



Economics Questions By Topic:

Supply & Demand (1.2.2 & 1.2.4)

A-Level Edexcel Theme 1

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SECTION A

Answer ALL questions. Write your answers in the spaces provided.

1 The table shows the quantity of PlayStation 4 games demanded and supplied.

Price	Quantity demanded per month (000s)	Quantity supplied per month (000s)	New quantity supplied per month (000s)
£25	400	320	
£30	360	360	
£35	320	400	
£40	280	440	
£45	240	480	

As a result of an increase in packaging costs for the games, supply decreased by 80 000 at all prices.

(Calculate the change in equilibrium price given the increase in packaging costs. Use the last column for your workings.)

(4)

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(Total for Question 1 = 4 marks)

2 The table shows market data for e-cigarette kits. The original equilibrium price is £23.

Price £	Quantity demanded per month (000)	Quantity supplied per month (000)	New quantity demanded per month (000)	New quantity supplied per month (000)
25	5	9		
24	6	8		
23	7	7		
22	8	6		
21	9	5		

As a result of a successful advertising campaign, demand increased by 3 000 e-cigarette kits at all prices. At the same time production costs fell leading to an increase in supply of 1 000 e-cigarette kits at all prices.

Calculate the new equilibrium price and quantity following the successful advertising campaign and the fall in production costs. Use the last two columns for your working.

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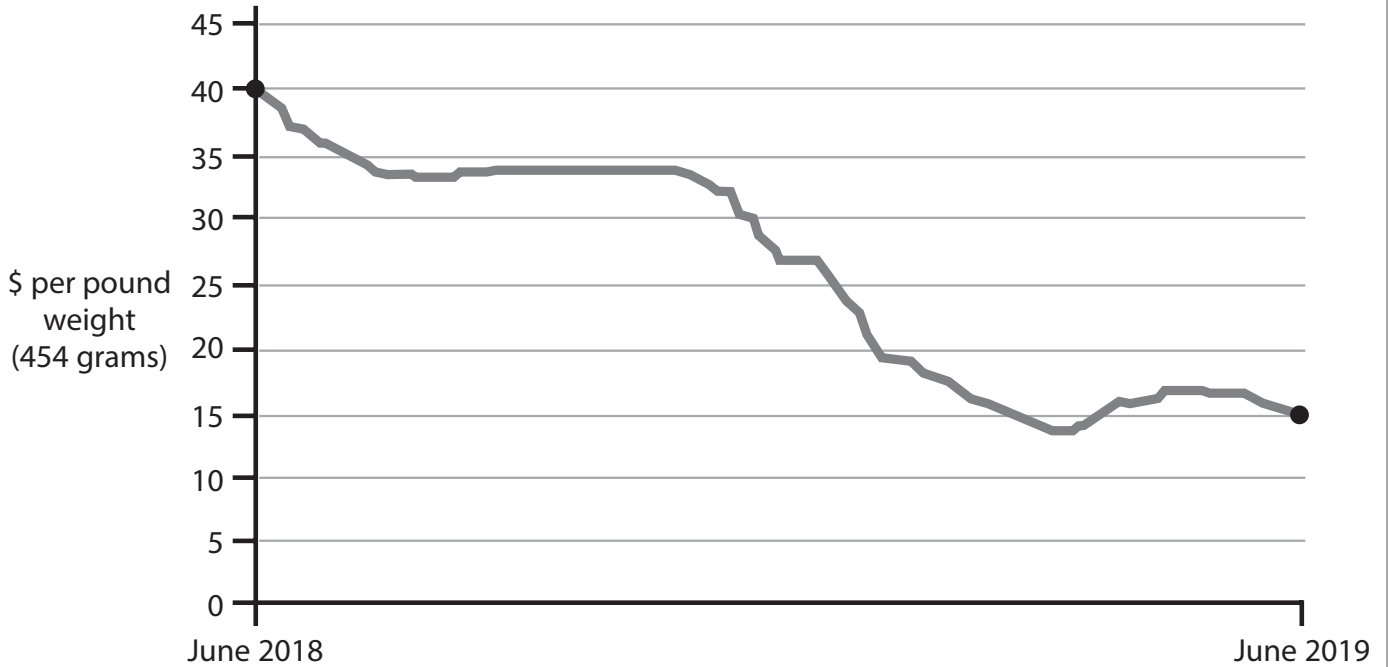
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(Total for Question 2 = 4 marks)

3 Cobalt is a key metal used in the batteries of electric cars. China is the world's largest producer of electric cars but has recently cut subsidies to its manufacturers.

The Democratic Republic of the Congo (DRC) produces more than 60% of the world's supply of cobalt, from its small-scale mines. Many new small mines opened in 2018 as a result of improved expectations of profit.

The following graph shows the price of cobalt between June 2018 and June 2019.



3 With reference to the information provided, draw a supply and demand diagram to show why the price of cobalt fell between June 2018 and June 2019.

(4)



(Total for Question 3 = 4 marks)

- 4 In August 2017 Hurricane Harvey caused the closure of nearly a quarter of the oil production capacity in the United States.

Draw a supply and demand diagram to show the likely microeconomic effects of the hurricane on the US oil market.

(4)



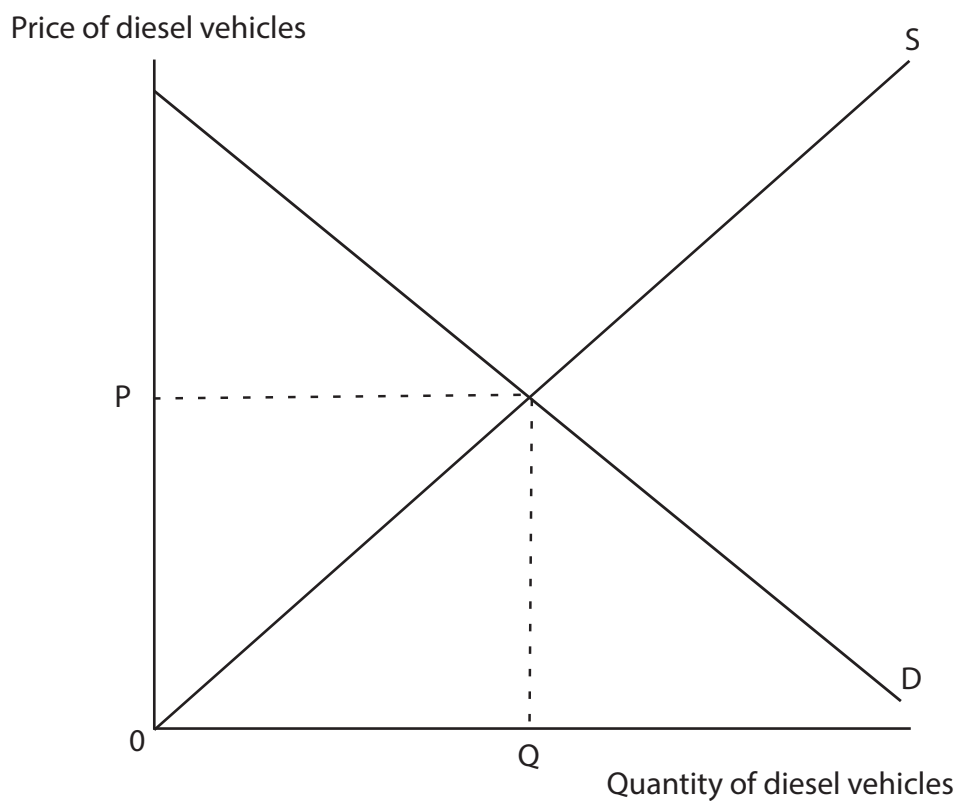
(Total for Question 4 = 4 marks)

- 5 The consensus that diesel emissions are bad for health has led to many cities planning to ban diesel vehicles from their centres. The mayors of Paris, Mexico City, Madrid and Athens have said they intend to ban these vehicles by 2025.

(Source: adapted from <http://www.autoexpress.co.uk/car-news/consumer-news/98747/diesel-ban-clean-air-zone-expansion-could-see-diesel-cars-charged-to>)

- (a) Annotate the diagram to show the change in consumer surplus in the market for diesel vehicles, following the change in demand caused by the proposed 2025 ban in some city centres.

(2)



(b) A ban on diesel vehicles in city centres will reduce the demand for diesel fuel.
This is because:

(1)

- A** consumers are irrational
- B** consumers expect the price of diesel to rise
- C** the goods are complements
- D** the goods are substitutes

(c) Define the term 'demand'.

(1)

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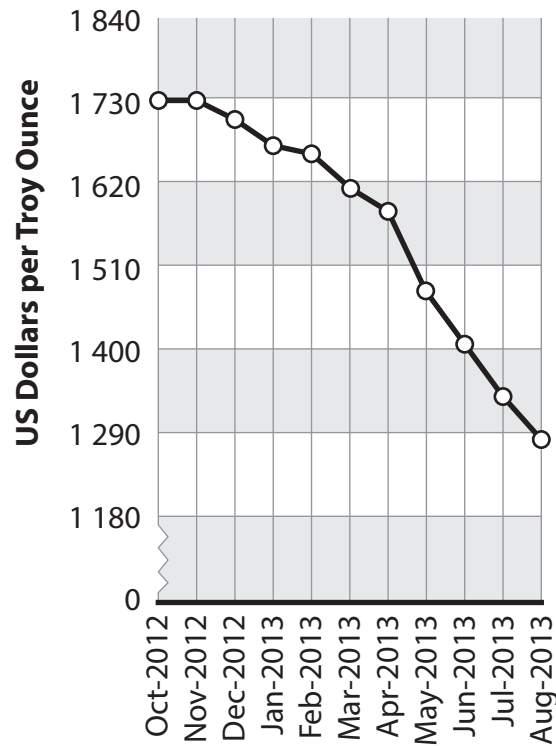
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(Total for Question 5 = 4 marks)

6



(Source: <http://www.indexmundi.com/commodities/?commodity=gold&months=60>)

The graph shows the price of gold per Troy Ounce between October 2012 and August 2013. Which **one** of the following is a possible reason for the trend shown over the period?

(1)

- A An increase in demand for gold jewellery in India and China
- B The sale of gold reserves by several European Central banks including Cyprus and Germany
- C An increase in the cost of machinery used in South African gold mining
- D Speculative buying of gold following expectations of rising inflation

Answer

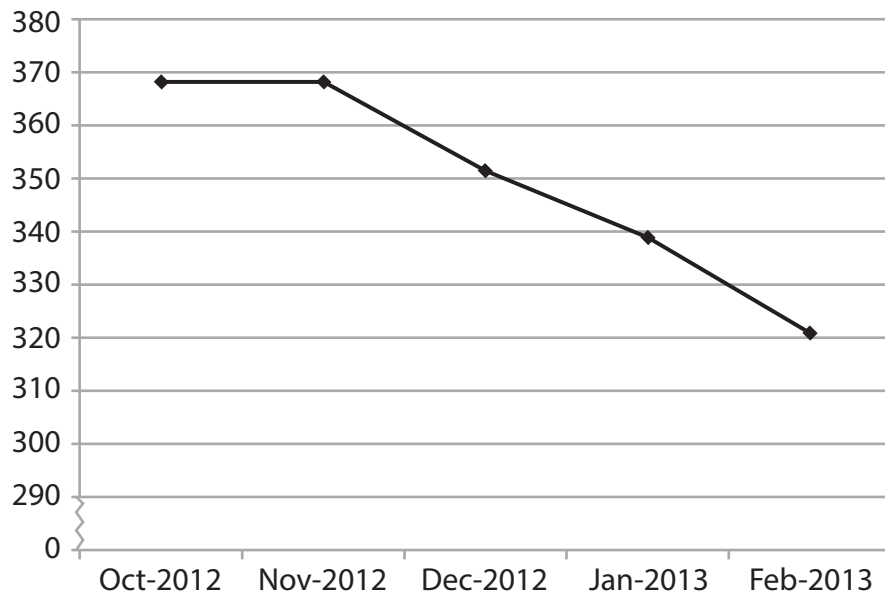
Explanation

You may use a demand and supply diagram in your answer.

(3)

(Total for Question 6 = 4 marks)

7 The price of black tea, US cents per kilogram



(Source: © IMF)

The graph shows the price of tea between October 2012 and February 2013.
(You may use a demand and supply diagram in your answer.)

A possible cause of this fall in the price of tea is

(1)

- A an increase in the wages of tea growers
- B an increase in the price of coffee
- C a larger tea harvest than expected
- D a decrease in the price of sugar

Answer

Explanation

(3)

Dotted lines for writing an explanation.

(Total for Question 7 = 4 marks)

8 The price of eggs increased by up to 20 pence a dozen in January 2012.

What is the most likely cause of this rise in price?

(1)

- A A scare that eating eggs might be unhealthy
- B A decrease in the price of feed for hens
- C A reduction in tax on eggs
- D New regulations which prevent the intensive farming of egg-laying hens

Answer

Explanation

(3)

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(Total for Question 8 = 4 marks)

9 The table shows the demand and supply schedules for packets of shortbread biscuits.

You may use the last column for your workings.

Price per packet	Quantity of packets demanded per month (000)	Quantity of packets supplied per month (000)	New quantity supplied per month (000)
£2.00	200	160	
£2.10	180	180	
£2.20	160	200	
£2.30	140	220	

As a result of an increase in the baking costs for producing packets of shortbread biscuits, supply decreases by 40 000 packets at all prices. The new equilibrium price is:

(1)

- A £2.00
- B £2.10
- C £2.20
- D £2.30

Answer

Explanation

(3)

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(Total for Question 9 = 4 marks)

10 Which of the following factors is most likely to cause the price of gold to fall without a shift in the demand curve?

(1)

- A An increase in national income
- B A decrease in the price of silver
- C An increase in the wages of gold miners
- D A decrease in the cost of machinery used in gold mining.

Answer

Explanation (3)

(Total for Question 10 = 4 marks)

END OF SECTION A

SECTION B

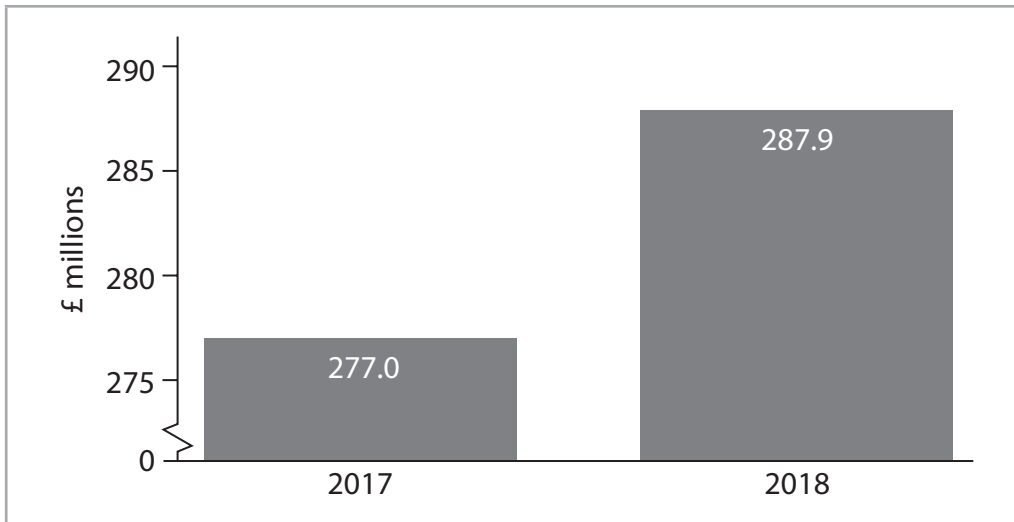
Read all Figures and Extracts before answering the questions.

Write your answers in the spaces provided.

Question 11

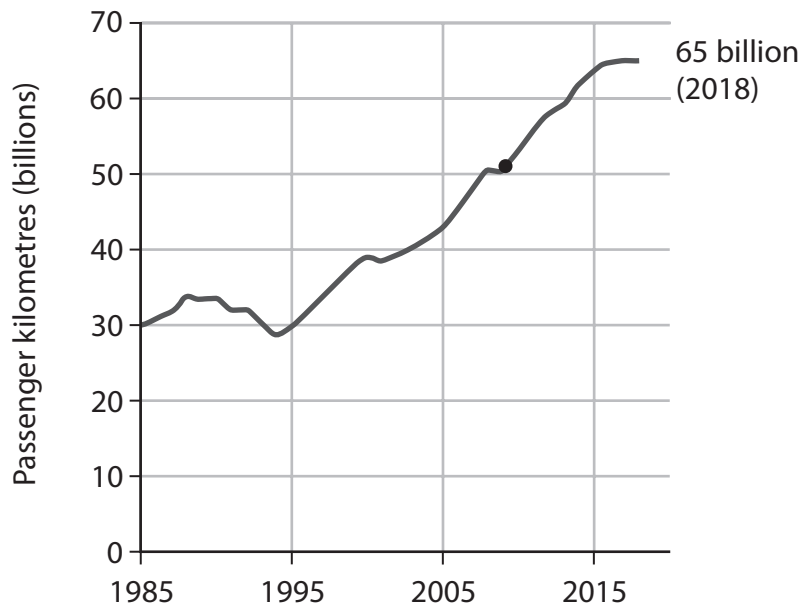
The UK Rail Industry

Figure 1: UK government subsidy to Northern, a train operating company in Northern England



(Source adapted from: <https://www.theyworkforyou.com/wrans/?id=2018-10-18.181280.h>)

Figure 2: Rail passenger kilometres travelled per year in the UK, billions



(Source adapted from: fullfact.org)

Figure 3: Price of a single off-peak train journey, Edinburgh to Leeds Saturday 22nd December 2018 19:00 hours

Adult	Young Persons (16–25) Railcard
£105.30	£69.50

(Source: <https://www.lner.co.uk/buy-tickets/booking-engine>)

Extract A

The case for nationalisation

Privatisation has not made the rail industry cheaper to operate, despite the promise from one government source that it would see private companies bringing: “more competition, greater efficiency and a wider choice of services”.

One reason, suggest the critics, is fragmentation. Instead of pushing British Rail into the private sector as a single supplier the government chose to break it into three components of track, train operators and rolling stock i.e. the trains and carriages. This has encouraged each part of the rail industry to prioritise its own profits rather than collaborating to improve the system. 5

Privatisation, meanwhile, never really worked. The rail network of 2 500 stations and 32 000 km of tracks was renationalised in 2001. This has encouraged the government’s transport secretary, a supporter of private sector involvement, to argue that the state Network Rail monopoly should be removed so that companies can bid to build new rail lines to upgrade the railway. 10

The privately-owned train operators are now the subject of fierce criticism, due to overcrowding and cancelled services. Private companies are supposed to compete to win a bid to be the train operator for a region for a short number of years. However in recent years the number of private companies bidding or renewing their contract as rail operators has fallen. In May 2018 the government rescued the East Coast line by renationalising it. The line had been run by the private rail operator Virgin Rail, which was suffering lower passenger numbers and revenue than forecast. 15 20

Some argue that there is a simple solution: reunite track and train in the only feasible manner, nationalisation.

(Source adapted from: <https://www.ft.com/content/d82848ca-f7ba-11e7-88f7-5465a6ce1a00>)

Extract B

Southern Rail boss paid £495 000

The Chief Executive of Southern Rail, the private-sector train operator that has become associated with delays, losses, cancellations and strikes, was paid £495 000 last year. This increased calls for nationalisation and a maximum wage for executives at companies with government contracts. In contrast the average base pay for a train driver in the UK is £47 705, although they can earn up to £63 000. 5

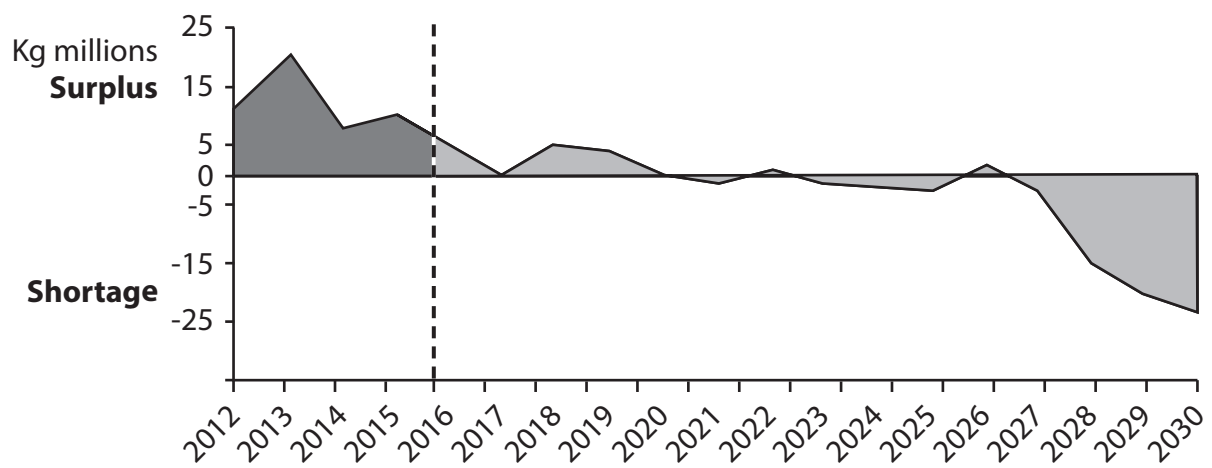
Nearly a third of Southern Rail trains were late in 2016 as it tried to deal with a labour dispute that involved extensive strike action. The rail trade unions are opposed to planned changes to the role of train guards, which they claim will put passenger safety at risk. 10

(Source adapted from: Rob Davies, The Guardian 10 April 2017
<https://www.theguardian.com/business/2017/apr/10/southern-rail-boss-double-pay-rise>)

Question 12

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. 20

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. 25
30

(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/>)

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. 10

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

12 With reference to Figure 1 and Extract A, explain why the price of uranium has 'fallen to a 13-year low' (Extract A, lines 2 and 3) in 2016. Include a supply and demand diagram in your answer.

(5)

(Area with horizontal dotted lines for writing the answer)

(Total for Question 12 = 5 marks)

Question 13

The market for cigarettes

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

Price of packet of 20 tobacco cigarettes £7.70–£9.50	Price of e-cigarette kit £9.99–£19.99
Average price per tobacco cigarette 48p	Single cigarette equivalent price of an e-cigarette 7p
Price elasticity of demand for tobacco cigarettes –0.35	Price elasticity of demand for e-cigarettes –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. 10

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. 15
20

(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.

10

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.

15

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.

20

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

14 Theatre and cinema markets

Extract A

West End ticket prices reach all time high

The price of West End theatre tickets in London has reached an all-time high. In the past year alone, up to January 2013, the average top-price ticket has risen by almost £10 and now stands at £81.05. In January 2013, London theatres announced record numbers of people wanting to buy tickets for shows. Costs of running the theatres have also risen because there are restoration costs to pay and energy costs have increased. This rise in costs is despite some of the theatres in the West End receiving subsidies.

(Source: adapted from 'West End theatre tickets more expensive than ever, says The Stage,' by Matt Trueman, *The Guardian*, 5 April 2013
<http://www.theguardian.com/stage/2013/apr/05/west-end-ticket-price-discrepancy>)

5

Extract B

Cineworld merger with Cinema City International (CCI)

The UK's biggest cinema chain by market share is to enter seven overseas markets through a £900m merger. Cineworld announced that it has agreed to merge with CCI which owns 100 multiplex cinemas in seven countries Bulgaria, Czech Republic, Hungary, Israel, Poland, Romania and Slovakia. The deal is expected to be promoted as a merger of equals although Cineworld is larger than its new partner. The planned merger with CCI follows a fall of 1% in the revenue earned by cinemas in the UK and Ireland in 2013 to £1.17bn.

5

In 2013, Cineworld was ordered by competition regulators to sell three cinemas following its takeover of the Picturehouse chain. This underlined the difficulty of finding new growth opportunities in the company's home market, which was one factor prompting a search for international expansion opportunities.

10

Cineworld's UK-based rivals have also grown overseas, with Odeon UCI having a presence in seven countries, while Canadian-owned Vue Entertainment has cinemas in Portugal, Taiwan, Germany and Denmark.

The combined group is to be run by CCI's chief executive, although other senior management will be drawn from the ranks of both companies and the board will have more Cineworld board members.

15

(Source: adapted from 'Cineworld Targets Europe With £900m Merger,' By Mark Kleinman, *Sky News*, 9th January 2014
<http://news.sky.com/story/1192823/cineworld-targets-europe-with-900m-merger>)

Extract C

Cineworld investigation by Competition Commission (competition regulator)

Cineworld had to sell cinemas in three towns after the Competition Commission (CC) concluded that its acquisition of the Picturehouse chain would lead to higher prices for customers in Aberdeen, Bury St Edmunds and Cambridge. While Cineworld operates mainly in large out-of-town-centre cinemas, Picturehouse's cinemas tend to be smaller and located in city centres.

5

The CC has concluded that the acquisition could lead to a substantial lessening of competition in the cinema market in Aberdeen, Bury St Edmunds and Cambridge – where Cineworld and Picturehouse face limited competition.

(Source: <http://www.competition-commission.org.uk/media-centre/latest-news/2013/aug/cineworld-could-have-to-sell-cinemas>)

Adult (19–59 yrs)	£9.60
Child (2–14 yrs)	£6.80
Student (15–18 yrs)	£7.30
Senior (60+ yrs)	£7.30
Family of 4	£29.80

Figure 1

Cineworld (London) cinema ticket prices after 5pm

14 Explain why the price of 'the average top-price ticket has risen by almost £10' (Extract A, line 2). Use a supply and demand diagram in your answer.

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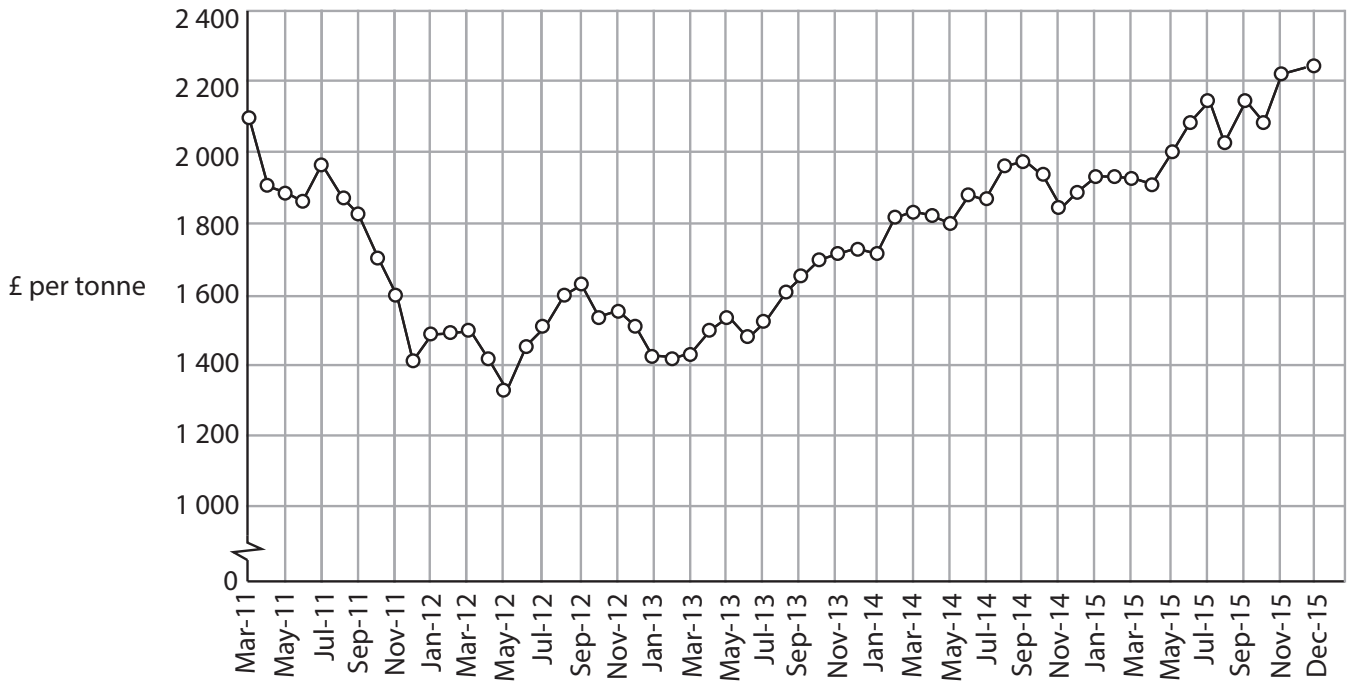
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(Total for Question 14 = 5 marks)

15 The price of cocoa

Figure 1 Cocoa prices, March 2011 – December 2015



(Source: <http://www.indexmundi.com/commodities/?commodity=cocoa-beans&months=60¤cy=gbp>)

Extract 1 Fluctuations in cocoa prices

The price of cocoa has risen to record levels following poor harvests in West Africa. Between November 2014 and December 2015 cocoa prices increased from £1 840 to £2 230 per tonne. Strong winds from the El Nino weather effect led to drought conditions damaging the cocoa crop. Traders have also purchased extra cocoa in advance for fears of a shortage next year, raising prices further according to Edward George at Ecobank, a major African bank. 5

Three quarters of global production remains concentrated in just a few West African countries such as Ivory Coast, the world's biggest producer. Cocoa trees take five years to grow to maturity and the availability of suitable land for expansion is severely limited. 10

Cocoa is subject to enormous price fluctuations. This creates instability in income, employment and investment among cocoa farmers. The governments of West Africa are considering a buffer stock scheme which aims to adjust supply between good and poor harvests to stabilise the cocoa market. However, such a scheme failed some thirty years ago because of funding problems and difficulties in organising the thousands of cocoa farmers. 15

(Source: adapted from 'El Nino pushes up price of chocolate',
Robin Pagnamenta, *The Times*, 30 November 2015)

Extract 2 Chocolate prices set to rise

Cocoa is a key ingredient in making chocolate products. The increase in cocoa prices is almost certain to lead to a rise in the price of premium brands of chocolate such as Godiva and Lindt, which contain high levels of cocoa. However, for standard chocolate brands such as Mars and Cadbury, higher cocoa prices may have little impact on the price of chocolate bars. The producers may seek to avoid raising prices by reducing the size of the chocolate bars or altering the ingredients. 5

In the long term, as 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.

(Source: adapted from 'El Nino pushes up price of chocolate',
Robin Pagnamenta, *The Times*, 30 November 2015)

(b) With reference to Extract 2, examine the likely impact of the rise in the price of cocoa on the producers of chocolate products such as Godiva, Lindt, Mars and Cadbury.

(10)

(Total for Question 15 = 16 marks)

16 Bottled water

Figure 1 UK bottled water market

Year	Consumption (million litres)	Sales revenue (£ million)
2008	1 970	1 380
2009	2 010	1 400
2010	2 020	1 420
2011	2 070	1 500
2012	2 140	1 570
2013	2 360	1 770
2014	2 580	1 960

(Source: http://www.britishsoftdrinks.com/write/MediaUploads/Publications/BSDA_Annual_Report_2015.pdf)

Extract 1 Growth in UK bottled water sales

The consumption of bottled water has continued to grow at a time of falling demand for other types of soft drink such as fruit juices, smoothies and fizzy colas. The growth in demand for bottled water reflects successful promotions and more people trying to follow healthier lifestyles.

The potential for further growth is very positive: annual bottled water consumption per head in the UK is 41 litres, which is far below the West European average of 119 litres.

5

The recycling of bottles and cans has increased rapidly over the past decade; many containers are now produced with 25–50% recycled materials. Of the bottled water consumed in the UK around 73% is bottled in the UK, including most supermarket own brand water. 15% comes from France, including premium brands such as Badoit and Perrier.

10

(Source: adapted from www.britishsoftdrinks.com/PDF/2013UKsoftdrinksreport)

Extract 2 Environmental damage from bottled water

Water is a precious resource. Governments should ensure the sustainability of safe water supplies for the benefit of all people and the natural environment.

The use of bottled water is harmful to the environment. Three litres of water are used directly or indirectly in the production of one litre of bottled water. The majority of bottles are made of plastic and end up in landfill sites rather than being recycled. 5

Furthermore, vast amounts of plastic waste never reach the recycling plants but end up in the oceans, killing fish and birds who mistake it for food. It takes up to a thousand years for plastic to decompose and so the problem is set to get worse.

Bottled water is often transported hundreds of miles from its origin to shops and consumers, at considerable carbon cost. By contrast, tap water only takes a little energy to pump along pipelines into homes. 10

Bottled water is also expensive and consumers can pay anything up to 10 000 times more than if they just drank tap water. Studies have shown that tap water is generally just as clean and healthy as bottled water, if not more so. Furthermore, over half of the bottled water in the UK comes from purified tap water. It is time for the UK Government to intervene by increasing the indirect tax on bottled water. 15

(Source: adapted from <http://www.guardian.co.uk/commentisfree/2007/jul/10/timetocapbottledwater?INTCMP=SRCH> and http://www.sierraclub.org/committees/cac/water/bottled_water/bottled_water.pdf)

16 With reference to Extract 1 and Figure 1, explain the effect on the total revenue of bottled water manufacturers following an increase in demand for bottled water between 2008 and 2014. Use a supply and demand diagram in your answer.

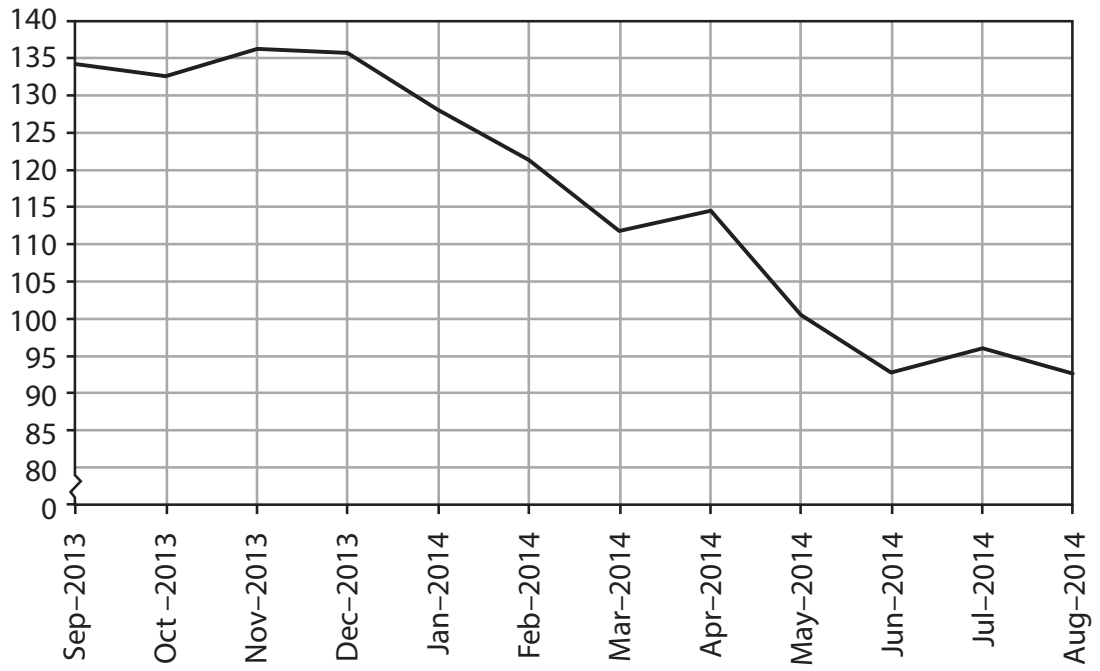
(6)

(Total for Question 16 = 6 marks)

17 The market for iron ore

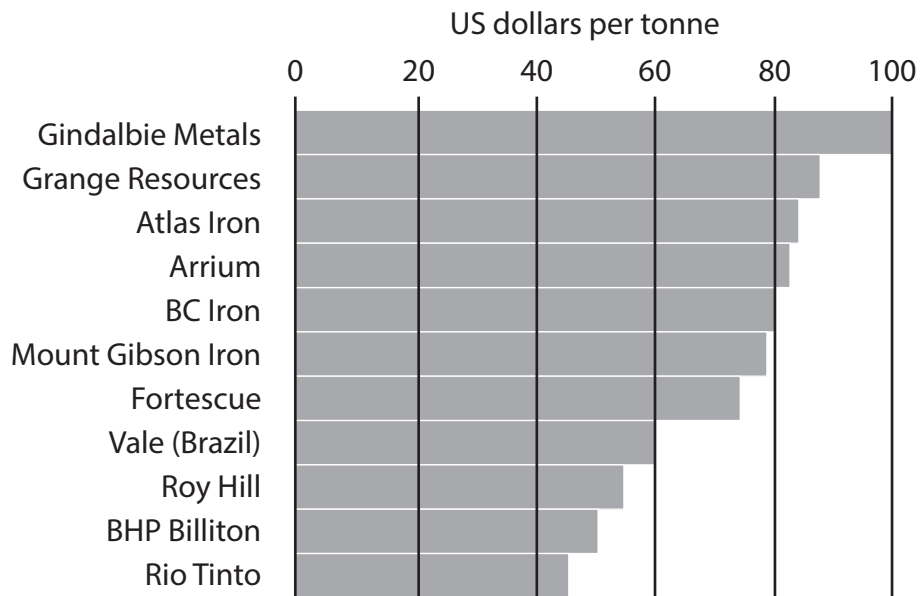
Figure 1 Price of iron ore (September 2013 – August 2014)

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>)

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.

5

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.

10

(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. 5

(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>)

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. 5

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. 10

(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>)

(a) With reference to Figures 1 and 2 and Extract 1, assess the possible economic effects of a fall in the price of iron ore on the producers of iron ore.

(10)

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(b) With reference to Extract 1, explain the likely effect on the **market for steel**, following a fall in the price of iron ore. Use a supply and demand diagram in your answer.

(6)

(Total for Question 17 = 16 marks)

SECTION B

18 The UK Housing Market

Figure 1 Annual percentage increase in share prices of the seven largest house builders (to November 2013)

Company	% change
Berkeley Group	29.6
Bovis Homes	33.8
Bellway	43.5
Redrow	58.4
Taylor-Wimpey	59.5
Barratt Developments	60.1
Persimmon	63.3

(Source: Financial Times, 1 November 2013)

Figure 2 Average house prices, annual earnings and unemployment rates by selected regions in UK, 2013

Region	Average house price	Average annual earnings	Unemployment rate (%)
North East	£149 000	£25 584	10.4
Yorks and Humber	£167 000	£25 572	8.9
North West	£166 000	£26 416	8.3
West Midlands	£188 000	£26 936	9.8
East of England	£257 000	£31 096	6.7
South East	£304 000	£35 552	5.8
London	£437 000	£39 312	8.3
UK	£247 000	£29 536	7.7

(Sources: http://www.ons.gov.uk/ons/dcp171778_286243.pdf <http://www.ons.gov.uk/ons/search/index.html?newquery=weekly+region+earnings>)

Extract 1 Rising house prices

Average house prices in the UK reached their highest level ever at £247 000 in August 2013, exceeding the previous peak in January 2008. In the 12 months to August 2013 UK house prices rose by 3.8%. However, many regional variations were recorded with the highest increase in London. The rise of 8.7% in London prices was largely a result of increased purchases from foreign buyers.

5

The rise in house prices follows a sustained period of low interest rates for borrowers as well as the success of the government's 'Help to Buy' scheme. This scheme enables buyers of new-build homes to borrow up to 95% of the house value. In October 2013, it was extended to include borrowing on all types of properties up to the value of £600 000. Banks are more willing to lend as the government guarantees up to 15% of the house loan as an insurance policy in case of borrowers being unable to repay.

10

(Source: adapted from 'Home-buying at its highest for five years', Juliet Samuel, The Times, 11 October 2013)

Extract 2 Supply constraints in house building

Capacity constraints have affected house building over recent months according to a Bank of England report, providing evidence of growing demand and rising prices in the sector. Skills shortages have appeared after many building workers left the industry during the recession. Delivery time for bricks and other construction materials have also increased, forcing firms to look to imports. Brick-making firms are reluctant to invest in new kilns without the assurance of a continuous supply of reasonably priced energy.

5

However, the Home Builders Federation pointed out that suppliers have responded to short term pressures through increased training schemes and also gave examples of brick makers re-opening plants.

(Source: adapted from 'House builders provide blot on improved landscape', Patrick Hosking and Kathryn Hopkins, The Times, 24 October, 2013)

Extract 3 Buildings are key to tackling carbon emissions

Any serious attempt to tackle climate change must deal with the problem of poorly insulated buildings. More than 40% of carbon emissions in developed countries come from heating, cooling and providing power to homes and offices. Cutting emissions from UK buildings by just 25% would have the same impact as taking every car off the road.

Carbon emissions can be significantly reduced through better insulation, more efficient heating boilers and triple glazing of windows for new build and existing homes. The initial costs of implementing energy efficiency schemes are high. However, reductions in gas and electricity bills mean that energy efficiency work can pay for itself in as little as five years.

5

(Source: adapted from 'Buildings are key to tackling emissions', David Fickling, Financial Times, 25 November 2009)

18 With reference to Extract 1, explain **two** likely reasons why UK house prices increased in the 12 months to August 2013.

(6)

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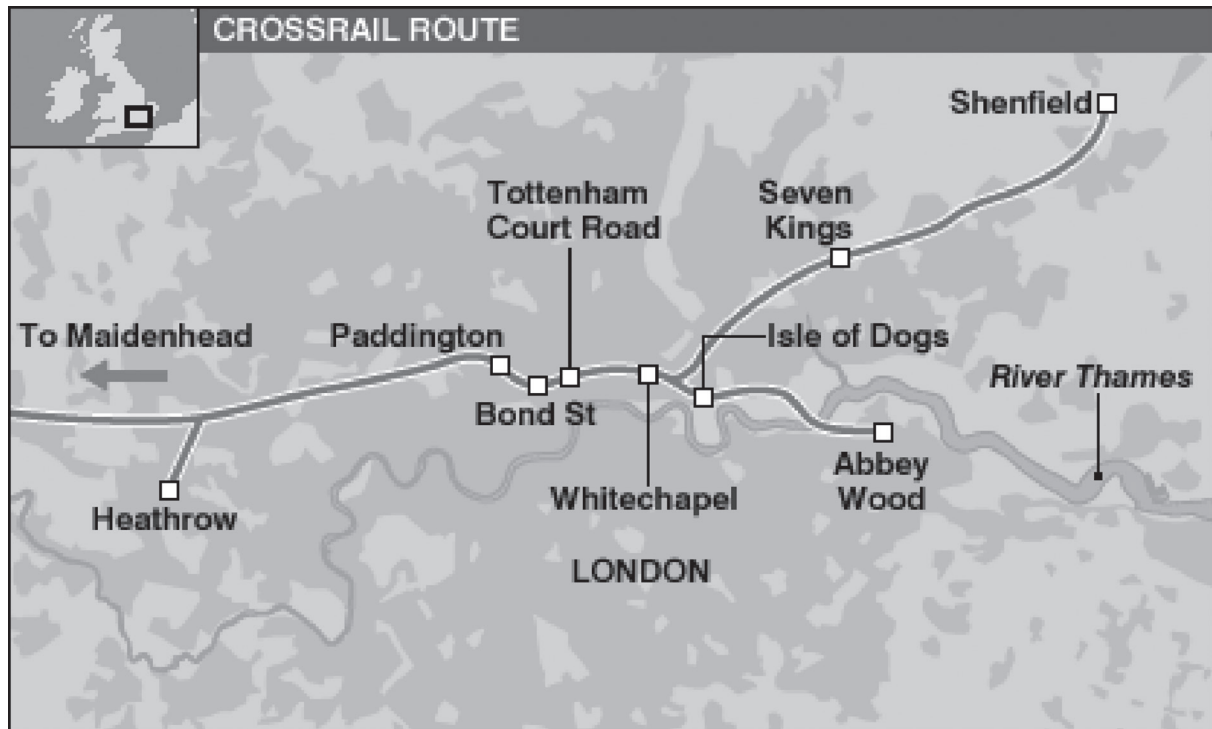
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(Total for Question 18 = 6 marks)

19 The London Crossrail project

Figure 1 The London Crossrail route



(Source: Google images)

Extract 1 London Crossrail is Europe's largest infrastructure project

A government-funded East-West rail link across London, known as Crossrail, is due to open in 2018. It involves building 73 miles of railway line to link Reading in the west to Shenfield in the east. It includes 38 railway stations and 26 miles of tunnels under London. London's rail capacity is set to increase by 10% and overcrowding on the existing transport routes should reduce.

5

Crossrail is being built to cope with London's growing population and to support further economic development of the capital city. An estimated 200 million passenger journeys per year will be made on Crossrail. Each train will be 200 metres long and capable of carrying 1 500 passengers. The project has coincided with the tendency for companies to move back into central London, reversing a 20 year trend.

10

Rail travel times are set to come down, for example, Heathrow Airport to the City of London will fall from 55 minutes to 32 minutes. The project will also bring a further 1.5 million people within a 45 minute commute to the major employment centres in London. There is now a discussion about building Crossrail 2 to improve links between north and south London.

15

(Source: <http://www.crossrail.co.uk/benefits/>)

Extract 2 Employment at London Crossrail

Over 9 000 people are directly employed on the project across 40 construction sites. Another 41 000 jobs have been created indirectly outside London, including the supply of thousands of tonnes of steel from Northern England and construction equipment from the Midlands.

However, at the start of construction in 2009, Crossrail required some 1 200 specialist workers with underground tunnelling skills but were only able to recruit 700 and these had an average age of 55 years. In response to the labour shortage, Crossrail set up a £15 million Tunnelling Academy to train the remaining specialist workers required for the project. This may prove useful for possible future transport infrastructure projects such as the controversial High Speed 2 rail line (HS2) between London and the north. 5 10

Terry Morgan, the boss of Crossrail, warned that Britain's construction skills base will be put at risk without a steady flow of large-scale infrastructure projects. Government spending on infrastructure projects fell by 50% in the first quarter of 2013, creating uncertainty over future employment for specialist construction workers and investment by firms. 15

(Source: adapted from 'Crossrail chief warns infrastructure schemes vital to skills base', James Pickford, Financial Times, 24 June 2013)

Extract 3 London Crossrail is unfair to taxpayers

Central and local government taxpayers are paying for most of the £14.8 billion cost of the Crossrail project. However, most taxpayers will receive little benefit from the rise in domestic and commercial property values. Only those properties near the stations will experience an increase in value as a result of Crossrail. House prices near the stations have already risen by 20% more than the average, and commercial values along the route are set to rise by at least 10%. The project could lead to an increase in regional inequality. 5

(Source: adapted from <http://www.transport-network.co.uk/Taxpayers-lose-out-on-millions-due-to-Crossrails-crude-funding-structure/9645#.UqOAJxZFAdU>)

19 'An estimated 200 million passenger journeys per year will be made on Crossrail' (Extract 1, lines 7 and 8). Discuss the factors which might influence the level of passenger demand for Crossrail services.

(14)

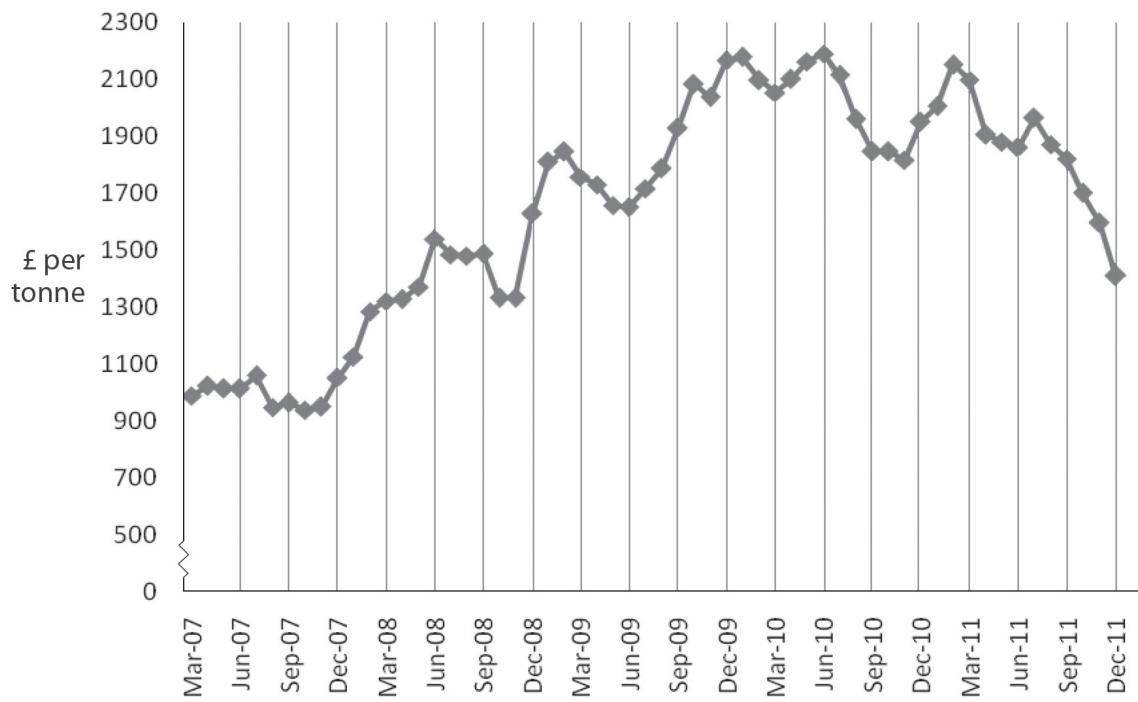
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(Total for Question 19 = 14 marks)

20 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. 5

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.

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. 10

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. 15

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. 20

(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>)

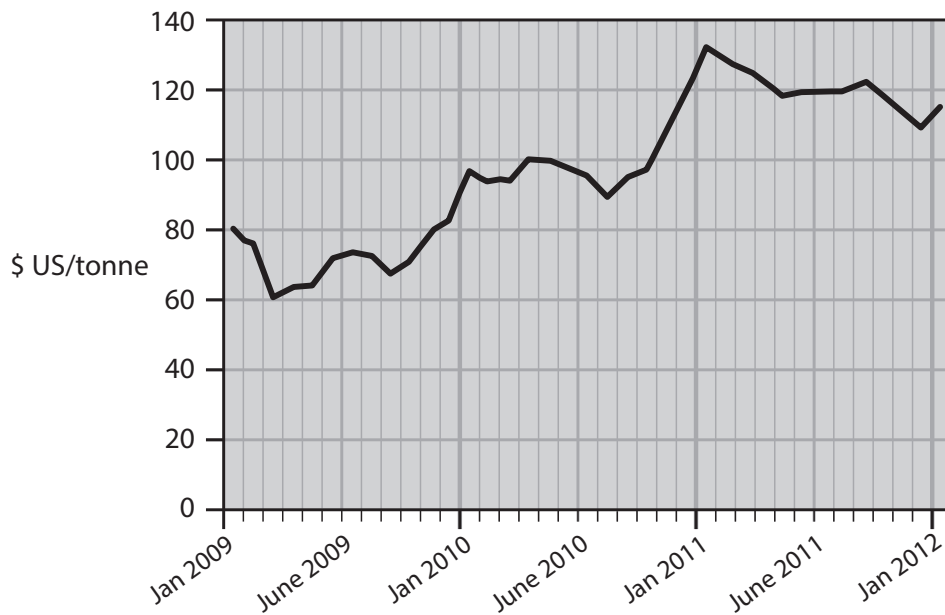
20 With reference to the first paragraph of Extract 1, explain the causes of the decrease in cocoa prices between February and December 2011. Illustrate your answer with a supply and demand diagram.

(6)

(Total for Question 20 = 6 marks)

21 The price of coal

Figure 1: The rising price of Australian coal



(Source: © Worldbank.org)

Extract 1 Floods hit Australian supply of coal

Severe floods have damaged many of Australia's coal mines and railway lines, dramatically reducing the production and transportation of coal and increasing its price by up to 35% per tonne from November 2010 to January 2011. A vast area has been affected by the floods and the cost of pumping out the water and repairing the mines could run into hundreds of millions of dollars. The floods have also led to an increase in speculative buying of coal by stock market traders anticipating shortages.

5

Despite the higher price of coal and reduced output, the revenues of the big Australian coal producers have remained the same.

The increase in coal prices is expected to put pressure on electricity prices over the coming months. The UK generates about one quarter of its electricity by burning coal, much of which is imported from overseas, including Australia.

10

(Source: adapted from © Times Newspapers Limited, 5th January 2011)

Extract 2 Carbon emissions trading scheme in Australia

Around 500 of Australia's biggest polluting companies will be forced into an emissions trading scheme in 2015, similar to that operating in the European Union. The Australian Government intends to achieve a 5% cut in carbon emissions by 2020.

Although Australia accounts for just 1.5% of global greenhouse gas emissions, its heavy reliance on coal fired power stations makes it one of the world's biggest carbon polluters per head of population. It is also the world's biggest exporter of coal. 5

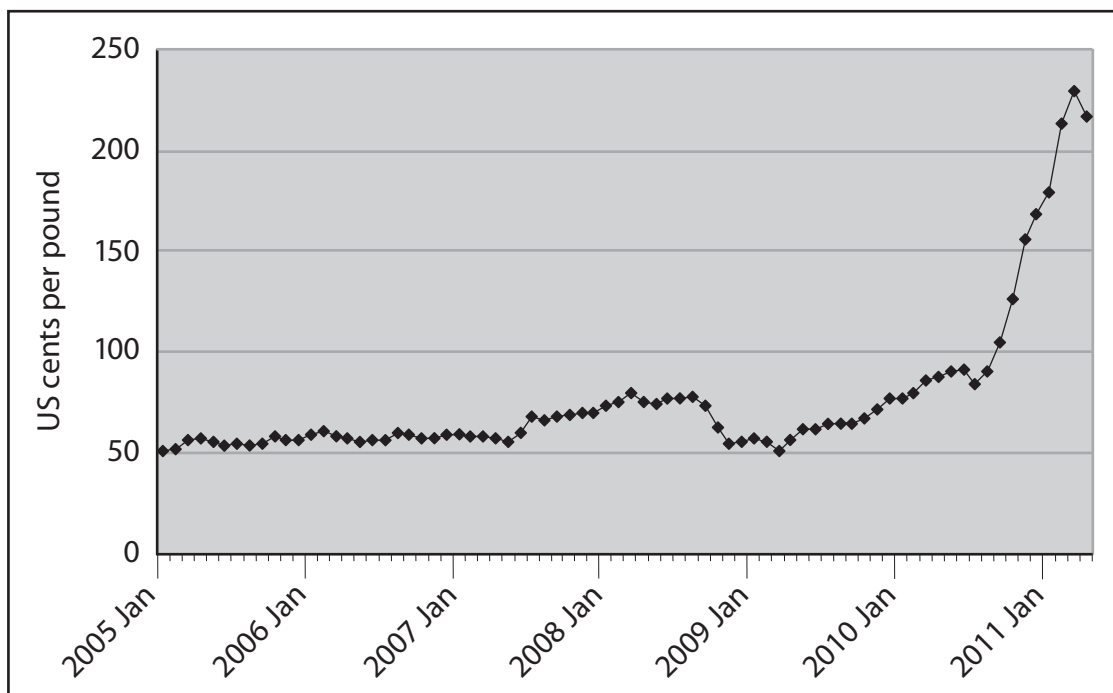
Initially, the companies in the scheme will receive 94.5% of their carbon permits for free, and then obtain government subsidies to purchase the other 5.5% of permits, so that no additional costs to the firms arise. Gradually over time, these subsidies will be removed. Emissions trading schemes have also attracted interest from China and South Korea. 10

However, the scheme is a blow to the Australian mining industry which faces carbon costs of at least 25 billion Australian dollars by 2020. According to Anglo American Corporation, some 40 000 jobs are directly at risk and a further 100 000 indirectly. It also believes some mining investment projects will be cancelled, adding further to structural unemployment. Government training programmes and relocation subsidies may be required to improve the mobility of labour. 15

(Source: adapted from © *The Financial Times*, 10th July 2011 and 8th November 2011)

22. The price of cotton

Figure 1: Cotton prices 2005-2011 (US cents per pound in weight)



(Source: World Economic Outlook Database © 2011 International Monetary Fund)

Extract 1 Rising cotton prices

The price of cotton more than doubled in 2010 after crops in China and Pakistan were hit by floods. This was made worse by the Indian Government's ban on cotton exports. World supply of cotton fell from 107 million bales in 2009 to 101 million bales in 2010. A bale of cotton weighs 500 pounds and can make 1200 t-shirts. Stocks of cotton are at their lowest level for five years. At the same time, speculators have bought up large quantities of cotton in the hope of making profits.

5

Farmers have responded to rising prices by devoting more land to cotton. In the right conditions, cotton crops take 100 days to reach maturity. World supply is forecast to increase to 117 million bales in 2011.

Cotton is the most important textile for making clothing. However, demand for synthetic materials is increasing as manufacturers look for alternatives.

10

(Source: adapted from 'Cotton price rise will hit clothing warns Next', James Hall, The Telegraph, 4th November 2010 © Copyright Telegraph Media Group Limited 2010)

Extract 2 The impact of rising cotton prices on clothing retail stores

Lord Wolfson, chief executive of retail clothing store Next, warned that the soaring price of cotton could lead to clothing prices rising by almost 10% in 2011. The retailer, which has more than 500 stores and 2.6 million online and catalogue shoppers, blamed 'what appears to be a speculative bubble' for the expected price rises.

Lord Wolfson stated that 'we have not seen clothing prices rise for nearly twenty years, so it's going to be very difficult to know how consumers will respond to a price increase'. Other stores such as Debenhams and Marks & Spencer also predicted higher clothing prices in 2011. Previously, prices had been kept down by firms relocating production facilities to Asia. 5

Next's share price in November 2010 was more than 20% higher than in November 2009. This reflected a successful diversification into home furnishings such as cushions, curtains and furniture. However, analyst Katharine Wynne, at Investec, cut her full-year profit forecasts for Next from £560m to £542m and cancelled her 'buy' recommendation on the retailer's shares. 10

(Source: adapted from 'Next forecasts 10% rise in clothes prices', Julia Finch, The Guardian, 4th November 2010 © Guardian News & Media Ltd 2010)

Extract 3 Genetically modified (GM) cotton farming in India

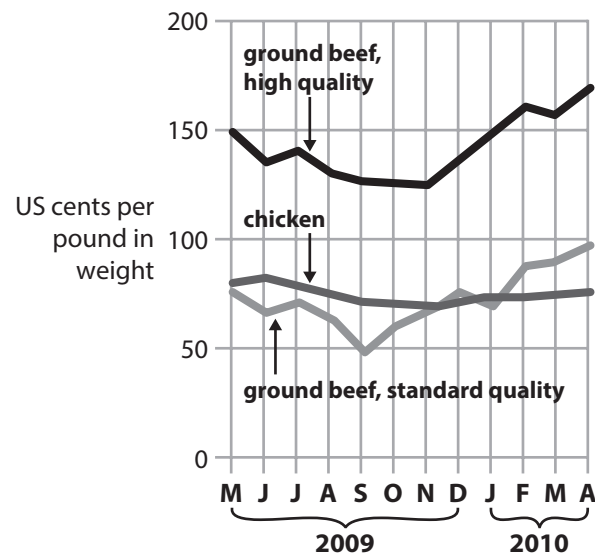
The use of genetically modified cotton seed is widespread in India. It is used to prevent disease, increase crop yields and used to kill the pink bollworm, a mite which eats cotton seed. However, in 2009, scientists found that the bollworm had developed resistance to the modified version of the seed.

Consequently, the anticipated increase in crop yields has not materialised. However, the costs to farmers of buying and using GM seeds have increased – they require more fertiliser and twice as much water compared to traditional seeds. Farmers are not allowed to harvest seeds for the next crop but are forced to buy fresh supplies from Monsanto, the producer of this GM seed. There is now a genuine fear of a lack of bio-diversity resulting from the use of GM crops. 5 10

(Source: adapted from 'Monsanto and Indian Farmer suicides', by Ralph Stone, © The Berkley Daily Planet, 6th December 2010.)

23 The price of beef

Figure 1 The price of beef and chicken for fast food restaurants 2009 – 2010



Extract 1 Rising price of beef

It is **not** a happy time in American fast food restaurants. Rising beef prices have reduced profit margins at the McDonalds, Burger King and Wendy chains. They have found it difficult to pass on higher beef prices to their customers through the sale of burgers such as the 'Big Mac' and 'Whopper'. Instead, the fast food restaurants have responded by promoting sales of chicken burgers and fish fillets.

5

Beef prices have risen due to higher costs for cattle feed and severe drought conditions in Australia and New Zealand (the main suppliers of beef for American fast food restaurants).

However, there is some good news. The fast food restaurants have benefited from the recession as consumers made savings by switching from eating at expensive restaurants to cheaper burger bars.

10

(Source: © *The Times* 'Increase in meat prices has burger lovers asking: where's the beef?', Alexandra Frean, 24th May 2010)

Extract 2 Cattle farms damaging the rainforest

Deforestation in Brazil releases an estimated 400 million tonnes of carbon dioxide into the atmosphere every year, making the country one of the biggest emitters of the gas in the world. An average of 7,330 square miles of rainforest has been lost each year since 1995. The destruction of rainforest has accelerated over the past few years due to soaring beef and soya prices. Farmers are burning more rainforest to turn land into cattle ranches and into fields for growing crops.

5

However, the President of Brazil announced plans to reduce deforestation by subsidising sustainable development projects. These include replanting trees and creating eco-friendly tourism as alternative means of providing employment and income for local communities. The amount of funds made available has not been revealed.

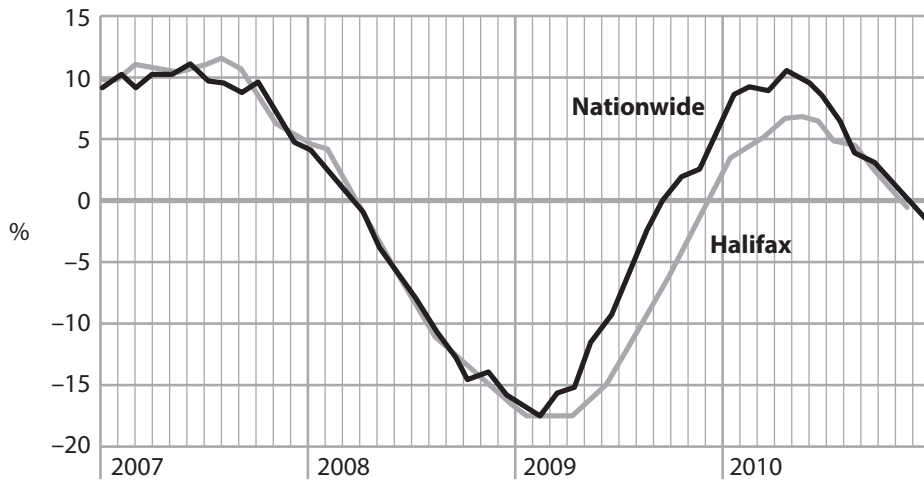
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The proposals also include an increase in the policing of forested areas and severe penalties for those breaking the law through illegal logging and farming.

(Source: © Guardian News & Media Ltd 2008, adapted from 'Brazil sets target to slow Amazon deforestation', by David Ljunggren)

24 Difficult times for house builders and first time buyers

Figure 1 UK house prices, year on year % change



(Source: © Halifax & © Nationwide Building Society)

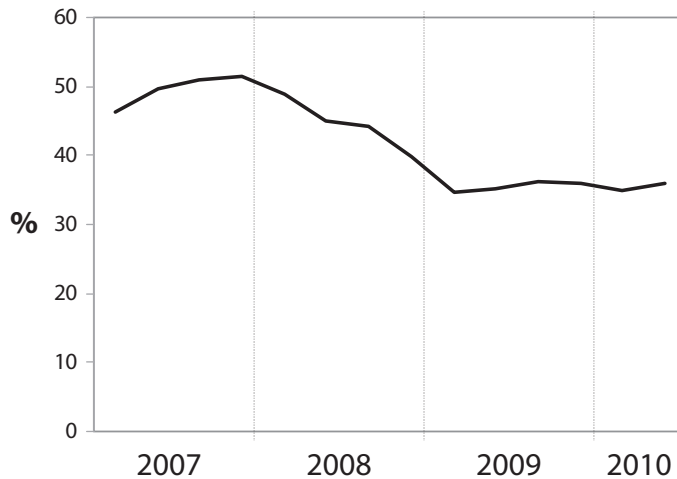
Figure 2 Share prices of the seven largest UK house builders, percentage change

Company	% change (Jan 1st–Nov 5th 2010)
Berkeley Group	+2.9
Redrow	-16.2
Bovis Homes Group	-18.8
Persimmon	-23.0
Bellway	-31.7
Barratt Developments	-32.9
Taylor Wimpey	-32.9

(Source: Investing 5th November 2010)

<http://www.fool.co.uk/news/investing/2010/11/05/a-harsh-winter-for-housebuilders.aspx>

Figure 3 Affordability of UK property for first-time buyers
Mortgage payments as a % of average take home pay for first-time buyers



(Source: © Nationwide Building Society)

Extract 1 Falling house prices

There are fears of a housing market crash following the largest ever recorded monthly fall in house prices in September 2010. According to Halifax Bank, over £6000 (3.6%) was wiped off the average house price.

More than £1 billion has been knocked off the stock market value of Britain’s seven leading house building firms between January and November 2010, over a period when share prices generally have increased by nearly 20%. The fall in house prices has caused the supply of new housing to fall sharply. Builders’ profits and employment have suffered.

5

Howard Archer, Chief economist at Global Insight, believes house prices will continue to fall by 10% in 2011. He added that a combination of factors was affecting house prices, including: high (and rising) unemployment, limited wage growth, deteriorating consumer confidence and difficulties in getting a mortgage.

10

(Source: © Guardian News & Media Ltd 2010)

Extract 2 First-time buyers

The number of new mortgages (loans which enable people to buy a property) dropped in September to its lowest level for more than a decade. Despite falling house prices, there are immense challenges for first-time buyers to get on to the property ladder. Lenders have increased the cash deposit required to gain a mortgage and refused to pass on interest rate cuts to this group of buyers due to the risk involved. The outlook is further worsened by rising unemployment and soaring student debt. A 30% cut in government subsidies for new-build affordable homes was also announced in the government spending review.

5

However, Figure 3 shows that housing has become more affordable for first-time buyers over recent years if they can provide a cash deposit. The alternative is to rent property. The Royal Institution of Chartered Surveyors report an increase in demand for rental properties and in rents charged over the latter part of 2010.

10

(Source: © Guardian News & Media Ltd 2010 adapted from 'Clouds over the housing market create a perfect storm for first-time buyers', by Simon Bowers)

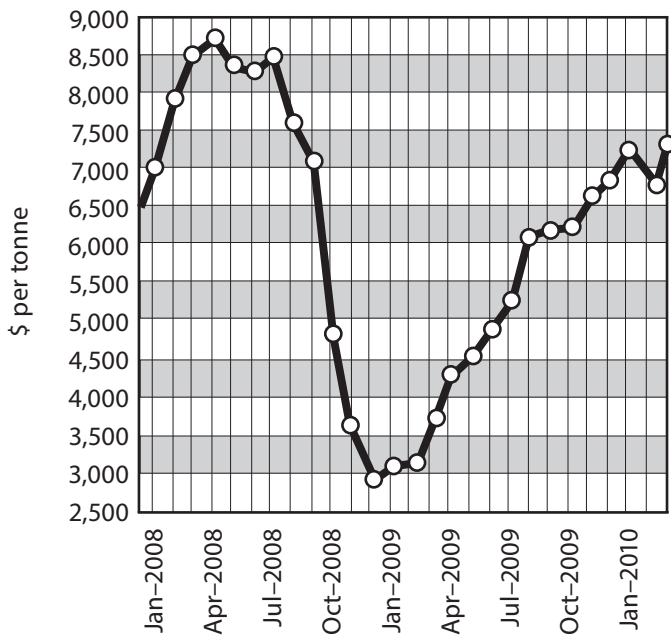
24 With reference to the last paragraph of Extract 1, explain why house prices fell in September 2010. Illustrate your answer with a supply and demand diagram.

(6)

(Total for Question 24 = 6 marks)

25 The market for copper

Figure 1 Copper prices, January 2008–March 2010



Source: www.lme.com/copper_charts.asp

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.

5

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.

10

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

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.

5

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.

10

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

25 With reference to the first paragraph of Extract 1, explain the cause of the decrease in copper prices between April and December 2008. Illustrate your answer with a supply and demand diagram.

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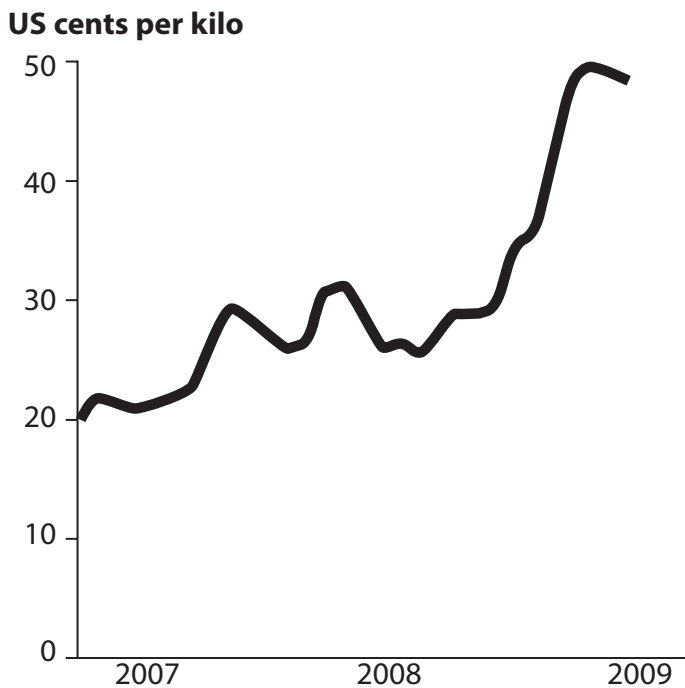
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(Total for Question 25 = 4 marks)

26 The Price of Sugar

Figure 1: World price of sugar



(Source: www.mongabay.com/images/commodities/charts/sugar.html)

Extract 1 Soaring price of sugar

Sugar prices around the world more than doubled over the last few years, reaching 50.8 US cents per kilo in 2009, a 28-year high.

Sugar production in Brazil, the world's largest producer, has been hit by heavy rain. Brazil is also diverting part of its sugar cane crop to making ethanol fuel for use by motor vehicles.

5

Speculative demand has also forced up sugar prices. Eugene Weinberg, an analyst at Commerzbank, pointed out that cash-rich speculators have purchased sugar stocks in anticipation of its price rising to even higher levels next year.

For much of the last decade, sugar has not been a very profitable crop compared to other types of farming. Recent high prices cannot result in an immediate increase in sugar production, as it may take up to two years for supply to respond. Destroying rainforests as a means to increase sugar production has a negative environmental and social impact.

10

(Source: adapted from 'Food groups say US is running out of sugar', by Alexandra Frean, *The Times*, 13th August, 2009 and 'Chasing a sugar rush: global deficit drives price rises', by Sean O'Grady, *The Independent*, 11th August, 2009.)

Extract 2 US faces sugar shortage

America's obesity problems may soon shrink amid fears that the makers of treats, such as Oreo cookies, Krispy Kreme doughnuts and Hershey bars, could run out of sugar. Leading food companies, including Kraft, Mars and Hershey, have warned the government that there may be a serious sugar shortage unless it allows more imports of the commodity into the country. The food companies blame the shortage on the government's policy of restricting imports of sugar in order to protect the incomes of US sugar farmers in the Midwest. 5

Rising sugar prices have affected the production costs of chocolate and other confectionery companies. However, there are many other costs to consider. At Mars, for example, sugar is third on its list of ingredient costs behind cocoa and milk. Moreover, the price of milk has been falling over recent years, helping to offset the increase in sugar costs. 10

Chocolate and other confectionery companies have experienced increased sales during the recession as people attempt to cheer themselves up by consuming more sugary treats. 15

(Source: adapted from 'Food groups say US is running out of sugar', by Alexandra Frean, *The Times*, 13th August, 2009 and 'Chasing a sugar rush: global deficit drives price rises', by Sean O'Grady, *The Independent*, 11th August, 2009.)

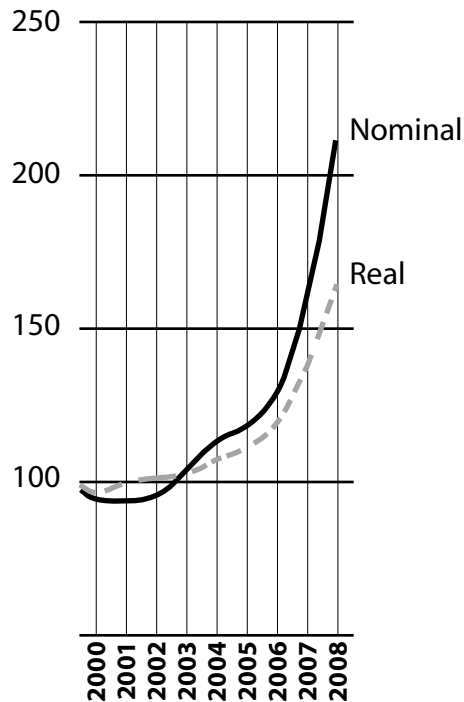
26 With reference to Figure 1 and Extract 1, explain why the price of sugar 'more than doubled over the last few years'. Use a supply and demand diagram in your answer.

(6)

(Total for Question 26 = 6 marks)

27 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.

5

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.

10

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.

15

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

20

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.

27 With reference to Extract 1 and Figure 1, explain the causes of the increase in the price of food. Use a supply and demand diagram in your answer.

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END OF SECTION B

(Total for Question 27 = 8 marks)