AQA A-LEVEL ECONOMICS · 7136

ECONOMICS



EXAM QUESTION PACK

3.1.8.4 POSITIVE AND NEGATIVE EXTERNALITIES

SCORE	PERCENTAGE
/530	%

STEMUP

These questions belong to AQA, not to us.

The examination questions, mark schemes and examiner reports in this pack were written and published by AQA. They are past assessment materials, reproduced here so that students can revise from them.

What we do not own

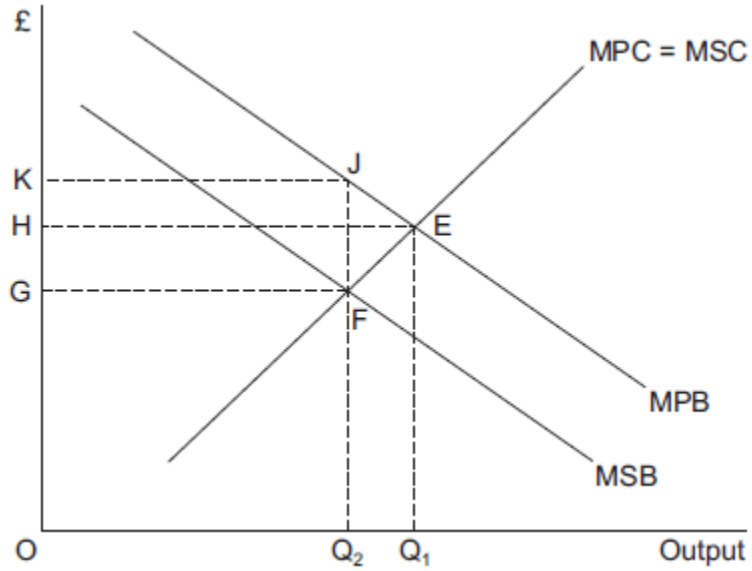
STEMUP is not affiliated with AQA and does not own, and makes no claim to own, any of the question, mark scheme or examiner report material in this pack. AQA has not endorsed, approved or been involved in the production of it. AQA and the qualification titles used here belong to their respective owners and appear for identification only.

Where to find the originals

AQA publishes its past papers, mark schemes and examiner reports free of charge. Always check the current specification at aqa.org.uk before you revise, because content and wording can change between series.

If you hold the rights to any material in this pack and would like it amended or removed, contact admin@stemup.co.uk and we will act on it.

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]

STEMUP.CO.UK

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]

STEMUP.CO.UK

5. THE GLOBAL CONTEXT

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 modifi ed (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 modifi ed 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.

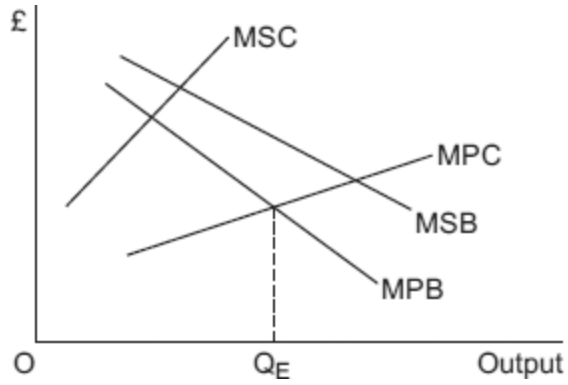
Can GM crops really guarantee 'food security'? Critics claim that a lack of spending power, not food supply, is the real problem, with poor people in failing economies often starving in front of full stores and granaries. They also claim that GM crops cause negative externalities. For instance, their 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]

STEMUP.CO.UK

7. **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.

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.

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.

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.

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.

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

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

[25 marks]

STEMUP.CO.UK

9.

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

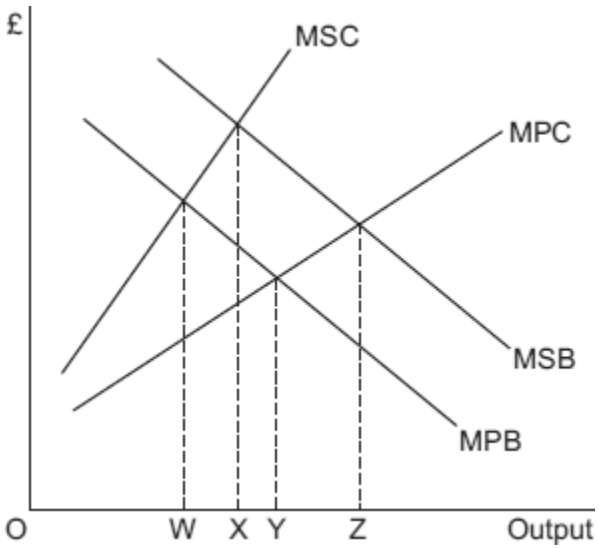
10.

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]

STEMUP.CO.UK

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]

STEMUP.CO.UK

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]

STEMUP.CO.UK

16. THE EUROPEAN UNION CONTEXT

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. 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.

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.

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.

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.

STEMUP.CO.UK

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.

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.

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.

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.

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.

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]

STEMUP.CO.UK

20. THE EUROPEAN UNION CONTEXT

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.' 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.

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.

Source: News reports, 2014

STEMUP.CO.UK

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 ⬭

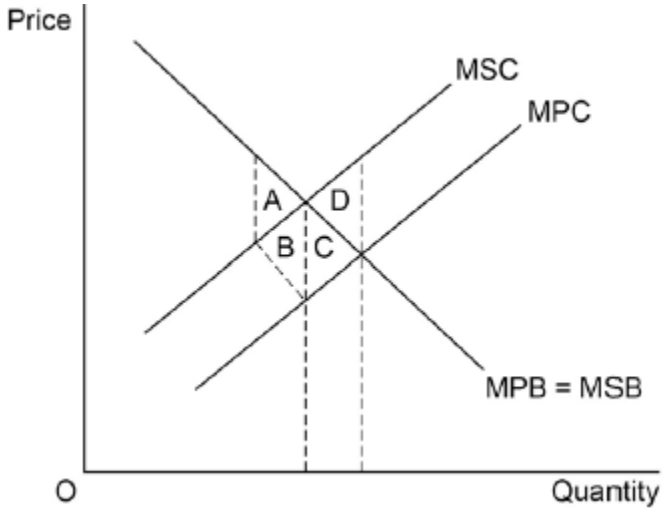
C Subsidise product X and tax product Y ⬭

D Subsidise product X and subsidise product Y ⬭

[1 mark]

STEMUP.CO.UK

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 ⬭

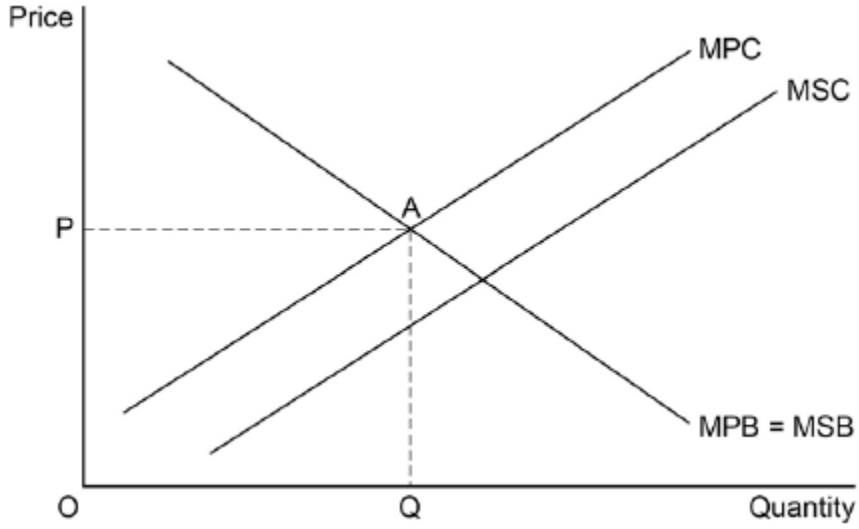
C ⬭

D ⬭

[1 mark]

STEMUP.CO.UK

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]

STEMUP.CO.UK

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]

STEMUP.CO.UK

8. 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.

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 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.

Source: news reports, 2010

9. 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.

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. 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]

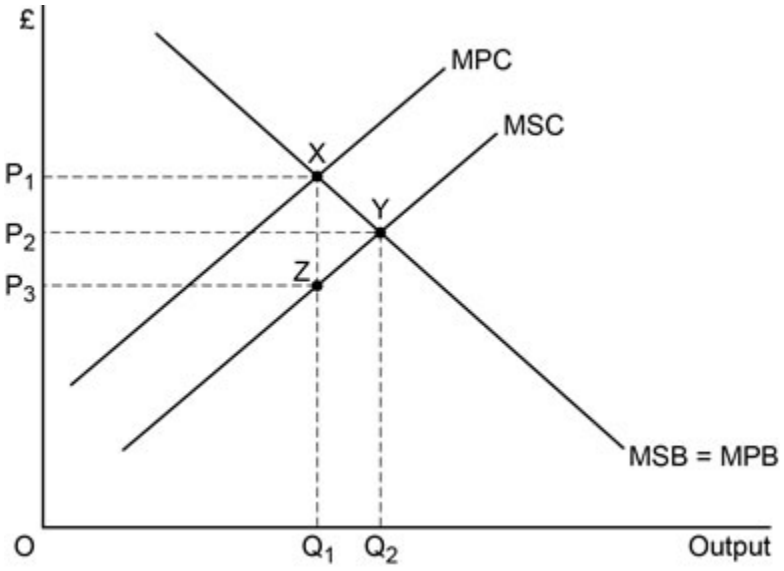
16. ‘A third runway at Heathrow is essential for the success of the economy of London and the UK.’

‘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 ⬭

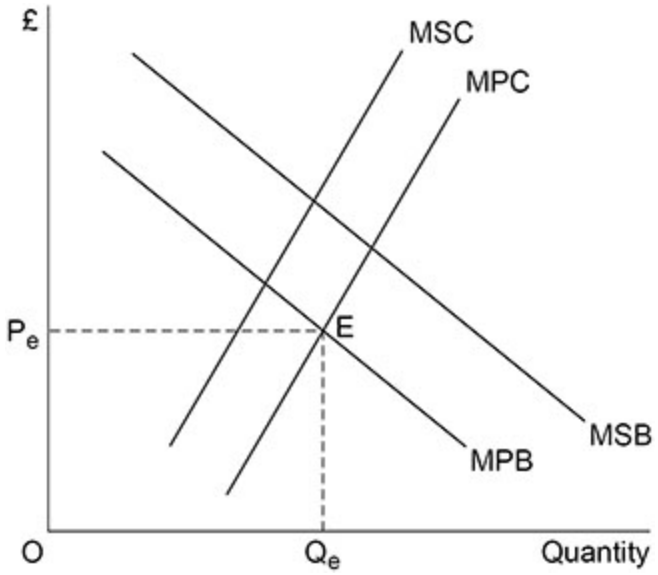
C P_1 minus P_3 is the subsidy per unit that is required to correct the market failure and achieve the social optimum ⬭

D The diagonal distance XY shows the amount by which marginal private cost exceeds marginal social cost at OQ_2 ⬭

[1 mark]

STEMUP.CO.UK

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]

STEMUP.CO.UK

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]

STEMUP.CO.UK