapted from 'Euro debt crisis bites into cocoa' by Emiko Terazono, © The Financial Times Ltd, 5th December 2011 and http://www.traidcraft.co.uk)



9	supply and demand diagram.	In Al
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15 North Atlantic fishing



Extract 1 EU and mackerel fish quotas

North Atlantic fish stocks are collapsing through mismanagement by governments. A breakdown in the agreement over the size of fish catches between the European Union (EU), Norway, Iceland and the Faroe Islands means the last great stock of mackerel is under threat. The quantity of mackerel caught has risen by almost 50% this year and is now well beyond the level required to remain a sustainable resource. If mackerel disappear, so do the many links in the food chain which depend on them. The fish catches need to be small enough to maintain breeding stocks for future generations.

Global warming has caused mackerel to migrate further north to the seas around Iceland and the Faroe Islands and these two countries are massively exceeding the agreed fish catches, known as quotas. Both of these non-EU countries are catching over 150 000 tonnes of mackerel this year – over-fishing in excess of their agreed limit of 100 000 tonnes – whilst the EU countries have maintained their fish catches. More than a third of the mackerel caught by Icelandic fishing boats is fed to animals and farmed fish or turned into fertiliser. It is an astonishing waste. Other fish stocks in Iceland's waters such as whiting and herring have been wiped out.

To make matters worse, the EU fish quota system means that over 30% of fish catches are thrown back into the sea. Fishing boats are not allowed to land or sell more than their allowances, otherwise they risk severe fines.

(Source: adapted from George Monbiot, © Guardian News and Media Ltd, 8th August 2011)

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Extract 2 Protecting fish stocks

A Royal Commission on Environmental Pollution recommended that the UK government prevents all fishing in 30% of the UK's coastal waters. Fish could then reproduce safely, greatly increasing the size of stocks. However, fish swim where they want – they do not remain in any one country's coastal waters.

Another way to protect the fish stocks is for the UK government to subsidise the development of fish farms, which currently account for a third of all fish directly consumed. Many believe this has relieved pressure from wild fish stocks as well as creating thousands of jobs in remote communities.

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Fish farming does have its critics. For example, disease spreads rapidly in overpopulated fish farms and the local wild fish population can be contaminated. Furthermore, when large numbers escape from the farms, this affects the overall gene pool.

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(Source: adapted from George Monbiot, © Guardian News and Media Ltd, 8th August 2011)



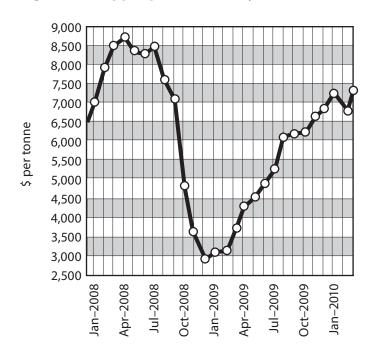
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16 The market for copper

Figure 1 Copper prices, January 2008–March 2010



Source: www.lme.com/copper_charts.asp

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Extract 1 Unstable copper prices

The price of copper has been highly unstable over the past year. It collapsed from a record level of \$8,940 in April 2008 to \$2,871 per tonne by December of that year. The steep drop in price followed lower global economic growth, especially from China. The decrease in demand was most noticeable in the motor vehicle and construction sectors which use vast amounts of the metal. Its impact was to reduce profits and share prices of major copper mining companies such as Chile's Antofagasta.

However, by March 2010, copper prices recovered to almost \$7,500 per tonne. This followed disruption to supply in several major copper mines in Chile due to a severe earthquake and a series of strikes by miners, demanding a 7.5% pay rise. The global economy has also recovered from the recession and China is expected to achieve an economic growth rate of 9.5% in 2010. The dramatic fluctuations in copper prices have led some analysts to propose a guaranteed minimum price scheme.

Source: Adapted from 'Miners dragged lower as price of copper tumbles', Peter Stiff, The Times, 19th December 2009.

T EXPERT TUITION

Extract 2 Proposals for a major copper mine in Bristol Bay, Alaska

Rising copper prices has made it profitable to open new mines. The mining companies Northern Dynasty and Anglo-American Corporation have jointly proposed creating North America's largest open pit mine at Pebble Mill in Bristol Bay, Alaska. It would be 3.2 kilometres long and 610 metres deep. It would also involve building the largest dam in the world to hold back the vast amount of toxic waste created in the mining process. The dam, made of earth rather than concrete, would be 220 metres high and 7 kilometres long. It takes a thousand tonnes of copper ore to produce just one tonne of copper metal.

However, Bristol Bay is home to the world's most productive wild salmon fishery and there is concern that pollution from the mines would destroy the \$400 million a year fishing and canning industries, as well as having a negative impact on tourism. The area already has a history of earthquakes and severe flooding which increase the chances of pollution from the mining project. The local native communities strongly oppose the scheme and the planning enquiry is expected to take several years.

Source: Adapted from Pebble mine – Bristol Bay Alaska www.renewableresourcescoalition.org/project_outline.htm www.ourbristolbay.com/commerical-fisheries.html

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diagram.	(14)



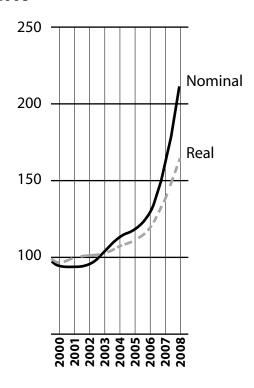




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17 Rising Food Prices

Figure 1 Food and Agricultural Organisation (FAO) Food Price Indices, 2000–2008



Source: ftp://ftp.fao.org/docrep/fao/meeting/013/k2414e.pdf

Extract 1 Food Prices

The UK faces a major food crisis unless urgent steps are taken to support its agricultural sector, warns a report by Chatham House, an influential research organisation. The report suggests that UK consumers must expect to pay significantly more for food to ensure long term security. It warns that developed countries have tended to take their food supply for granted and that recent sharp rises in commodity prices will occur more frequently in the future.

The rapid rise in food prices is linked to the growth in global population and rising incomes in the developing world, along with increased costs of agricultural production.

The report warns of the limited availability of land for agricultural expansion in the UK and recommends a discussion of using intensive farming methods and genetically modified crops to increase output. However, this could reduce quality and bio-diversity while increasing the risk of crop diseases.

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T EXPERT TUITION

The UK produces just 48% of the food it consumes. Around 30% comes from the rest of Europe and the remaining 22% from non-European countries. A crisis could develop through some form of external shock, such as animal or crop disease, or extreme weather events leading to a shortage of affordable food. It is households on low incomes which are hit the hardest by rising food prices.

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The report calls for government funding to expand agricultural production, innovation and skills. This includes guaranteed minimum prices to encourage more domestic agricultural production.

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The report also indicates the need for consumer attitudes to change. Around one third of all food purchased is thrown away, some 6.7 million tonnes a year, most of which is edible.

Source: 'Britain must revive farms to avoid grave food crisis', by Jamie Doward, *The Observer*, 1st February 2009.

17 Evaluate the likely economic effects of the introduction of 'guaranteed minimum prices to encourage more domestic agricultural production' (Extract 1, lines 20 and 21). Use an appropriate diagram in your answer.	
and 1.7, 200 an appropriate anagram in year anonen	(12)



END OF SECTION B	(Total for Question 17 = 12 marks)
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SECTION C

Write your answers in the spaces provided.

18 'Tradable permits are less effective than taxation in reducing carbon emissions.'			
To what extent do you agree with this statement?			
	(Total for Question 18 = 25 marks)		







