

AQA A-LEVEL ECONOMICS • 7136

ECONOMICS



EXAM QUESTION PACK

3.1.8.4 POSITIVE AND NEGATIVE EXTERNALITIES

SCORE

/530

PERCENTAGE

%

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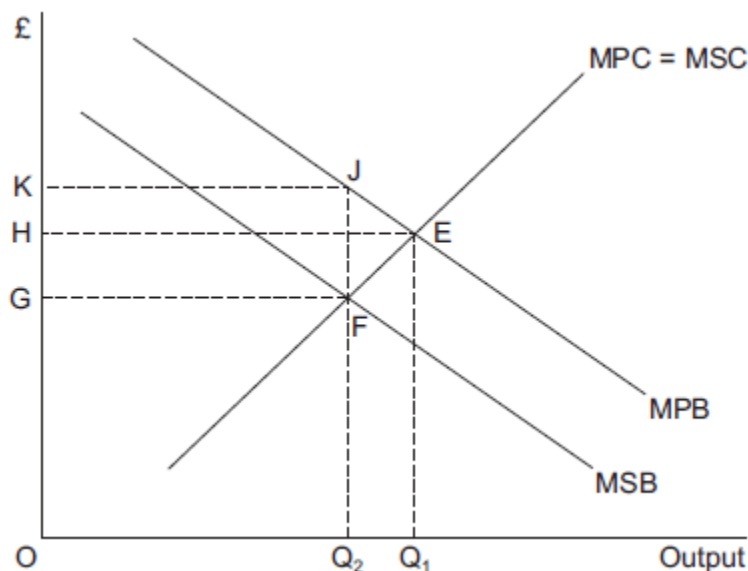
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1.

The diagram below shows the marginal private benefit and marginal social benefit (MPB and MSB) curves and the marginal private cost and marginal social cost (MPC and MSC) curves for Good X.



To reduce the market equilibrium output from Q_1 to Q_2 , the government could

A introduce a subsidy of GH.

☐

B set a minimum price of OG.

☐

C introduce a per unit tax of FJ.

☐

D set a maximum price of OH.

☐

[1 mark]

2.

It is 'difficult to judge whether GM crops will boost productivity to feed the world and create social benefits or cause market failure through monopoly, environmental damage and adverse side effects on human health' (**The Global Context Extract B**, line 38–40).

Using the data and your economic knowledge, evaluate the view that the UK Government should support the production and use of GM crops.

[25 marks]

3.

The table below indicates the private and external costs and benefits resulting from building a coal-burning power station.

	£ million
Private benefit	180
Private cost	190
External benefit	110
External cost	140

The social cost **minus** the social benefit equals

A £120 million.

☐

B £40 million.

☐

C £30 million.

☐

D £10 million.

☐

[1 mark]

4.

‘The UK’s strong reliance on landfill indicates the existence of widespread environmental market failure’ (**The Global Context Extract B**, lines 16 –17).

Using the data and your economic knowledge, evaluate alternative methods of correcting market failure arising from waste disposal.

[25 marks]

Extract B: Diminishing returns and food production

The British political economist Thomas Malthus (1766-1834) argued that because cultivatable land is in fixed supply, food production is subject to the law of diminishing returns and cannot keep pace with population growth. Technological improvements and international trade have meant that his gloomy predictions of famine and drought have largely been avoided, certainly for industrialised countries like the UK. Now that the world has more than 6 billion people, predicted to rise to 9 billion by 2050, there is a worry once again that diminishing returns will set in. Some estimates suggest that the world's undernourished could soon number over a billion people.

Genetically modified (GM) crops are seen by some experts as providing a way around the problem of diminishing returns. Supporters of GM technology claim that by developing crops that are resistant to disease, drought, salty soil and flooding, more land can be cultivated and existing farmland used more efficiently. The result is improved agricultural productivity. They also claim that private goods like rice and tomatoes can be turned into merit goods by being modified to contain vaccines or cures for diseases.

Anti-GM groups have mounted high profile campaigns against what the media have called ‘Frankenstein foods’. In response, the British frozen food chain Iceland decided that there was a competitive advantage in announcing that all of its products would aim to be GM-free and the major British supermarkets quickly followed. Meanwhile, the UK Government’s official position is that it has an open mind, and that its priority is to protect human health and the environment while being ‘pro-consumer choice’. In the USA, the ‘choice’ argument has been undermined by the view that foods containing GM products need not be labelled as such.	15 20
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Can GM crops really guarantee 'food security'? Critics claim that a lack of spending power, not food supply, is the real problem, with poor people in failing economies often starving in front of full stores and granaries. They also claim that GM crops cause negative externalities. For instance, their pollen can contaminate the crops of nearby organic businesses. Also, most GM crops are developed for resistance to weed-killers and pesticides, and this encourages farmers to use more chemicals, killing wildlife and reducing biodiversity. Furthermore, there are fears that eating GM foods might have long-term risks to human health which have yet to be fully investigated.

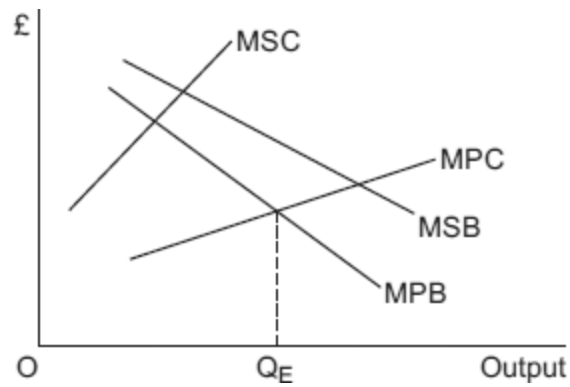
Regulations in Europe are so strict that it costs a seed manufacturer at least ten times as much to develop a new GM crop than a conventional crop. This means that only big companies can afford to develop them. Globally, the American company Monsanto controls the seeds on over 80 per cent of the world area of planted GM crops. Furthermore, Monsanto bans 'seed saving'. It uses patent laws to sue farmers if they save seeds for planting, rather than buying new seeds every year.

Almost every single piece of evidence on each side of the debate is contested, making it difficult to judge whether GM crops will boost productivity to feed the world and create social benefits or cause market failure through monopoly, environmental damage and adverse side-effects on human health.

Source: news reports, 2008 / 9

6.

The diagram below shows the marginal private and social benefit (MPB and MSB) curves and the marginal private and social cost (MPC and MSC) curves for a good.



Which one of the following combinations of price and output, **A**, **B**, **C** or **D**, will improve the allocation of resources compared with the market outcome at Q_E ?

	Price	Output	
A	Lower	Lower	☐
B	Lower	Higher	☐
C	Higher	Lower	☐
D	Higher	Higher	☐

[1 mark]

THE GLOBAL CONTEXT

Extract B: The recycling market

Scrap metal dealers are once again touring housing estates in their pick-up trucks obtaining steel and other metals from householders. Increased demand for steel and other metals on world markets has led to a change in the fortunes of these dealers, who are price takers. 1

Recycling has become a global activity. In 2009, with gold selling internationally at well over \$1000 an ounce, there were TV adverts from companies wanting to buy unwanted jewellery. A mobile phone also contains tiny traces of precious metals which can be extracted profitably from the millions of phones discarded each year. This is done at large processing centres, usually near sea ports, and much of the recovered material is exported to factories in China. The Olympic stadium in Beijing, China, was built almost entirely using recycled steel. 5 10

Germans, Scandinavians and Canadians are used to sorting their rubbish into different coloured bins. But instead of matching the recycling rates achieved in some countries, the UK still dumps many potentially useful materials. These include plastics, glass, paper and metals, which are buried in landfill sites partly because there are insufficient market incentives for recycling. The UK's strong reliance on landfill indicates the existence of widespread environmental market failure. Landfill creates greenhouse gases, threatens to pollute water sources and wastes scarce resources. 15

Some critics suggest that it would be better for the UK to aim at waste reduction, eliminating unnecessary packaging and other 'bads' at the production and retail stages. The UK pressure group *Waste Watch* also suggests more reuse, for example encouraging people to buy second-hand clothes from charity shops. However, other methods, such as returnable milk bottles, are in sharp decline. 20

There are now landfill taxes and regulations which provide incentives for recycling. Households could face the prospect of fines for breaking 'bin-bag rules'. However, this may lead to unintended consequences such as illegal dumping of waste. *Waste Watch* wants national targets and other policies to promote composting because, by weight, garden and kitchen waste make up the majority of material sent to landfill. *Waste Watch* also suggests increasing the landfill tax each year and extending it to cover incineration and other waste-disposal methods. 25 30

Recovery is a further option. In less developed countries, some homeless people live on city rubbish dumps making a living from what they can find and sell. In the UK, market conditions are such that the metal in a 2p coin is now actually worth 3p. Some experts even predict that within ten years it will be economic to excavate landfill sites to 'mine' the tin cans and other scrap materials that have been buried there.

Source: news reports, 2009–10

Discuss whether markets alone can be relied upon to reduce the problems of environmental pollution.

[25 marks]

THE GLOBAL CONTEXT

Extract B: Climate change

In 2004, Russia signed up to the Kyoto Protocol, an international agreement on policies to manage climate change. This committed Russia to a United Nations programme to reduce emissions of greenhouse gases. In 2010, Russia's emissions were as low as their 1990 levels, but this was less to do with environmental policy and more to do with the collapse of heavy industry following the fall of the Soviet Union. A large contribution towards the UK's Kyoto targets also came from deindustrialisation. However, China, like the USA, did not sign up to the Kyoto Protocol.

International action to control carbon emissions is necessary. One policy is known as 'carbon trading'. Countries agree overall emissions limits and try to create an international market for permits to pollute. The idea is to put a money value on emissions and, over time, to create incentives for businesses to invest in less-polluting technology. As well as the large compulsory 'compliance' market for carbon credits, there is also a smaller voluntary market for 'carbon offsets'.

For example, an organisation can be paid to plant trees to allegedly offset the damage that an airline journey does to the ozone layer. Some companies are using these offsets, together with greater energy efficiency and reduced polluting activities, to claim to be 'carbon neutral'. Some environmentalists are suspicious of offset schemes and claim, for instance, that offset schemes have hidden environmental costs.

Some economists argue that the pollution and depletion of communal resources such as clean air, water reserves and fish stocks are made worse by a lack of property rights. Critics say that carbon trading amounts to 'privatisation of the atmosphere', with property rights in this vast new market being grabbed by speculators or by those who already pollute the most. They also claim that activities such as buying credits from Russia are an 'accounting fraud' because they do not necessarily arise from energy efficiency but from the collapse of heavy industry. There is concern that carbon trading is a further blow to manufacturing and that service industries are treated more leniently. If the UK relies on manufactured imports, it can be argued that factories located in China are actually creating UK emissions.

Some major UK businesses appear happier with permit trading than with alternative policies such as quotas on emissions or the taxation of fuel. There is a suspicion that carbon trading might mislead the public into believing that pollution from airlines and other industries is no longer damaging. Governments are accused of being overgenerous in allotting permits to industries that they see as nationally important, such as car manufacturing and electricity generation. While the UK might reduce its domestic demand for carbon, it continues to contribute to the world supply of fossil fuels through activities such as oil prospecting and opencast mining. Russia, China and less-developed countries with coal reserves show few signs of reducing their output of this form of carbon.

Source: news reports, 2010

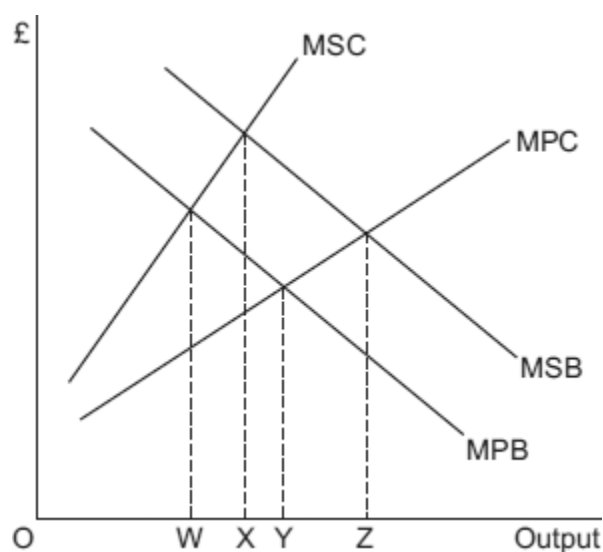
10.

Explain what is meant by 'property rights' (**The Global Context Extract B**, line 20) **and** analyse how an absence of property rights can worsen the environmental market failures of **both** pollution **and** the rapid depletion of natural resources.

[9 marks]

11.

The diagram below shows the marginal private cost and marginal social cost (MPC and MSC) and the marginal private benefit and marginal social benefit (MPB and MSB) of producing a good.



The optimal output of the good for society would be

A OW.

☐

B OX.

☐

C OY.

☐

D OZ.

☐

[1 mark]

12.

The table below shows the private and external costs for four products. Which product **A**, **B**, **C** or **D**, has a market price which takes **least** account of negative externalities?

product	Private cost per unit of output (£)	External cost per unit of output (£)	Market price (£)	
A	10	2	12	☐
B	12	5	15	☐
C	16	7	22	☐
D	22	8	24	☐

[1 mark]

13.

'The supply and use of water result in many externalities, both positive and negative' (**The Global Context Extract B**, line 16).

Using the data and your economic knowledge, evaluate UK government policies that could be used to deal with problems associated with the supply and use of water.

[25 marks]

14.

Distinguish between price elasticity of demand and income elasticity of demand, **and** analyse why, when people have medical insurance, the price elasticity of demand for medical treatment might be 'very low' while the income elasticity of demand is 'likely to be high' (**The European Union Context Extract E**, lines 22 to 24).

[9 marks]

15.

In August 2011, the UK Secretary of State for Culture said that while there were many local television stations broadcasting in the USA, they did not exist in the UK due to 'market failure'. He proposed a subsidy of £40m from public funds to help create stations which would then be financed by advertising.

Evaluate the view that attempts by governments to eliminate market failure by intervening in markets for public goods and merit goods will inevitably lead to government failure.

[25 marks]

Extract E: The price of health

The European Health Insurance Card (EHIC) is issued free to EU citizens via national governments. It allows anyone entitled to state health care in their home country to receive basic medical treatment in another member state for free or at a reduced cost.	1
While there is no charge for the EHIC, insurance-based health care systems generally involve the purchase of a policy from a company which then pays for treatment for people whose medical conditions are covered.	5
The UK's National Health Service (NHS) is predominantly in the public sector and is mostly paid for out of taxation. Treatment is 'universal', available to all UK citizens, and usually to visitors as well. While there are some treatments for which charges might be made, for example, for some dental work and spectacles, a guiding principle of the founders of the NHS was that treatment should be based on 'need' rather than 'ability to pay', and provided 'free at the point of use'. In the UK there is also a private sector consisting of hospitals and other facilities. They mostly work with commercial health insurance companies, but they can undertake some work on contract for the NHS.	10
In Germany, private health care is used approximately twice as much by patients as it is in the UK, but this does not necessarily mean that patients pay directly for their treatment. Roughly one-third of German hospitals are owned by the state, another third are not-for-profit organisations and the remaining third are in the private sector. German citizens can use any hospital in the system.	15
The founders of the NHS thought that its costs would fall as living standards rose and the population became healthier. However, when the state or an insurance company acts between the patient and the health provider, the patient's price elasticity of demand for medical treatment is likely to be very low, while income elasticity of demand is likely to be high. Costs have increased due to these unusual elasticities, together with new drugs, more sophisticated medical technology, a wider range of treatments, more complex procedures and increased life expectancy.	20
	25

17.**THE GLOBAL CONTEXT****Extract B: Water, water everywhere**

Access to clean water is closely linked to production, income and wealth, both within and free good. However, only a small proportion can be used to support human life and even this is not freely available to all. 1

As underground water levels drop in industrialised countries, and as waterways become polluted, some places, like southern Spain, are desperately short of water. Meanwhile, poorer countries, such as Bangladesh, sometimes suffer from too much water, with sudden disastrous floods. Unlike developed countries, such as the Netherlands, they cannot afford flood defence infrastructure. In Kenya, people living in villages without drinkable water can see irrigation systems in nearby fields spraying water over vegetables and flowers being grown for export to Europe. 5 10

There are problems with property rights to water. Indeed, some experts have predicted that, during the twenty-first century, countries controlling the world's fresh water supplies will be in a similarly powerful position to that of the twentieth century's oil producers, and that wars might even take place because of disputes over water. 15

The supply and use of water result in many externalities, both positive and negative. One-third of the water used by UK households is flushed down the toilet. The water used to carry human waste through sewers has to be kept separate from drinking water. When the water industry was privatised by the UK Government, shares were sold in 'water and sewerage businesses', and these companies were regulated by OFWAT (The Water Services Regulation Authority) for their commercial activities as regional monopolies, and by the Environment Agency for their wider impact such as the extraction of water from rivers. 20

In recent years, several regions of the UK have repeatedly been declared to be suffering from 'drought', and there has been some debate over which policy responses are appropriate. These include hosepipe bans, metering of water supplies, a national 'grid' for transporting water around rivers and canals, and more reservoirs. The privatised companies have made massive investment in infrastructure which has transformed polluted rivers such as the Wandle, near London, from open sewers into trout streams, but further measures are necessary to prevent annual droughts. 25

18.

Explain what is meant by the term 'externalities' (**The European Union Context Extract E**, line 12) **and** analyse how housing can create **both** positive **and** negative externalities.

[9 marks]**19.**

'In future, many young British people will have to adopt the German tradition of renting rather than buying, unless they eventually inherit a house from their parents. This has major implications for many aspects of the economy, including the mobility of labour and the distribution of wealth.' (**The European Union Context Extract F**, lines 17–20)

Should government intervene in the UK housing market, for example using subsidies, or leave the provision of housing to market forces? Using the data and your knowledge of economics, justify your answer.

[25 marks]

Extract F: Housing and inequality

The EU Commission has said: 'Decent housing at an affordable price in a safe environment is a fundamental need and right. Ensuring this need is met, which is likely to alleviate poverty and social exclusion, is still a significant challenge in a number of European countries.'	1
Housing inequality can result in part from income inequality and can, in turn, help cause wealth inequality. Most houses are bought using mortgages which are issued by banks and building societies on the basis of income. The UK's 'Right to Buy' policy, dating from the 1980s, makes a one-off redistribution of wealth from the state to low income families when tenants buy their council houses at a subsidised price. Regional and international differences enable some house owners to convert their housing assets into other forms of wealth. For example, someone who sells a former council house they have owned for 30 years in south-east England might release enough profit to be able to purchase a similar house in north-west England, or even two houses in Bulgaria, while still having cash left over.	5 10
In most EU countries, 'austerity' pressures on public finances can be expected to cause a further withdrawal by government from a direct role in housing. The financial crash of 2007 was made worse in Europe by excessive property speculation, particularly in the UK, Ireland and Spain. In future, many young British people will have to adopt the German tradition of renting rather than buying, unless they eventually inherit a house from their parents. This has major implications for many aspects of the economy, including the mobility of labour and the distribution of wealth. Moreover, in 2013, a government 'Help to Buy' scheme, intended to assist first-time buyers with their deposits, has also subsidised would-be landlords buying property to rent out. Yet the UK remains short of social housing and affordable private housing.	15 20

Source: News reports, 2014

Mark schemes

1.

c

[1]

Issues and areas for discussion include

Introduction	• Links between the quotation and economic issues that are contested e.g: ◦ Positive/ negative externalities ◦ Consumer choice/ monopoly power ◦ Food security/ distributive issues
Developing the response to the question	• Arguments for government support of production and use, e.g: ◦ Consumer sovereignty (assuming consumers want them) ◦ Efficiency arguments ◦ The need to feed a rapidly expanding population ◦ The need for technical progress ◦ Alleged external benefits • Arguments against, e.g: ◦ Consumer sovereignty (European consumers appear not to want them) ◦ Market failures such as Environmental damage, Other negative externalities such as damage to organics; health concerns, Monopolistic practices, Asymmetric information ◦ Government failure
Evaluation	• Market failure versus government failure • Consideration of whether consumers/governments/farmers have sufficient information, or whether they are influenced by the media, pressure groups and interested parties (both for and against GM crops) • Very perceptive and aware candidates might discuss whether the word 'support' in the question simply means 'allow' or 'facilitate' or whether there is an argument about actively encouraging GM growers, e.g. through subsidy. • Discussing whether intervention: is likely to correct or reduce any perceived market failure, eg the negative externalities produced by petrol/diesel fuelled cars; might lead to government failure; might increase or reduce economic efficiency; might increase or reduce economic welfare. <i>Examiners should note that it may be possible to award some marks for basic evaluation such as consideration of a number of pros and cons. However, this must be considered as low-level evaluation and rewarded accordingly. Stronger evaluation would prioritise the arguments for and against, and/or give economic reasons for justifying a particular policy decision.</i>

Also give credit for:

- relevant use of evidence and examples not contained in the data
- diagrams
- an overall judgement on the issues raised

It will only be possible for candidates to consider a few of the above. They may also discuss issues not discussed above

[25]

3.

B

[1]

4.

The issues identified below are intended to provide an indication of some of the areas which might be discussed. Candidates can only be expected to consider a few of these and / or other issues in the time available.

Issues and areas for discussion include:

Introduction	• meaning of environmental market failure) • examples of supply-side policies • reasons why landfill exemplifies market failure, eg missing markets for recycled products, negative externalities, local / national decisions favouring landfill over its alternatives
Developing the response to the question	• general policies, e.g: ◦ market-based policies ◦ command-and-control policies • specific methods / strategies, eg reduction, re-use, recovery, recycling, disposal (alternative methods of, eg landfill, incineration) • specific policies (some but not all mentioned in the data) aimed at supporting these methods / strategies, eg: ◦ landfill tax (polluter pays / market based) ◦ fines for dumping (command-and-control) ◦ subsidies for favoured recycling schemes ◦ targets for re-cycling ◦ subsidies / carrot and stick approaches • the alternative of non-intervention / allowing markets to work (the extract mentions market forces and price signals in scrap metals and suggests that a market for 'mined' recyclables from landfill could emerge in due course).
Evaluation	• comment on scarce / finite resources and the possibility of re-cycling in the case of metals, so that they become, in a sense, 'renewable' • role of government / legal sanctions • market failure versus government failure • the need for international / global action • pros and cons of particular policies, eg composting, incineration. Examiners should note that it may be possible to award some marks for basic evaluation such as consideration of a number of pros and cons. However, this must be considered as low-level evaluation and rewarded accordingly. Stronger evaluation would prioritise the arguments for and against, and / or give economic reasons for justifying a particular course of action.

Also give credit for:

- relevant use of evidence and examples not contained in the data
- diagrams
- an overall judgement on the issues raised

[25]

6.

C

[1]

8.

The issues identified below are intended to provide an indication of some of the areas which might be discussed. Candidates can only be expected to consider a few of these and / or other issues in the time available.

Issues and areas for discussion include:

Introduction:	• an explanation of the problems in terms of MSC / MSB analysis • a clean environment as a public good • environment can be damaged by market forces (ozone layer, coal tips) • environment can be protected by market forces (property rights / the 'tragedy of the commons') • polluting activities and demerit goods.
Developing a response to the question:	• What markets can do alone, eg ◦ Treat a clean environment as a scarce resource ◦ Supply and demand, price incentives ◦ Assertion of property rights • How markets can be 'nudged' by government, eg ◦ Carbon trading / pollution permits ◦ Road pricing ◦ Taxation (the polluter pays) ◦ Creation of property rights where they do not exist ◦ Creation / assertion of communal / societal rights (eg a right to clean air) • How markets can be 'nudged' by government, eg ◦ Command and control methods ◦ Bans and regulations • command and control versus market based policies
Evaluation:	• market failure and government failure • equity implications of reliance on markets (eg costs and benefits might accrue to different people / groups / countries).
Also give credit for:	• reference to the UK and / or other economies • diagrams

[25]

10.

For a relevant definition / description of property rights, e.g. a legally recognised right of ownership over a resource; or a definition of market failure.

For explaining how property rights can be lacking, e.g. on common land, on the high seas, in the atmosphere.

Pollution is an example of a negative externality. One failure is the pollution of a communal resource such as a piece of land, a lake or the atmosphere for any one example). Fresh air is a resource essential to life however the atmosphere can also be polluted by human activity. Because nobody owns the atmosphere the costs of pollution are external to the polluter and it is possible for an economic agent to pass these costs on to the wider community.

Another failure is the **depletion** of a communal resource, e.g. water reserves, fish stocks, wildlife, open spaces, and property rights incentivise conservation.

Make appropriate use of diagrams, e.g. an externality diagram.

[9]

11.

B

[1]

12.

D

[1]

13.

Candidates can approach the question with a focus on the UK government or government in general. Either approach can gain full marks. Also, they can focus on 'externalities' or wider 'problems' of market failure.

Issues and areas for discussion include:

Introduction	• definitions/descriptions of, eg ◦ externalities ◦ positive and negative • clean water as a merit good • polluted water as a demerit good.
Developing the response to the question (Application)	• relevant use of theory, eg private costs, benefits, social costs, benefits • evidence from the data, eg reference to • pressures on drinking water • lowering of water tables • floods • polluted wells, sanitation • unnecessary waste (bottled water) • costs in terms of oil • private (personal) health benefits of clean water • external health benefits of clean water (avoidance of contagious disease) • environmental issues arising from above points
Developing the response to the question (analysis)	• wider environmental issues, and international comparisons, eg ◦ floods in Bangladesh, drought in southern Spain; ◦ Britain's case of universal drinking water (a result of infrastructure investment over generations). • discussion of water as a private/public/merit good • consequences of different views of the economic nature of water, in terms of government policy, eg • a private good implies privatisation and marginal cost pricing; a public good implies nationalisation and payment out of taxation • a merit good (clean water, good sanitation) implies social benefits exceeding private benefits and under supply/under consumption, and an argument for direct government provision or subsidy • a de-merit good (unfit water, poor sanitation) implies social costs exceeding private costs and over supply/over consumption, and an argument for government action to remove the negative externalities (eg making the polluter pay) • regulation versus de-regulation • policies for supply • policies for use.

Evaluation	• reasons why market failure/externalities/environmental grounds might be a reason for having a special view of the economics of water; eg water is ubiquitous and a fundamental part of the environment; a basic of life • use of markets to distribute water (eg trade in licences to abstract water) • inequality in buying power, eg utilities can pass costs of buying water along their supply chain to customers; smaller firms, eg farmers, cannot • providing sanitation and clean drinking water cost money, and there is a role for commercialisation (eg there is a debate in the UK about how water should be priced; there is clearly a consumer demand for water in plastic bottles) • balance of advantages and disadvantages of governments regarding water as a merit good • consideration of costs and benefits of, eg ◦ government action ◦ the bottled water industry ◦ alternative uses for water • role of government in general in water-related matters • role of UK government in particular • discussion of whether the UK has consistently regarded water as a 'merit good' ('water and sewerage' businesses have been privatised; however, they have also been strongly regulated) • market failure versus government failure <i>Examiners should note that, for some of the weaker or average candidates, parts of the above represent quite sophisticated evaluation and so it is important to ensure that more basic evaluation is adequately rewarded where a genuine effort has been made to display that skill.</i>
Also give credit for	• relevant diagrams • an overall judgement on the issues raised.

It will only be possible for students to consider a few of the above. They may also discuss issues not discussed above.

[25]

14.

Relevant issues/logical chains of analysis include:

- defining/distinguishing between price elasticity (responsiveness of the quantity demanded to a change in price) and income elasticity of demand (responsiveness of quantity demanded to a change in income)
- (PED) The link between the consumer and price is broken by insurance and the purchasing decision is now taken by the insurance company or by the state or its agent (eg the GP). The patient will want life-saving treatment whatever the price. However some people are not members of insurance schemes or might not qualify for state provision
- assymetric information; unpredictability of medical need
- universal state provision replaces price rationing with the queue (or waiting list) insurance enables people to jump the queue
- (YED) Higher incomes make insurance more affordable
- arguable that people on higher incomes will be more aware of treatments available
- possibility of unnecessary treatments and procedures, e.g. cosmetic surgery for vanity reasons
- meaning of high/low/price/income elasticity
- appropriate use of diagrams, e.g. demand curves related to PED and YED

[10]

15.**Issues and areas for discussion include:**

Introduction	• Meaning of market failure • Reasons for and examples of market failure, eg ◦ distinction between public and merit goods ◦ positive and negative externalities ◦ public goods, merit goods • Reasons for and examples of government failure.
Developing the response to the question Application/ Analysis	• Policy options for public/merit goods ◦ taxation (the ability to pay principle) ◦ charging (the beneficial principle) ◦ subsidies ◦ direct government provision ◦ public/private partnerships • Opportunity cost • Efficiency arguments • Rationale for govt. intervention in providing $MSC = MSB$, therefore providing a socially optimum level • Consequences of policy options, eg ◦ consumer welfare and producer surplus ◦ national/international competitiveness ◦ prices, employment • Reasons for and examples of government failure • Discussion specific to the local TV station example
Evaluation	• effectiveness of different types of policy • intended and unintended consequences • the option of allowing market forces to work without government intervention (in the local TV case, challenging the apparent view of the minister that there is a 'missing market'); consumer sovereignty arguments) • problems of determining social optimum • market vs govt failure. <i>Examiners should note that, for some of the weaker or average students, parts of the above represent quite sophisticated evaluation and so it is important to ensure that more basic evaluation is adequately rewarded where a genuine effort has been made to display that skill.</i>
Also give credit for	• diagrams • an overall judgement on the issues raised • examples.

It will only be possible for students to consider a few of the above. They may also discuss issues not discussed above.

[25]

18.

Explanation:

For defining/describing externality, e.g. an external effect of production or consumption that spills over into a neighbourhood or community; they can be positive, a benefit, or negative, a cost.

Analysis of positive and negative externalities

For Example

- Positive: good housing gives benefits to the householder in terms of quality of life, but also improves the neighbourhood, and so benefits people other than the householder; if one person improves their house, then its market value will rise; but the neighbourhood's general prices might also increase.
- Positive: Building houses on derelict land improves a whole district
- Negative: bad housing leads to poor health, crime, social disorder, strain on NHS
- Negative: building in the countryside on greenfield sites reduces amenity for others.
- Reward some reference to how government might provide good housing e.g. subsidies, social housing.

Make appropriate use of diagrams, eg MPC, MSC, MPB, MSB

[9]

Issues and areas for discussion include:

Introduction	• Description of 'market forces' in housing • Tenures • Subsidies • Intervention methods.
Developing the response to the question: (Application)	• Comments from own economic knowledge or based on the data, e.g. ◦ Supply and demand theory ◦ Relationship between new houses (the flow) and existing houses (the stock). The flow is small in relation to the stock; therefore, house building has little immediate effect on prices. ◦ Data hints that the distinction between social and private housing is muddled (Extract E). Students might mention the bedroom tax (as a 'withdrawal of subsidy') in a relevant way • Further discussion of Extract D, e.g.' ◦ Rise in homes owned outright, with fall in mortgages, indicates possible validity of the quote about Germany ◦ Fall in social housing, together with fall in mortgages and rise in private renting indicates right to buy has led to a rentier class rather than a nation of individual owner occupiers. • Tenure and types of housing, Extract E • Houses and equality, Extract F.
Developing the response to the question: (Analysis)	• Basic reasons why governments of developed countries are involved in provision of housing. • Arguments for intervention, e.g. ◦ market failure ◦ externalities ◦ need for price stabilisation ◦ imperfect information ◦ mobility of labour ◦ income and wealth distribution. • Arguments against, e.g. ◦ rationing/signaling ◦ consumer choice ◦ opportunity costs (pressure on government budgets) ◦ efficiency ◦ problems with government failure, e.g. poor town and country planning.

Evaluation	• Market failure versus government failure • Consequences of government involvement (e.g. costs to the taxpayer) versus consequences of non-involvement (e.g. costs to the consumer and to society) • Unintended consequences (e.g. Help to Buy being used by private landlords rather than first time buyers) • Discussion of the clear distinction between the flow of newly built houses and the stock of existing houses • Alternatives to house building/'predict and provide', the argument that supply of houses creates its own demand; alternatives (e.g. town centre living) • Critical assessment of the movement from council houses towards private renting, and from directly subsidised rents to the use of housing benefits. <i>Examiners should note that, for some of the weaker or average candidates, parts of the above represent quite sophisticated evaluation and so it is important to ensure that more basic evaluation is adequately rewarded where a genuine effort has been made to display that skill.</i>
Also give credit for	• Diagrams • An overall judgement on the issues raised.

It will only be possible for candidates to consider a few of the above. They may also discuss issues not discussed above

[25]

1.

'In tackling environmental problems there is not really a straight choice between perfectly performing markets on the one hand, and wonderfully wise governments on the other.'
(**Extract C**, lines 18 – 19).

Using the data and your knowledge of economics, assess the relative importance of market forces and government intervention in encouraging businesses to behave responsibly towards the environment.

[25 marks]

2.

The table below shows the marginal private and external benefits and the marginal private and external costs of two products at their free market equilibrium level of output.

	Product X (£)	Product Y (£)
Marginal private benefit	200	70
Marginal external benefit	50	40
Marginal private cost	200	70
Marginal external cost	90	30

To improve the allocation of resources, what should the government do?

A Tax product X and subsidise product Y

☐

B Tax product X and tax product Y

☐

C Subsidise product X and tax product Y

☐

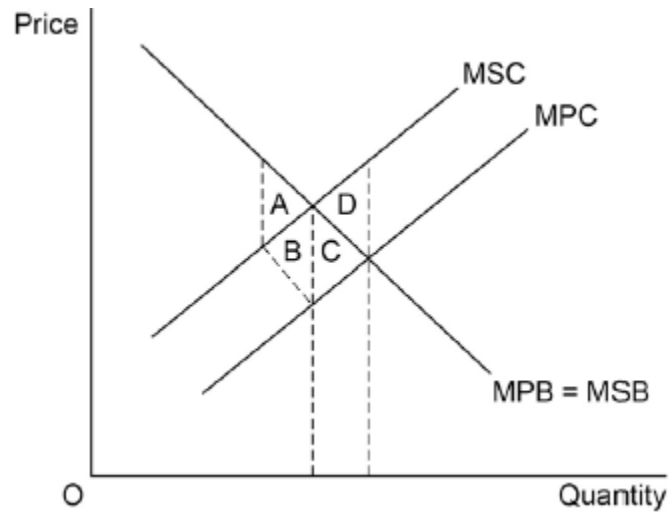
D Subsidise product X and subsidise product Y

☐

[1 mark]

3.

The diagram below shows the marginal private benefit and marginal social benefit (MPB and MSB) curves and marginal private cost and marginal social cost (MPC and MSC) curves for Good X.



Which triangle, **A**, **B**, **C** or **D**, represents the welfare loss if output is at the private optimum rather than the social optimum?

A ☐

B ☐

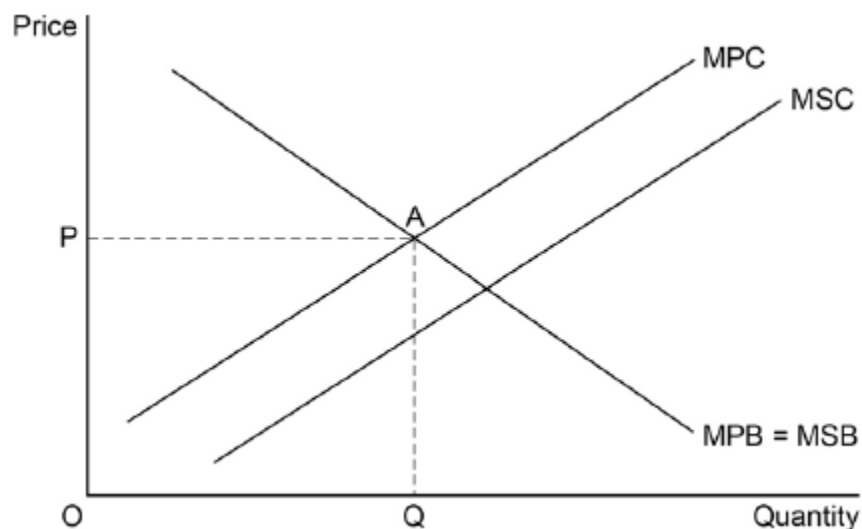
C ☐

D ☐

[1 mark]

4.

The diagram below shows the marginal private benefit and the marginal social benefit (MPB and MSB) curves and the marginal private cost and marginal social cost (MPC and MSC) curves for good X.



Assuming the free market equilibrium is at point A, what action taken by the government is most likely to lead to output being produced at the socially optimal level?

- A Increase in unit taxes on good X ☐
- B Subsidies to the producers of good X ☐
- C Regulation to reduce consumption of good X ☐
- D Issue of permits designed to reduce output of good X ☐

[1 mark]

5.

Pollution and Climate Change Extract F (lines 9–10) states ‘Some major UK businesses appear happier with permit trading than with alternative policies such as quotas on emissions or the taxation of fuel’.

Using the data in the extracts and your knowledge of economics, evaluate the possible impact on UK businesses of policies to reduce pollution.

[25 marks]

6.

THE EUROPEAN UNION CONTEXT

Extract E: Housing tenure and externalities

Most Spaniards and Estonians live in flats, while most people in the UK and Ireland live in semi-detached houses. Housing markets are made up of different sectors or 'tenures' which describe the legal basis under which houses are occupied. Most of the population of the EU live in owner-occupied houses. Social housing is built or funded by the public sector and, in the past, the UK has been almost unique in Europe in providing such houses mainly through local councils. In France, this is done by not-for-profit organisations, similar to UK housing associations. About two-thirds of tenants across the EU pay a market price rent, while the rest receive some form of subsidy. In the UK, the concept of social housing has become complicated by the large number of private landlords whose tenants are receiving welfare benefits. While the UK government has moved away from rent controls, it has attempted to influence rents indirectly by capping housing benefits for low income tenants.

While housing has many of the characteristics of a merit good, externalities from housing can be positive or negative. Bad housing is often associated with crime, ill-health and other problems, and the opposite is true of good housing. Tenure can also be linked to externalities, for example, if poorly designed social housing, such as an inner-city block of flats, is compared with high-quality private housing in a prosperous area. Much depends on the quality of the build, the surrounding social conditions and the economic infrastructure.

Source: News reports, 2014

7.

Pollution and Climate Change Extract E (lines 18-20) states 'They argue that the pollution and depletion of communal resources such as clean air, water reserves and fish stocks are made worse by a lack of property rights'.

With the help of a diagram, explain how the absence of property rights can worsen the environmental market failures of **both** pollution **and** the rapid depletion of natural resources.

[9 marks]

Pollution and climate change

Extract E: Climate change

In 2004, Russia signed up to the Kyoto Protocol, an international agreement on policies to manage climate change. This committed Russia to a United Nations programme to reduce emissions of greenhouse gases. In 2010, Russia's emissions were as low as their 1990 levels, but this was less to do with environmental policy and more to do with the collapse of heavy industry following the fall of the Soviet Union. A large contribution towards the UK's Kyoto targets also came from deindustrialisation. However, China, like the USA, did not sign up to the Kyoto Protocol.	1 5
International action to control carbon emissions is necessary. One policy is known as 'carbon trading'. Countries agree overall emissions limits and try to create an international market for permits to pollute. The idea is to put a money value on emissions and, over time, to create incentives for businesses to invest in less-polluting technology. As well as the large compulsory 'compliance' market for carbon credits, there is also a smaller voluntary market for 'carbon offsets'.	10
For example, an organisation can be paid to plant trees to allegedly offset the damage that an airline journey does to the ozone layer. Some companies are using these offsets, together with greater energy efficiency and reduced polluting activities, to claim to be 'carbon neutral'. Some environmentalists and economists are suspicious of offset schemes and claim, for instance, that offset schemes have hidden environmental costs. They argue that the pollution and depletion of communal resources such as clean air, water reserves and fish stocks are made worse by a lack of property rights.	15 20

Source: news reports, 2010

Pollution and climate change

Extract F: Issues over carbon trading

Critics say that carbon trading amounts to 'privatisation of the atmosphere', with property rights in this vast new market being grabbed by speculators or by those who already pollute the most. They also claim that activities such as buying credits from Russia are an 'accounting fraud' because they do not necessarily arise from energy efficiency but from the collapse of heavy industry. There is concern that carbon trading is a further blow to manufacturing and that service industries are treated more leniently. If the UK relies on manufactured imports, it can be argued that factories located in China are actually creating UK emissions.	1 5
Some major UK businesses appear happier with permit trading than with alternative policies such as quotas on emissions or the taxation of fuel. There is a suspicion that carbon trading might mislead the public into believing that pollution from airlines and other industries is no longer damaging. Governments are accused of being overgenerous in allotting permits to industries that they see as nationally important, such as car manufacturing and electricity generation. While the UK might reduce its domestic demand for carbon, it continues to contribute to the world supply of fossil fuels through activities such as oil prospecting and opencast mining. Russia, China and less-developed countries with coal reserves show few signs of reducing their output of this form of carbon.	10 15

Source: news reports, 2010

10.

It is generally accepted that we need to adopt new ways of charging for the use of our roads. This is partly because of worsening congestion, but is also due to the reduction in revenue generated from taxes on fuels as a result of more fuel-efficient vehicles.

Assess the view that a system of road-pricing is the best way to tackle the problem of worsening traffic congestion in the UK.

[25 marks]

11.

It is generally accepted that we need to adopt new ways of charging for the use of our roads. This is partly because of worsening congestion, but is also due to the reduction in revenue generated from taxes on fuels as a result of more fuel-efficient vehicles.

Explain why, in the absence of government intervention, too many journeys are likely to be made by road and too few by rail.

[15 marks]

12.

‘Most consumers know, more or less, when and why they are likely to want to replace a TV set or mobile phone. Nobody really knows in advance when or why they might need to go into hospital for a new knee-cap or hip joint.’

Discuss whether economic welfare would necessarily be increased if the provision of merit goods and public goods were always left to governments without ever involving markets.

[25 marks]

13.

‘The UK government would be happy with state control of British railways “as long as it’s not the British state” (**Extract C**, lines 19 – 21).

Evaluate, using the data and your knowledge of economics, the case for and against the UK government privatising public services while allowing foreign ownership of these services.

[25 marks]

14.

‘Most consumers know, more or less, when and why they are likely to want to replace a TV set or mobile phone. Nobody really knows in advance when or why they might need to go into hospital for a new knee-cap or hip joint.’

Explain why imperfect information might lead to market failure in the case of merit goods and demerit goods.

[15 marks]

15.

In 2018, the UK Government will impose a new tax on sugary drinks, aimed at tackling obesity. Behavioural economists believe that taxation alone is unlikely to be very effective in reducing consumption. By 2050, obesity is predicted to affect 60% of adult men, 50% of adult women and 25% of children. It is associated with a range of health problems including type 2 diabetes, cardiovascular disease and cancer.

Evaluate the view that imposing a tax is the most effective government policy for reducing the market failures arising from overconsumption of unhealthy food and drink.

[25 marks]

16.

'A third runway at Heathrow is essential for the success of the economy of London and the UK.'

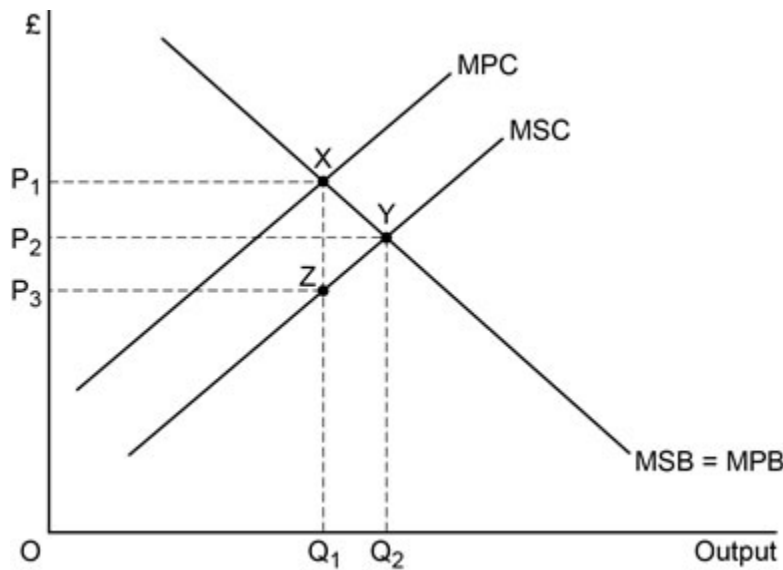
'A third runway at Heathrow would be an environmental disaster and cause huge market failure.'

Explain how an investment project, such as airport expansion, can be commercially successful and yet produce market failure.

[15 marks]

17.

The diagram below shows the marginal private and social benefit (MPB and MSB) curves and the marginal private and social cost (MPC and MSC) curves in a market where there are positive externalities in production.



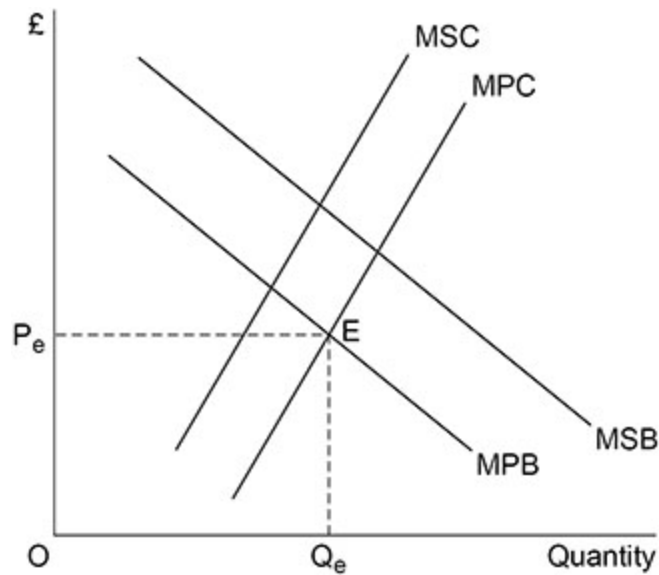
At the free market equilibrium, market failure occurs. Which one of the following is correct?

- A As a result of this market failure, consumer surplus is reduced by ZXY ☐
- B As a result of this market failure, there is a deadweight loss to society of P_3P_1XZ ☐
- C P_1 minus P_3 is the subsidy per unit that is required to correct the market failure and achieve the social optimum ☐
- D The diagonal distance XY shows the amount by which marginal private cost exceeds marginal social cost at OQ_2 ☐

[1 mark]

18.

The diagram below shows the marginal private benefit and marginal social benefit (MPB and MSB) curves and the marginal private cost and marginal social cost (MPC and MSC) curves in the market for a good.



The diagram represents a good with

- A negative externalities in production and consumption. ☐
- B negative externalities in production and positive externalities in consumption. ☐
- C positive externalities in production and consumption. ☐
- D positive externalities in production and negative externalities in consumption. ☐

[1 mark]

19.

According to Public Health England, poor air quality is the largest environmental risk to public health in the UK. In particular, diesel cars are estimated to be responsible for 40 000 premature deaths each year. In response, the Government announced in 2017 that it would ban the sale of new petrol and diesel cars by 2040.

Assess the view that regulation is a better policy for dealing with the problem of air pollution than the allocation of property rights or taxation.

[25 marks]

20.

In 2018, the UK Government will impose a new tax on sugary drinks, aimed at tackling obesity. Behavioural economists believe that taxation alone is unlikely to be very effective in reducing consumption. By 2050, obesity is predicted to affect 60% of adult men, 50% of adult women and 25% of children. It is associated with a range of health problems including type 2 diabetes, cardiovascular disease and cancer.

Explain why, in a free market, sugary drinks may be overconsumed.

[15 marks]

21. INVESTIGATION

Scenario

You are an economist working for the Ministry of Housing, Communities and Local Government (MHCLG).

You have been asked to investigate the state of the UK housing market.

As part of this investigation, you are to provide answers to three questions.

Referring to the **Extracts A, B, C and D**, use them and your knowledge of economics to help you answer this question.

After considering **Extract E**, and the original evidence in **Extracts A, B, C and D**, would you recommend that the Government should increase its spending on housing? Justify your recommendation.

[25 marks]

22.

According to Public Health England, poor air quality is the largest environmental risk to public health in the UK. In particular, diesel cars are estimated to be responsible for 40 000 premature deaths each year. In response, the Government announced in 2017 that it would ban the sale of new petrol and diesel cars by 2040.

Explain why the use of petrol and diesel cars may be a source of market failure.

[15 marks]

23.

Extract C (lines 17–19) states: 'Many environmental economists suggest that making firms pay for the costs of landfill associated with their products, or taxing raw material inputs, will be necessary to ensure a sustainable future for all.'

Using the extracts and your knowledge of economics, evaluate policies, if any, that governments in developed countries should pursue to reduce waste and encourage the recycling of waste products.

[25 marks]

24.

After considering **Extract E**, and the original evidence in **Extracts A, B, C and D**, which policies, if any, would you recommend that the UK government should introduce to ensure that it achieves its zero-emissions target by 2050. Justify your recommendation.

[25 marks]

25.

Extract B (lines 8–10) states: 'many companies intentionally make it difficult to repair their products in order to increase sales. This is both economically inefficient and environmentally foolish; it imposes costs on the environment even though it may make sense for individual companies.'

With the help of a diagram, explain how the production of goods which are designed not to last long may result in market failure.

[9 marks]

Mark schemes

1.

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion if they are to be awarded **more than 15 marks**.

Where there is no **explicit** reference to the data, award a maximum of **21 marks**.

Level 5	Good analysis <u>and</u> good evaluation	22 to 25 marks <i>Mid-Point 24 marks</i>
Level 4	Good analysis <u>but</u> limited evaluation OR Reasonable analysis <u>and</u> reasonable evaluation	17 to 21 <i>Mid-Point 19 marks</i>
Level 3	Reasonable including some correct analysis <u>but</u> very limited evaluation	10 to 16 <i>Mid-Point 13 marks</i>
Level 2	Weak with some understanding	4 to 9 <i>Mid-Point 7 marks</i>
Level 1	Very weak	0 to 3 <i>Mid-Point 2 marks</i>

Refer also to the issues and areas for discussion on the next page.

Introduction	- Definitions / descriptions of, e.g. - Market forces - Government intervention / regulation
Developing the response to the question: (Application)	Comments from own economic knowledge or based on the data, e.g. - Further comments on Extract A, (international comparisons of green / non-green energy sources) - Examples from Extract B of businesses behaving responsibly, e.g seeking new fuels for aircraft, developing electric cars - Market forces clashing with government predictions, e.g. seeking new oil while wanting to limit climate change (Extract B) - Failures of regulation (Extract C) - Unsustainable business model (Extract C)
Developing the response to the question: (Analysis)	Arguments for regulation / intervention e.g. - Market failure - Negative externalities - Inability of markets to make long term predictions - Health and safety issues arising from environmental problems - The need for coordinated international action Arguments for market forces e.g. - Government failure - Efficiency - Competition, enterprise, efficiency - Signalling, incentive, rationing functions of price
Evaluation	- Evaluation of policies in general, e.g. command and control vs. market-focused policies - Evaluation of some specific policies, e.g. prohibitions, regulations, vs. pollution permits, carbon off-setting, taxes, subsidies - Discussion of the quotation (perfectly performing markets vs. wonderfully wise governments) - Consideration of why environmental policies might be good for business and also why it is good for business to respect the environment - Advantages and disadvantages of a mixed economy approach - Market failure versus government failure - Need for privatisation to be accompanied by effective regulation - Discussion of the claim about privatised profits and nationalised costs <i>Examiners should note that, for some of the weaker or average candidates, parts of the above represent quite sophisticated evaluation and so it is important to ensure that more basic evaluation is adequately rewarded where a genuine effort has been made to display that skill.</i>
Also give credit for	- Relevant diagrams - An overall judgement on the issues raised.

It will only be possible for candidates to consider a few of the issues and areas noted. They may also discuss issues not mentioned in the table.

[25]

2. A

[1]

3. D

[1]

4. B

[1]

5. **Areas for discussion include:**

- explaining: permit trading, quotas, environmental taxes, regulation, subsidising green technologies
- effects of emissions trading and alternatives, specifically on UK businesses (firms) in terms of:
 - costs
 - revenues
 - profits
- rationale for government intervention
- internalising externalities and “polluter pays” ideas
- command-and-control versus market-based solutions
- permit/carbon trading schemes in theory and practice
- alternatives and their implications compared and contrasted, e.g. quotas, taxes and subsidising green technologies
- efficacy/appropriateness of ‘offsets’
- possible conflicts between policies, e.g. environmental improvement versus growth and employment
- distortions, e.g. lenient treatment of favoured businesses/industries (mentioned in the data)
- the need for international action
- being ‘carbon neutral’ as a business objective

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the candidate's response to the question.

[25]

Level of response	An answer that:	Max 9 marks
3	- is well organised and develops one or more of the key issues that are relevant to the question - shows sound knowledge and understanding of relevant economic terminology, concepts and principles - includes good application of relevant economic principles and/or good use of data to support the response - includes well-focused analysis with a clear, logical chain of reasoning - includes a relevant diagram that will, at the top of this level, be accurate and used appropriately.	7-9 marks
2	- includes one or more issues that are relevant to the question - shows reasonable knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present - includes reasonable application of relevant economic principles and/or data to the question - includes some reasonable analysis but it might not be adequately developed and may be confused in places - may include a relevant diagram.	4-6 marks
1	- is very brief and/or lacks coherence - shows some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely - demonstrates very limited ability to apply relevant economic principles and/or data to the question - may include some very limited analysis but the analysis lacks focus and/or becomes confused - may include a relevant diagram but the diagram is not used and/or is inaccurate in some respects.	1-3 marks

It is expected that a MSC/MSB diagram will be used but a relevant, correctly explained demand and supply diagram is also acceptable.

Relevant issues include:

- description of property rights, eg a legally recognised right of ownership over a resource
- negative externalities and the spill-over effects on 3rd parties
- why a lack of property rights can lead to negative externalities, ie some costs are not internalised
- the distinction between private optimal outcomes and socially optimal outcomes
- why property rights can be lacking, eg on common land, the high seas, in the atmosphere
- reasons for too rapid depletion of a communal resource, eg water reserves, fish stocks, wildlife, open spaces; property rights incentivise conservation

[9]

10.

Areas for discussion include:

- roads as a scarce resource
- the negative externalities associated with congestion, eg the longer journey times for other road users
- what is meant by road-pricing and how it might be implemented (allow both tolls and congestion charges as forms of road-pricing or as alternative policies)
- other policies that might be employed such as: higher taxes on fuels, increasing the road fund licence, building more roads, subsidising public transport, investing in and improving public transport
- the extent to which roads display the characteristics of a public good and how has this been affected by developments in technology.
- congestion is most prevalent on certain roads and at certain times of the day
- how road-pricing might be implemented, eg charging drivers a price for each mile travelled with different prices for different roads and for different times of the day, perhaps mentioning automatic number plate recognition systems
- setting up tolls on major roads with the toll charge varying between peak and off-peak times
- how higher taxes on fuels would help to reduce congestion and the relevance of price elasticity of demand
- how subsidising, for example, bus and rail transport, will help to reduce congestion and the relevance of cross elasticity of demand
- the budgetary and cost implications of the different options
- possible unintended consequences of the different methods, eg the impact of road pricing on city centres, such as empty shops, higher prices for products as transport costs rise
- equity arguments, eg are indirect taxes regressive, should the road user pay or the taxpayer, the impact of the different policies on the poorest members of society, town versus country dwellers, commuters and businesses
- the likelihood of government failure, eg inadequate information means that the government may set an inappropriate price for using roads, eg a price that doesn't reflect the true cost of congestion, government policy is likely to be affected by public opinion and the reactions of voters.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the candidate's response to the question.

[25]

11.**Relevant issues include:**

- sources of market failure in transport, eg externalities, roads as a quasi-public good
- examples of externalities associated with journeys by road and rail, eg congestion and longer journey times for other road users, pollution and associated health problems, environmental damage
- explaining why roads may exhibit some of the characteristics of a public good, ie they are, up to a point, non-rival and may be non-excludable.
- why, in the absence of government intervention, the existence of negative externalities means that the user will not bear the full cost of the activity
- free market equilibrium level of output ($MPB=MPC$) and the social optimum level of output ($MSB=MSC$)
- negative externalities associated with rail journeys are likely to be less than for journeys by road, hence road journeys will be under-priced by more than rail journeys, ie there will be a greater divergence between the marginal social cost and the marginal private cost for road journeys than rail journeys
- rail companies charge for the use of the rail network but, in most cases, road users are not directly charged for the use of roads
- taxes imposed on the motorist mean that some, or all, of the costs of building and maintaining the road network are borne by the motorist.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the candidate's response to the question.

[15]**12.**

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion if they are to be awarded **more than 15 marks**.

Level 5	Good analysis <u>and</u> good evaluation	22 to 25 marks <i>Mid-Point 24 marks</i>
Level 4	Good analysis <u>but</u> limited evaluation OR Reasonable analysis <u>and</u> reasonable evaluation	17 to 21 <i>Mid-Point 19 marks</i>
Level 3	Reasonable including some correct analysis <u>but</u> very limited evaluation	10 to 16 <i>Mid-Point 13 marks</i>
Level 2	Weak with some understanding	4 to 9 <i>Mid-Point 7 marks</i>
Level 1	Very weak	0 to 3 <i>Mid-Point 2 marks</i>

Issues and areas for discussion include

Introduction	• Definitions, examples ◦ Economic welfare ◦ Merit goods, distinguished from public goods ◦ Asymmetric information ◦ Missing markets
Developing the response to the question: Application/Analysis	• Reasons for government provision, e.g. • Positive externalities • Negative externalities • Unequal income distribution • Relative and absolute poverty; unequal life chances • Merit goods ◦ Social objectives : health, education ◦ Economic objectives; infrastructure, efficiency ◦ Equity arguments ('social wages' from public services) ◦ Imperfect information ◦ Missing markets • Public goods ◦ Social or strategic importance (e.g. defence, law & order) ◦ Non-rivalry ◦ Non-diminishable ◦ Non-excludable / pure / non-pure • Arguments for involving markets, e.g. ◦ Efficiency ◦ Competition ◦ Trickle down arguments ◦ Incentive arguments
Evaluation	• Critical discussion of the quotation • Different approaches to ◦ Merit goods and public goods ◦ Different types of merit good ◦ Merit and demerit goods • Is this a really case of either / or? • Can the private sector function efficiently without a public sector (and vice versa) • Can the private sector be trusted to function properly without intervention? • Possibility of public / private partnerships • Money costs and opportunity costs • Real world examples such as public and private transport, primary, secondary, tertiary education; tuition fees versus graduate taxes; public universities, private universities • Overall view of advantages and disadvantages of private and state provision <i>Examiners should note that, for some of the weaker or average candidates, parts of the above represent quite sophisticated evaluation and so it is important to ensure that more basic evaluation is adequately rewarded where a genuine effort has been made to display that skill.</i>

Also give credit for

- Diagrams
- An overall judgement on the issues raised
- Examples

It will only be possible for students to consider a few of the above. They may also discuss issues not discussed above.

[25]

13.

In this part of the question, candidates will need to demonstrate that they are able to evaluate issues and arguments to support a conclusion if they are to be awarded **more than 15 marks**.

Where there is no **explicit** reference to the data, award a maximum of **21 marks**.

Level 5	Good analysis <u>and</u> good evaluation	22 to 25 marks <i>Mid-Point 24 marks</i>
Level 4	Good analysis <u>but</u> limited evaluation OR Reasonable analysis <u>and</u> reasonable evaluation	17 to 21 <i>Mid-Point 19 marks</i>
Level 3	Reasonable including some correct analysis <u>but</u> very limited evaluation	10 to 16 <i>Mid-Point 13 marks</i>
Level 2	Weak with some understanding	4 to 9 <i>Mid-Point 7 marks</i>
Level 1	Very weak	0 to 3 <i>Mid-Point 2 marks</i>

Issues and areas for discussion include

Introduction	- Definitions / descriptions of, e.g. - Privatisation - Public ownership
Developing the response to the question: (Application)	- Comments from own economic knowledge or based on the data, e.g. - Further comments on Extract A, (differences / similarities between different governments) - Examples from Extract B of privatisations - Dangers of privatisation mentioned in Extract C
Developing the response to the question: (Analysis)	NOTE There are two aspects to the question: privatisation vs. nationalisation, and domestic ownership vs. international ownership. To achieve Level 5 both aspects must be analysed and evaluated. Level 4 can be achieved by a thorough treatment of one aspect, as long as the other is addressed to some extent. - Arguments for nationalisation / against privatisation, e.g. - Externalities - Inability of markets to make long term predictions - Health and safety issues arising from environmental problems - The need for coordinated international action - Merit goods, demerit good, public goods - Arguments for privatisation / against nationalisation, e.g. - Efficiency - Competition, enterprise, efficiency - Signalling, incentive, rationing functions of price - Advantages / disadvantages of international cooperation. - Implications of inward investment; skills / knowledge transfer, comparative advantage vs. self-sufficiency, import substitution
Evaluation	- Evaluation of some specific privatisations, e.g railways, nuclear power, water - Discussion of the quotation (whether the exclusion of British state ownership can be justified if owners are nationalised by their states, or have the backing of a foreign sovereign wealth fund) - Advantages and disadvantages of a mixed economy approach - Market failure versus government failure - Need for privatisation to be accompanied by effective regulation - Globalisation and globalism - Protection vs. free trade; free movement of capital <i>Examiners should note that, for some of the weaker or average candidates, parts of the above represent quite sophisticated evaluation and so it is important to ensure that more basic evaluation is adequately rewarded where a genuine effort has been made to display that skill.</i>
Also give credit for	- Relevant diagrams - An overall judgement on the issues raised.

It will only be possible for candidates to consider a few of the above. They may also discuss issues not discussed above.

[25]

14.

For relevant definitions e.g. imperfect information (2 marks), merit goods (2 marks), demerit goods (2 marks), market failure (2 marks) .	Up to 2 marks per point defined or explained to a maximum of 4 marks
For explanation – Award 1 mark for each step in a logical chain of reasoning up to 15 marks.	
Examples include - Poor information (1 mark) or asymmetric information (1 mark) are among a number of possible reasons for market failure (1 mark). When merit goods are consumed benefits do not stop with the prime consumer (1 mark), but spill over into the neighbourhood (1 mark) as positive externalities (1 mark). The consumer will not necessarily be aware of these benefits (1 mark) and so will not base spending decisions on this information (1 mark). Since individual consumers under-estimate the social benefits of their consumption, (1 mark) merit goods tend to be under-consumed (1 mark). It follows that they are also under-supplied (1 mark). Demerit goods are those where costs do not stay with the consumer (1 mark), but spill over into the neighbourhood (1 mark) as negative externalities (1 mark) - Imperfect information might affect consumers in the LONG RUN, causing them to demand too much or too little, compared with what they might have consumed if they were fully aware of the future consequences to themselves. - Market signals tell us about what is happening now, they are not adept at foreseeing the future; current market signals might, for instance, tell us to close down an industry, a decision that might be regretted some time later when conditions change (e.g. the policy of closing branch railway lines in favour of roadbuilding in the 1960s)	
Use of diagrams to help support explanations, e.g. short run and long run cost curves.	Up to 2 marks per diagram (1 mark for labelling, 1 mark for information shown) to a total of 4 marks.
Relevant real world examples and/or relevant reference to the UK and/or other economies.	1 mark per reference to a maximum of 2 marks

[15]

15.

Areas for discussion include:

- the existence of market failure
- explanation of how taxes reduce consumption
- distinction between specific and ad valorem tax
- the argument that if demand is inelastic, this will result in larger tax revenues which can be put towards public health spending to the same effect
- the extent to which the burden of the sugar tax will be passed on to consumers rather than hitting profits of producers
- the likely extent to which producers change their recipes to avoid the tax
- the fact that the tax only applies to some sugary drinks, and not others (eg milk-based or fruit-based drinks), and does not apply to sugary foods such as chocolate bars
- unintended consequences (positive and negative) which have emerged (or could emerge) from the policy
- alternative policies such as a minimum price per litre, a rationing of quantity, a ban in school vending machines, quantitative limits on the sugar added to drinks in the production process, subsidy for healthier alternatives
- policies to increase uptake of healthier alternatives such as water or milk including information campaigns, subsidies, free school milk, etc.
- whether more prominent labelling (perhaps using a “teaspoon of sugar” measure) is more or less effective
- whether consumer drinks choice is an appropriate area of interference by the Government, or alternatively evidence of the “nanny state”
- whether insights from behavioural economics offer possible solutions, e.g. nudge economics, social norms
- government failure arguments

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the candidate's response to the question.

Level of response	Response	Max 25 marks
5	Sound, focused analysis and well-supported evaluation that: • is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes good application of relevant economic principles to the given context and, where appropriate, good use of data to support the response • includes well-focused analysis with clear, logical chains of reasoning • includes supported evaluation throughout the response and in a final conclusion.	21 – 25 marks
4	Sound, focused analysis and some supported evaluation that: • is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes some good application of relevant economic principles to the given context and, where appropriate, some good use of data to support the response • includes some well-focused analysis with clear, logical chains of reasoning • includes some reasonable, supported evaluation.	16 – 20 marks
3	Some reasonable analysis but generally unsupported evaluation that: • focuses on issues that are relevant to the question, showing satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present • includes reasonable application of relevant economic principles to the given context and, where appropriate, some use of data to support the response • includes some reasonable analysis but which might not be adequately developed or becomes confused in places • includes fairly superficial evaluation; there is likely to be some attempt to make relevant judgements but these are not well-supported by arguments and/or data.	11 – 15 marks
2	A fairly weak response with some understanding that: • includes some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely • includes some limited application of relevant economic principles to the given context and/or data to the question • includes some limited analysis but it may lack focus and/or become confused • includes some evaluation which is weak and unsupported.	6 – 10 marks
1	A very weak response that: • includes little relevant knowledge and understanding of economic terminology, concepts and principles • includes application to the given context which, at best, is very weak • includes attempted analysis which is weak and unsupported.	1 – 5 marks

[25]

16.

For relevant definitions, e.g. commercial success, in terms of trade and profitability (2 marks), market failure, in terms of opportunity costs / externalities (2 marks)	Up to 2 marks per point defined or explained to a maximum of 4 marks
For explanation – award 1 mark for each link in a logical chain of reasoning to a maximum of 15 marks.	
Possible explanations include - A major international airport, such as Heathrow has multiplier effects on the local economy (1 mark). It is also important to the national economy as a transport hub (1 mark). The airport itself is these days likely to be a private sector enterprise (1 mark) and many other private sector organisations (shops, cafes, suppliers, contractors) will benefit from the economic activity (1 mark). If profitable, the whole enterprise will be a significant commercial success (1 mark). However, the government will be expected to provide infrastructure (1 mark) with an opportunity cost (1 mark). The taxpayer might not get an adequate return (1 mark). There are also environmental costs (1 mark) such as noise, air pollution and road congestion (1 mark for an example). Commercial success is measured by profits, whereas externalities and other market failures are difficult to measure (1 mark) therefore they can co-exist (1 mark). - An airport, such as Heathrow, as a major employer	
Use of diagrams to support explanations, e.g. Internal / external costs and benefits	Up to 2 marks per diagram (1 mark for labelling, 1 mark for information shown) to a total of 4 marks.
Relevant real world examples and/or relevant reference to the UK and/or other economies.	1 mark per reference to a maximum of 2 marks

[15]

17.

C

[1]

18.

B

[1]

19.

Areas for discussion include:

- analysis of the main sources of air pollution (road vehicles, ships, factories, energy production)
- analysis of the main impacts of air pollution (localised health problems, smog, acid rain, global warming)
- the impact that existing policies have had, eg air passenger duty, fuel excise duty, regulations surrounding emissions (NB Volkswagen scandal), price controls
- explanation of regulation
- the benefits of regulation (simple, easy to change, easier to enforce)
- the costs of regulation (blunt and inefficient tools, create rent-seeking behaviour, unresponsive to changing markets)
- explanation of property rights and how a clear allocation of property rights might help,
- the limitations of property right allocation as an effective policy
 - how the initial allocation of property rights can be extremely problematic
 - how difficult it can be to identify when a right is being breached. For example, if an individual has a right to clean air, how is “clean air” to be defined?
- the success or otherwise of tradable permit systems such as the EU Emission Trading Scheme and the Californian trading system
- explanation of environmental taxation and how it might be applied in this context
- the benefits and costs of taxation
- the international nature of the problem, meaning that interventions taken by individual countries can address localised problems such as smog, but that problems such as global warming require coordinated global action
- examples of successful/unsuccessful regulatory interventions
- whether improved information can be an effective antidote to polluting behaviour
- government failure arguments.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the candidate's response to the question.

Level of response	Response	Max 25 marks
5	Sound, focused analysis and well-supported evaluation that: • is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes good application of relevant economic principles to the given context and, where appropriate, good use of data to support the response • includes well-focused analysis with clear, logical chains of reasoning • includes supported evaluation throughout the response and in a final conclusion.	21 – 25 marks
4	Sound, focused analysis and some supported evaluation that: • is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes some good application of relevant economic principles to the given context and, where appropriate, some good use of data to support the response • includes some well-focused analysis with clear, logical chains of reasoning • includes some reasonable, supported evaluation.	16 – 20 marks
3	Some reasonable analysis but generally unsupported evaluation that: • focuses on issues that are relevant to the question, showing satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present • includes reasonable application of relevant economic principles to the given context and, where appropriate, some use of data to support the response • includes some reasonable analysis but which might not be adequately developed or becomes confused in places • includes fairly superficial evaluation; there is likely to be some attempt to make relevant judgements but these are not well-supported by arguments and/or data.	11 – 15 marks
2	A fairly weak response with some understanding that: • includes some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely • includes some limited application of relevant economic principles to the given context and/or data to the question • includes some limited analysis but it may lack focus and/or become confused • includes some evaluation which is weak and unsupported.	6 – 10 marks
1	A very weak response that: • includes little relevant knowledge and understanding of economic terminology, concepts and principles • includes application to the given context which, at best, is very weak • includes attempted analysis which is weak and unsupported.	1 – 5 marks

[25]

20.**Areas for discussion include:**

- explanation of market failure
- sugary drinks as demerit goods leading to over-consumption
- asymmetric/imperfect information problems as consumers may fail to recognise the true costs and benefits of what they consume
- negative externalities in consumption
- examples of negative externalities in consumption arising from sugary drinks
- explanation of the specific health concerns and their burden on the NHS
- concerns about dental hygiene amongst children
- addictive properties of sugary drinks leading to inelastic demand
- reference to 'behavioural' reasons why sugary drinks might be over-consumed, e.g. bounded rationality, bounded self-control, social norms and other cognitive biases
- the tendency to undervalue the long-run consequences of consuming sugary drinks (the overoptimism bias).

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the candidate's response to the question.

Level of response	Response	Max 15 marks
3	A good response provides an answer that: • is well organised and develops a selection of the key issues that are relevant to the question • shows sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes good application of relevant economic principles to the given context and, where appropriate, good use of data to support the response • includes well-focused analysis with clear, logical chains of reasoning.	11 – 15 marks
2	A reasonable response provides an answer that: • focuses on issues that are relevant to the question • shows satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present • includes reasonable application of relevant economic principles to the given context and, where appropriate, some use of data to support the response • includes some reasonable analysis but which might not be adequately developed or becomes confused in places.	6 – 10 marks
1	A weak response provides an answer that: • has identified one or more relevant issues • has some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely • has very limited application of relevant economic principles to the given context and/or data to the question • might have some limited analysis but it may lack focus and/or become confused.	1 – 5 marks

[15]

Level of response	Response	Max 25 marks
5	Sound, focused analysis and well-supported evaluation that: - is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors - includes good application of relevant economic principles and, where appropriate, good use of data to support the response - includes well-focused analysis with clear, logical chains of reasoning - includes supported evaluation throughout the response and in a final conclusion.	21 – 25 marks
4	Sound, focused analysis and some supported evaluation that: - is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors - includes good application of relevant economic principles and, where appropriate, some good use of data to support the response - includes some well-focused analysis with clear, logical chains of reasoning - includes some reasonable, supported evaluation.	16 – 20 marks
3	Some reasonable analysis but generally unsupported evaluation that: - focuses on issues that are relevant to the question, showing satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present - includes reasonable application of relevant economic principles and, where appropriate, some use of data to support the response - includes some reasonable analysis but which might not be adequately developed or becomes confused in places - includes fairly superficial evaluation; there is likely to be some attempt to make relevant judgements but these aren't well-supported by arguments and/or data.	11 – 15 marks
2	A fairly weak response with some understanding that: - includes some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely - includes some limited application of relevant economic principles and/or data to the question - includes some limited analysis but it may lack focus and/or become confused - includes some evaluation which is weak and unsupported.	6 – 10 marks
1	A very weak response that: - includes little relevant knowledge and understanding of economic terminology, concepts and principles - includes analysis which is, at best, very weak - includes attempted evaluation which is weak and unsupported.	1 – 5 marks

Relevant issues and areas for discussion include:

- adequate housing as a basic human need, indicated by the mention of housing as a merit good in **Extract E**
- population growth, leading to more households, outstripping the growth in the UK's housing stock
- different methods of dealing with the problems experienced in the housing market, some of which involve more government spending on housing, eg relaxing planning controls, eliminating other impediments to private sector provision of more houses, making it easier for people to borrow, cutting SDLT, making it more expensive for people to buy and own a second home, discouraging housebuilders from sitting on building land, 'encouraging' local authorities to build more houses, subsidising housing associations, increasing 'housing benefits' paid to people on low incomes, rent controls, measures to encourage the provision of low-cost housing, encouraging innovation and improvements in productivity in the construction of houses
- an assessment of the pros and cons of some of the above
- the impact of more government spending on housing on the budget deficit and the national debt
- the significance of the type of government spending and whether it affects the 'current budget balance' or the overall budget balance, ie ceteris paribus, more capital spending will increase the overall budget deficit but not the current deficit
- the macroeconomic consequences of an increase in the budget deficit and national debt
- possible opportunity cost of an increase in government spending on housing, eg reduced spending on other programmes, higher taxes, crowding out of the private sector
- the case for more government borrowing for capital projects when government borrowing costs are low
- are there sufficient resources, eg construction workers, available to increase the number of houses built?
- increased spending on house building and short-run economic growth, including possible multiplier effects
- increased spending on house building and long-run economic growth
- market failure in the housing market and the possibility that state intervention may result in government failure
- the case for more state provision and ownership of the housing stock versus encouraging more private-sector provision
- should private-sector provision be encouraged by deregulation and relaxing planning controls or by the state giving financial support to the sector and/or homebuyers?
- are measures that make housing more affordable likely to help by encouraging private sector providers to build more homes or are they likely to just bid up house prices, adding to the problem?

Good answers are likely to present and evaluate arguments for and against the government increasing its spending on housing. They are also likely to discuss other methods of dealing with the problems of the UK housing market. The significance of and the impact on the macroeconomy of increasing spending on housing are likely to be considered, as well as possible microeconomic effects of specific policies identified. The response should include a supported recommendation which could be either for or against the government increasing its spending on housing. The recommendation might also include an alternative policy or set of policies.

The use of relevant diagrams to support analysis should be taken into account when assessing the quality of a student's response to the question.

An answer that does not include ANY evaluation must not be awarded more than 13 marks.

[25]

22.

Areas for discussion include:

- definition of market failure
- distinction between MSB and MPB (allow MSC and MPC)
- explanation of why MPB is greater than MSB
- analysis of the negative consumption (allow production) externalities produced by driving petrol and diesel cars
 - air pollution
 - noise pollution
 - congestion
 - accidents
- why the existence of negative externalities leads to over-production and consumption
- discussion of current government interventions such as licences, speed limits, age restrictions, congestion charge
- information asymmetry problems, for example the fact that diesel cars used to be thought of as cleaner than petrol cars.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the candidate's response to the question.

Level of response	Response	Max 15 marks
3	A good response provides an answer that: • is well organised and develops a selection of the key issues that are relevant to the question • shows sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors • includes good application of relevant economic principles to the given context and, where appropriate, good use of data to support the response • includes well-focused analysis with clear, logical chains of reasoning.	11 – 15 marks
2	A reasonable response provides an answer that: • focuses on issues that are relevant to the question • shows satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present • includes reasonable application of relevant economic principles to the given context and, where appropriate, some use of data to support the response • includes some reasonable analysis but which might not be adequately developed or becomes confused in places.	6 – 10 marks
1	A weak response provides an answer that: • has identified one or more relevant issues • has some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely • has very limited application of relevant economic principles to the given context and/or data to the question • might have some limited analysis but it may lack focus and/or become confused.	1 – 5 marks

[15]

23.**Areas for discussion include:**

- explanation of market forces and government intervention
- acknowledgement of recent rapid growth in the supply of waste
- discussion of the global market for waste, with waste from the rich world being shipped to parts of the developing world, where lower-cost labour makes sorting cost-effective and there is greater demand for second-hand materials
- discussion of how the ‘collect, sort, export’ model has been threatened by China’s decision to effectively ban imports of some types of waste’
- explanation of how rich countries, by moving away from manufacturing and into service sectors, have effectively outsourced production to developing countries, thus exporting some of the environmental problems too
- explanation of the ‘circular economy’ and how it differs from the current market model of supply and demand
- how there are economic benefits to circularity as well as costs (eg job creation)
- discussion of possible policies at the national level
 - regulations
 - taxation of raw material inputs
 - subsidies
 - permits and quotas
 - forcing producers to pay for disposal of products
- discussion of problems with the above policies, including feasibility, effectiveness and cost
- the likely uneven impact across different sectors of introducing policies to promote circularity
- explanation of how international agreement may be necessary given the global nature of the problem and discussion of how such international agreements are slow to achieve and often fail to address problems identified
- discussion of EU targets for national governments to improve their recovery rates
- how the market may respond to lower waste prices via rationing, signalling and incentive effects: for example, automation may replace human sorters at waste plants, and online markets for second-hand raw materials may develop
- market failure arguments
- government failure arguments.

The use of relevant diagrams to support the analysis should be taken into account when assessing the quality of the student’s response to the question.

Level of response	Response	Max 25 marks
5	Sound, focused analysis and well-supported evaluation that: - is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors - includes good application of relevant economic principles to the given context and, where appropriate, good use of data to support the response - includes well-focused analysis with clear, logical chains of reasoning - includes supported evaluation throughout the response and in a final conclusion.	21 – 25 marks
4	Sound, focused analysis and some supported evaluation that: - is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors - includes some good application of relevant economic principles to the given context and, where appropriate, some good use of data to support the response - includes some well-focused analysis with clear, logical chains of reasoning - includes some reasonable, supported evaluation.	16 – 20 marks
3	Some reasonable analysis but generally unsupported evaluation that: - focuses on issues that are relevant to the question, showing satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present - includes reasonable application of relevant economic principles to the given context and, where appropriate, some use of data to support the response - includes some reasonable analysis but which might not be adequately developed or becomes confused in places - includes fairly superficial evaluation; there is likely to be some attempt to make relevant judgments but these are not well-supported by arguments and/or data.	11 – 15 marks
2	A fairly weak response with some understanding that: - includes some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely - includes some limited application of relevant economic principles to the given context and/or data to the question - includes some limited analysis but it may lack focus and/or become confused - includes attempted evaluation which is weak and unsupported.	6 – 10 marks
1	A very weak response that: - includes little relevant knowledge and understanding of economic terminology, concepts and principles - includes application to the given context which, at best, is very weak - includes attempted analysis which is weak and unsupported.	1 – 5 marks

[25]

Level of response	Response	Max 25 marks
5	Sound, focused analysis and well-supported evaluation that: - is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors - includes good application of relevant economic principles and, where appropriate, good use of data to support the response - includes well-focused analysis with clear, logical chains of reasoning - includes supported evaluation throughout the response and in a final conclusion.	21 – 25 marks
4	Sound, focused analysis and some supported evaluation that: - is well organised, showing sound knowledge and understanding of economic terminology, concepts and principles with few, if any, errors - includes good application of relevant economic principles and, where appropriate, some good use of data to support the response - includes some well-focused analysis with clear, logical chains of reasoning - includes some reasonable, supported evaluation.	16 – 20 marks
3	Some reasonable analysis but generally unsupported evaluation that: - focuses on issues that are relevant to the question, showing satisfactory knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present - includes reasonable application of relevant economic principles and, where appropriate, some use of data to support the response - includes some reasonable analysis but which might not be adequately developed or becomes confused in places - includes fairly superficial evaluation; there is likely to be some attempt to make relevant judgements but these aren't well-supported by arguments and/or data.	11 – 15 marks
2	A fairly weak response with some understanding that: - includes some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely - includes some limited application of relevant economic principles and/or data to the question - includes some limited analysis but it may lack focus and/or become confused - includes some evaluation which is weak and unsupported.	6 – 10 marks
1	A very weak response that: - includes little relevant knowledge and understanding of economic terminology, concepts and principles - includes analysis which is, at best, very weak - includes attempted evaluation which is weak and unsupported.	1 – 5 marks

Relevant issues and areas for discussion include:

- explanation of what is meant by the zero-emissions target
- why further government action might be needed to ensure the target is achieved by 2050
- explanation of policies that the UK government could introduce to reduce emissions, examples include: carbon taxes, pollution permits, regulations, subsidies for technologies that reduce GHG emissions, carbon border tax
- the advantages and disadvantages of individual policies
- some policies may shift production that causes GHG emissions to other countries, eg in Asia or Africa
- whether policies should focus on consumption instead of, or as well as, production
- the costs of policies to reduce GHG emissions for particular industries/sectors of the economy
- the benefits of policies to reduce GHG emissions for particular industries/sectors of the economy
- opportunities to develop 'new industries' in growing markets and create export opportunities
- the role of market forces in reducing GHG emissions
- the impact on short-run and long-run growth
- the impact on employment and unemployment
- the impact on inflation
- the impact on the balance of payments
- possible regional effects
- effects on the distribution of income, eg some policies may be regressive
- short-run versus long-run effects
- role of moral and political judgements
- judgements relating to the relative merits of different policies
- the significance of the global nature of the climate change problem
- consideration of the case for and against not taking any further action
- a supported recommendation in favour of a particular policy/set of policies/or to take no further action.

The use of relevant diagrams to support analysis should be taken into account when assessing the quality of a candidate's response to the question.

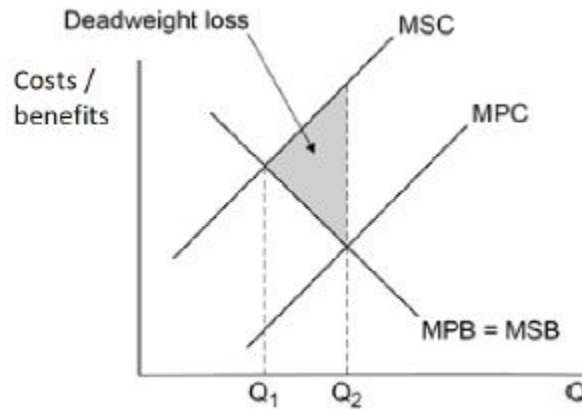
An answer that does not include any evaluation or a supported recommendation must not be awarded more than 13 marks.

[25]

Level of response	Response:	Max 9 marks
3	• is well organised and develops one or more of the key issues that are relevant to the question • shows sound knowledge and understanding of relevant economic terminology, concepts and principles • includes good application of relevant economic principles and/or good use of data to support the response • includes well-focused analysis with a clear, logical chain of reasoning • includes a relevant diagram that will, at the top of this level, be accurate and used appropriately	7 – 9 marks
2	• includes one or more issues that are relevant to the question • shows reasonable knowledge and understanding of economic terminology, concepts and principles but some weaknesses may be present • includes reasonable application of relevant economic principles and/or data to the question • includes some reasonable analysis but it might not be adequately developed and may be confused in places • may include a relevant diagram	4 – 6 marks
1	• is very brief and/or lacks coherence • shows some limited knowledge and understanding of economic terminology, concepts and principles but some errors are likely • demonstrates very limited ability to apply relevant economic principles and/or data to the question • may include some very limited analysis but the analysis lacks focus and/or becomes confused • may include a relevant diagram but the diagram is not used and/or is inaccurate in some respects.	1 – 3 marks

Suggested diagram

An MSC/MSB externality diagram is expected, showing overproduction as a result of a negative externality in production. However, a demand and supply diagram illustrating overproduction resulting from a negative externality is also acceptable.



An externality diagram showing negative consumption externalities is also acceptable. The written response should relate appropriately to the chosen diagram.

Relevant issues include:

- definition of market failure
- explanation of diagram, showing over-production of goods due to the marginal external costs creating a divergence between marginal social cost and marginal private cost. The over-production of goods creates a deadweight loss
- explanation of why output in a free market will be where $MPC=MPB$, whereas the socially optimal output is where $MSC=MSB$
- explanation of economic (in)efficiency
- explanation of how firms have an incentive to make products short-lived, as such products are likely to be made with cheaper raw materials, less quality control and perhaps cheaper labour
- how designing products to fail may result in more sales in the future
- how the actions of producers are normally not constrained by any requirements to consider how products are disposed of at the end of their useful life
- how disposal of waste products via landfill or incineration imposes externalities on third parties
- analysis of what such externality impacts are and who pays for them
- how the rapid utilisation of scarce resources such as minerals, water, oil, accelerates the degradation of the environment and reduces the quantity available for the future
- how such environmental problems might be considered allocatively inefficient
- reference to extracts, including the fact that not only producers, but also transport companies and others benefit from the overproduction of goods.

[9]