GCE AS MARKING SCHEME

SUMMER 2024

AS
ECONOMICS - UNIT 2
2520U20-1

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About this marking scheme

The purpose of this marking scheme is to provide teachers, learners, and other interested parties, with an understanding of the assessment criteria used to assess this specific assessment.

This marking scheme reflects the criteria by which this assessment was marked in a live series and was finalised following detailed discussion at an examiners' conference. A team of qualified examiners were trained specifically in the application of this marking scheme. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners. It may not be possible, or appropriate, to capture every variation that a candidate may present in their responses within this marking scheme. However, during the training conference, examiners were guided in using their professional judgement to credit alternative valid responses as instructed by the document, and through reviewing exemplar responses.

Without the benefit of participation in the examiners' conference, teachers, learners and other users, may have different views on certain matters of detail or interpretation. Therefore, it is strongly recommended that this marking scheme is used alongside other guidance, such as published exemplar materials or Guidance for Teaching. This marking scheme is final and will not be changed, unless in the event that a clear error is identified, as it reflects the criteria used to assess candidate responses during the live series.

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GENERAL MARKING GUIDANCE

Positive Marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good learner to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme, nor should marks be added as a consolation where they are not merited.

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GCE AS ECONOMICS – UNIT 2

SUMMER 2024 MARK SCHEME

Q1(a)	**'Tackling climate change is not an issue which can be left to the free market' (line 2). Briefly outline <u>one</u> reason why the free market has led to climate change. [2]**			
	AO1: 2 marks Understanding/definition of the 'free market'. Understanding may be implicit. [1] Identification of market failure occuring [1] e.g. external costs or absence of property rights [1] due to rational firms/consumers not being willing to pay for the external costs of production/consumption [1] nobody owns the oceans or the air and thus firms abuse this to maximise profits [1]			
Q1(b)	**To what extent do the external benefits of wind power outweigh the external costs? [10]**			
Band	**AO1**	**AO2**	**AO3**	**AO4**
	2 marks	**2 marks**	**2 marks**	**4 marks**
	Does the candidate show a good understanding of external benefits and costs?	*Is the answer applied to the context of wind power?*	*Did the candidate use economic theory to explain the external benefits of wind power?*	*Has economic theory been used to evaluate the arguments made in AO3?*
3				**4 marks** Excellent evaluation. An excellent range and depth of evaluation which leads to an overall reasoned judgement.
2	**2 marks** Good knowledge. Candidate effectively defines/describes external benefits and external costs. Understanding may be implicit.	**2 marks** Good application. Candidate uses examples from the data or own knowledge to contextualise their answer in terms of wind power.	**2 marks** Good analysis. Candidate uses economic theory to explain the external benefits of wind power.	**2-3 marks** Good evaluation. A good range and depth of evaluation but an overall reasoned judgement may be missing.
1	**1 mark** Limited knowledge. Candidate shows an incomplete understanding of external benefits and costs.	**1 mark** Limited application. It is likely that quotes have been identified but that they are not tied in (integrated) to the explanation.	**1 mark** Limited analysis.	**1 mark** Limited evaluation.
0	**0 marks** No knowledge.	**0 marks** No application.	**0 marks** No analysis.	**0 marks** No evaluation.

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THIS IS A REVERSIBLE ANSWER.

Indicative content:

AO1
External benefits are benefits to third parties, external to the transaction
External benefits = social benefits – private benefits

External costs are costs to third parties, external to the transaction
External costs = social costs – private costs

AO2
The answer must be linked to wind power.
References might include:
- The main reason for a decrease in the UK's carbon emissions has been lower emissions from power stations.
- In 2019, 'Wind power alone generated almost a fifth of the UK's electricity over the year.'

AO3
Analysis may include:
Using wind power to produce electricity has reduced the threat of climate change.

This has benefited people (third parties) who live near to the sea or in low-lying areas, whose homes and places of work were at risk of flooding.

It has also benefited farmers whose crops would have been negatively affected by climate change.

It has increased food and water security, benefiting everyone on the planet.

AO4
Possible lines of argument include:

There are significant external costs involved in wind power production as:
- People living in the countries where 'steel, concrete, and other such industrial materials' are produced may suffer from water and soil pollution. This will have a negative effect on their health and the fertility of the land.
- A large number of birds (third parties) are also killed by wind turbines, and this may have additional negative effects on the food chain.

The external benefits of wind power production may not be so great as:
- Only 28.9% of the UK's electricity was generated by wind in 2022.
- There are other reasons for the fall in carbon emissions apart from the move to using renewable energy sources
- Short term vs long term: perhaps the external costs are greater in the short term, but the external benefits are greater in the longer term.
- The answer may be different in different countries.

NB Reward relevant externalities diagrams.

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Q1(c)	**Discuss the likely effectiveness of a tradeable carbon emissions permits scheme, (EU ETS or UK ETS), in reducing carbon emissions.** **[8]**		
Band	**AO2**	**AO3**	**AO4**
	2 marks	**2 marks**	**4 marks**
	Is the answer applied to the context of the EU and/or UK ETS?	*Did the candidate use economic theory to explain how the scheme would reduce emissions?*	*Has economic theory been used to evaluate the arguments made in AO3?*
3			**4 marks** Excellent evaluation. An excellent range and depth of evaluation which leads to an overall judgement.
2	**2 marks** Good application. Candidate uses examples from the data or own knowledge to contextualise their answer in terms of carbon emissions/trading.	**2 marks** Good analysis. Candidate uses economic theory to explain how a tradeable carbon emissions permits scheme would reduce emissions.	**2-3 marks** Good evaluation. A good range or depth of evaluation.
1	**1 mark** Limited application. It is likely that quotes have been identified but that they are not tied in (integrated) to the explanation.	**1 mark** Limited analysis.	**1 mark** Limited evaluation.
0	**0 marks** No application.	**0 marks** No analysis.	**0 marks** No evaluation.

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THIS IS A REVERSIBLE ANSWER

Indicative content:

AO2
The answer must be linked to carbon trading:
References might include:
- The EU ETS has been in operation since 2005.
- 'The ETS limits emissions from more than 11,000 high energy-using power stations, industries and airlines.'
- 'the UK emissions trading scheme went live on 1 January 2021'.

AO3
Lines of argument include:

'Clean' firms who do not use all of their permits may sell them on to 'dirty' firms who want to emit more than their initial allocation of permits would allow. There is a profit incentive to reduce carbon emissions as:
- 'clean' firms can earn money from selling their excess permits on the market; and
- 'dirty' firms incur additional costs. This should incentivise them to invest in green technology to reduce their emissions.
- If 'dirty' firms do not invest in green technology, their extra costs may lead to them making lower profits, so they may exit the market, leaving only cleaner, more competitive firms.

This means that carbon emissions are reduced in the most efficient / lowest cost way.

Firms who emit more carbon that their permits allow may be fined.

NB Reward use of an appropriate supply and demand diagram for the emissions permit market.

AO4
Possible lines of argument include:

Firms may try to hide the true level of their emissions / asymmetric information.

The system has significant administration costs.

The scheme only works well if the price of a permit is set at an appropriate level. In the past, the price to emit a tonne of carbon within the ETS has been too low to alter firms' incentives.

The scheme may lead to government failure if firms relocate from the EU/UK to developing countries to avoid the scheme.

The scheme's effectiveness depends on how many firms are involved / what industries are covered.

Short run vs long run impacts.

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Q1(d)	**Explain how a carbon tax could correct the market failure caused by carbon emissions. Illustrate your answer with an appropriate diagram. [8]**			
Band	**AO1**		**AO2**	**AO3**
	2 marks	**2 marks**	**1 mark**	**3 marks**
	Does the candidate show a good understanding of a carbon tax and market failure?	*Does the candidate use an appropriate diagram?*	*Is the answer applied well to the context of carbon emissions?*	*Does the candidate explain how the carbon tax could correct market failure?*
3				**3 marks** Excellent analysis. Candidate explains in depth how a carbon tax could correct market failure.
2	**2 marks** Good knowledge. Candidate understands market failure and identifies at least one form.	**2 marks** Good knowledge. Diagram shows an indirect tax correcting market failure. 1 minor error allowed.		**2 marks** Good analysis. Candidate explains how a carbon tax would work in less detail.
1	**1 mark** Limited knowledge. Candidate shows an imprecise understanding of market failure, or does not identify any relevant forms.	**1 mark** Limited knowledge. Diagram shows only an indirect tax, or external costs of production. 2 minor errors or 1 major error but the understanding is still clear.	**1 mark** Limited application. Some application to the context is present in the response.	**1 mark** Limited analysis. Superficial analysis of how a carbon tax would work.
0	**0 marks** No knowledge.	**0 marks** No diagram or incorrect diagram.	**0 marks** No application.	**0 marks** No analysis.

Indicative content:

AO1/AO3
Possible lines of argument include:

Market failure occurs when the price mechanism does not lead to an optimal/efficient allocation of resources.

In this case, there is over-production of the good/service at the free market equilibrium, as the firm does not take the external costs of production into account.

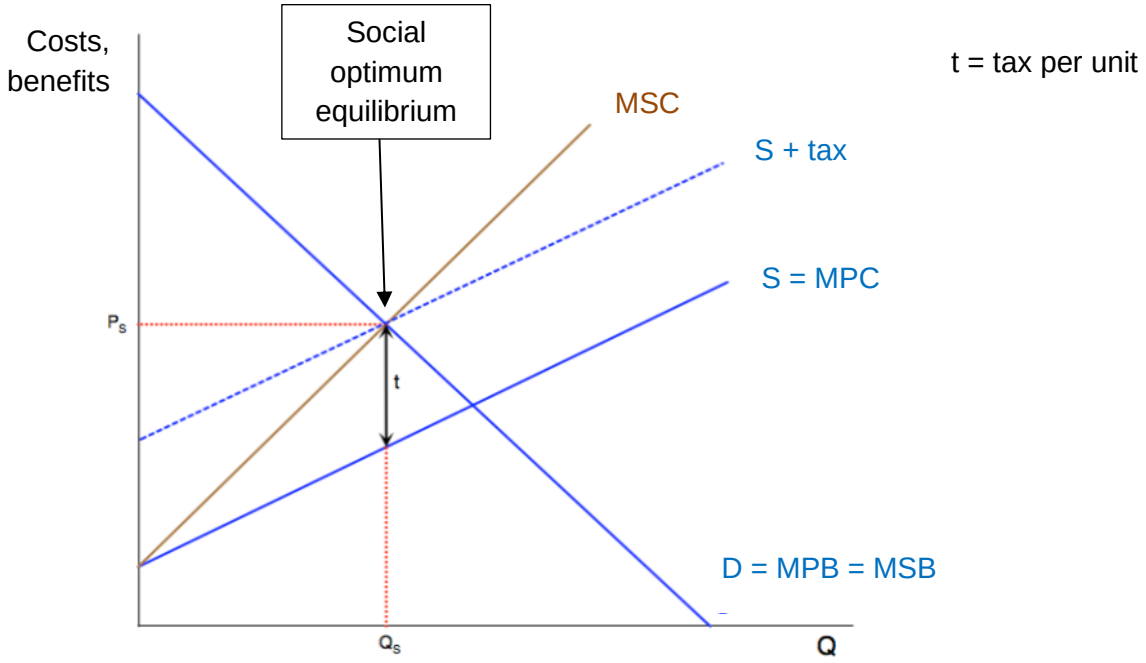
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A carbon tax is a specific indirect tax, which would increase firms' costs of production, leading to a decrease in supply of the goods/services produced.

If the tax per unit was equal to the marginal external costs of production at the social optimum equilibrium, the market failure caused by the external costs of production would be corrected.

The tax would 'internalise the externality'.

Additionally, the tax revenue could be used to either reduce the effects of climate change or to compensate those affected.



Also accept diagrams showing the MSC curve as parallel to the MPC curve

Also accept simple demand and supply diagrams

AO2
The answer must be linked to carbon.

References might include:
- 'firms are charged a set amount per tonne of carbon dioxide they emit'
- Firms would submit data on their emissions
- 'Firms could be fined if they fail to comply with the carbon tax requirements'.

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Q1(e)	**To what extent might UK Government policies to tackle climate change cause conflicts with their macroeconomic policy objectives? [12]**			
Band	**AO1**	**AO2**	**AO3**	**AO4**
	2 marks	**2 marks**	**4 marks**	**4 marks**
	Does the candidate show a good knowledge of the macroeconomic policy objectives?	*Is the answer applied well to the context of these policies to tackle climate change?*	*Does the candidate explain why the conflicts (in AO1) would arise?*	*Has economic theory been used to evaluate the question effectively?*
3			**4 marks** Excellent analysis. Candidate explains in depth two likely conflicts.	**4 marks** Excellent evaluation. An excellent range and depth of evaluation which leads to an overall reasoned judgement.
2	**2 marks** Good knowledge. Candidate identifies two macroeconomic objectives.	**2 marks** Good application. Use of data is integral to the explanation.	**2-3 marks** Good analysis. Candidate explains one conflict in depth, or multiple likely conflicts in less depth.	**2-3 marks** Good evaluation. One conflict is evaluated in depth, multiple effects are evaluated in less depth, or there may not be an overall reasoned judgement.
1	**1 mark** Limited knowledge. Candidate identifies one macroeconomic objective.	**1 mark** Limited application. It is likely that quotes have been identified but that they are not tied in (integrated) to the explanation.	**1 mark** Limited analysis. Superficial analysis of the conflicts.	**1 mark** Limited evaluation.
0	**0 marks** No knowledge.	**0 marks** No application.	**0 marks** No analysis.	**0 marks** No evaluation.

THIS IS A REVERSIBLE ANSWER

Indicative content:

AO1/AO3
Possible lines of argument might include:

<u>Low inflation</u>
If firms pass on the increase in their costs of production from either a carbon tax or having to buy additional carbon permits to consumers, this may increase inflationary pressures in the UK, causing the inflation rate to be above the 2% CPI target.

<u>Low levels of unemployment</u>
Firms may look to relocate away from the UK, perhaps to a developing country, to avoid having to pay the carbon tax or having to buy additional carbon permits. This could lead to increased unemployment in the UK.

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Alternatively, firms may just look to reduce costs to try to maintain their profit margins, for example by decreasing the size of their workforces.

Sustainable economic growth
An increase in firms' costs from either policy may lead to them undertaking less investment. This could reduce potential growth/threaten the long-term prospects for growth in the UK.
If firms leave the UK to operate overseas, this would lead to less investment/more imports/less exports, reducing AS and AD in the UK economy, reducing the rate of economic growth.
Any reduction in ability to produce power could reduce productivity in the UK.

Equilibrium in the current account of the balance of payments
An increase in firms' costs of production in the UK would make them less internationally competitive (if the costs are passed on to consumers), leading to less exports and more imports, worsening the current account position.
If firms leave the UK to operate overseas, this could lead more imports/less exports, and possibly less primary income flowing into the UK, worsening the current account position.

AO2
The answer must be linked to the UK and policy objectives.

References might include:
- Current UK inflation rate, unemployment rate, growth rate and current account position from own knowledge.
- Many people say that carbon taxes 'have led to rising fuel prices and a higher cost of living'
- 'carbon taxes introduced in other countries have been controversial'
- The UK was a member of the EU ETS from its creation in 2005. After Brexit, the UK created its own UK ETS in 2021.

AO4
Possible lines of argument include:

Impacts depend on the level of the carbon tax/price of a permit to emit carbon. If these are low, it may not lead to significant inflationary pressures.

Firms producing goods which have price elastic demand will pass on less of a carbon tax.

If the inflation rate is below target, an increase may help to bring it back up to 2%, therefore meeting a policy objective rather than conflicting with it.

Many firms will be unlikely to relocate overseas as this has significant costs.

A carbon tax may make it cheaper for firms to produce in the UK than under the EU ETS, leading firms to invest in/move to the UK.

Unemployment may only be short term, depending on workers' occupational and geographical mobility of labour. That said, it may create long term structural unemployment which has a more negative effect on the economy.

Other jobs may be created, such as in the production of renewable energy.

Reducing carbon emissions reduces the severity of future climate change and the use of non-renewable resources, making economic growth more sustainable.

Questioning the ceteris paribus assumption, e.g. changes in the exchange rate, or other government policies may make the UK more internationally competitive and outweigh the negative effects of the carbon tax/carbon trading scheme.

NB Accept alternative conflicts e.g. inequality.

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Q2(a)	**Describe the likely impact of the new coal mine on the UK Government's budget/fiscal balance.** **[4]**	
Band	**AO1**	**AO2**
	2 marks	**2 marks**
	Does the candidate show knowledge of the fiscal budget balance and how it might change?	*Is the answer applied well to the context?*
2	**2 marks** Understanding of the term 'budget balance' and how an increase in tax revenue and/or decrease in government spending will improve the balance. Understanding of budget balance may be implicit.	**2 marks** Good application. Use of data is integral to the explanation.
1	**1 mark** Understanding of the term 'budget balance' OR identification of a likely increase in tax revenue not linked to the impact on the balance. Understanding of budget balance may be implicit.	**1 mark** Limited application. It is likely that quotes have been identified but that they are not tied in (integrated) to the explanation.
0	**0 marks** No knowledge.	**0 marks** No application.

Indicative content:

AO1
The Government budget/fiscal balance is the difference between government spending and government revenue on an annual basis.

AO1/2
The new coal mine is likely to improve the budget balance as:
- Tax revenue will rise, e.g.,
  - 'more that £800 million in corporation tax'
  - increased income tax revenue from the 'about 500 direct jobs and an additional 1,500 jobs in the wider community', particularly as average incomes in the mine are 'expected to be £43,875 per year … almost twice the UK's median salary'
  - increased indirect tax revenue as 'a very large proportion of employees' income will be spent locally'
- Government spending may fall, e.g.,
  - less spent on unemployment benefit with the creation of new jobs
  - less spent on means-tested benefits as average incomes rise in the area

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Q2(b)	**Outline how the 'estimated private sector investment of £165 million' (line 4) to build the new coal mine will create a multiplier process in the UK economy. [4]**	
Band	**AO1**	**AO2**
	2 marks	**2 marks**
	Does the candidate show good understanding of the multiplier process?	*Is the answer applied well to the context?*
2	**2 marks** Good understanding. Candidate shows good knowledge of the multiplier process.	**2 marks** Good application. Use of data is integral to the explanation.
1	**1 mark** Limited understanding. Candidate shows knowledge of the multiplier process.	**1 mark** Limited application. It is likely that quotes have been identified but that they are not tied in (integrated) to the explanation.
0	**0 marks** No understanding.	**0 marks** No application.

Indicative content:

AO1
Identification that investment is an injection into the circular flow.

Understanding that an injection into the circular flow leads to a greater increase in national income than the value of the injection due to the multiplier process, as one person's spending is another person's income / the injection stimulates further rounds of spending / a proportion of the injection is re-spent within the circular flow.

Candidates could illustrate their understanding of the multiplier by using a relevant formula (but this is not required).

AO2
'The average salary for workers at the coal mine is expected to be £43,875 per year' and 'a very large proportion of employees' income will be spent locally' creating further jobs/incomes in the region.

The mine owners will 'source all major equipment and machinery from within the UK' creating further jobs/incomes in the supply chain.

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Q2(c)	With reference to the data and Chart 1, discuss the possible effects of the new coal mine on the steel market in the UK. [10]		
Band	**AO2**	**AO3**	**AO4**
	2 marks	**4 marks**	**4 marks**
	Is the answer applied to the context of the UK steel market?	*Did the candidate use economic theory to explain the impact on the UK steel market?*	*Has economic theory been used to evaluate the arguments made in AO3?*
3		**4 marks** Excellent analysis. Candidate explains in depth two likely effects.	**4 marks** Excellent evaluation. An excellent range and depth of evaluation.
2	**2 marks** Good application. Candidate uses examples from Figure 1 and the data or own knowledge to contextualise their answer.	**2-3 marks** Good analysis. Candidate explains one effect in depth, or multiple likely effects in less depth.	**2-3 marks** Good evaluation. A good range or depth of evaluation.
1	**1 mark** Limited application. Isolated reference made to Figure 1 or to the context of the UK only.	**1 mark** Limited analysis.	**1 mark** Limited evaluation.
0	**0 marks** No application.	**0 marks** No analysis.	**0 marks** No evaluation.

THIS IS A REVERSIBLE ANSWER

Indicative content\;

AO2
Reference to Figure 1, e.g.,
- the price of steel in the UK rose by 101% / approximately doubled between 2020 and 2022.
- the price of steel in the UK rose by 32% / approximately one-third between 2021 and 2022.

Reference to data, e.g.,
- ‘most steel production involves heating coal to high temperatures’
- ‘It takes about 770kg of coal to make one tonne of steel’
- ‘Most of the coal from the mine will provide fuel for steel-making’
- ‘In 2022, the UK produced 7.4 million tonnes of steel.’

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AO3
The new coal mine should increase the supply of coal, leading to a fall in the price of coal (may be shown diagrammatically). As coal is a raw material in the production process for steel, this will reduce steel's costs of production, leading to an increase in the supply of steel (may be shown diagrammatically). This is likely to lead to:

- A decrease in the price of steel, possibly reversing some of the price rises seen between 2020 and 2022.
- An increase in the market equilibrium quantity of steel produced and consumed in the UK.
- An increase in consumer surplus and in producer surplus in the UK steel market (may be shown diagrammatically).
- Increased employment in the steel industry as firms hire more workers to enable them to increase steel production / expansion of steel-producing firms in the UK.
- Increased profits for steel making firms in the UK.

AO4
The impact depends on what happens in Russia and whether the UK resumes importing Russian coal.

The vast majority of the coal from the new mine will be exported as it is not suitable for use in steel-making in the UK ('85% of the coal produced by the new mine is likely to be exported to the EU'). This means that the cost of coal is unlikely to fall significantly for UK steel producers, reducing the size of the effects identified.

The extent to which an increase in the supply of coal reduces its price depends on the price elasticity of demand for coal. As new 'green production methods' are adopted, demand for coal is becoming more price elastic, reducing the extent to which its price will fall.

Much steel is made without using coal, e.g., 'In 2022, 41% of European steel was produced using electric furnaces, while hydrogen was used in 10% of global production', so the impact on the supply of steel is likely to be less significant.

Time lag: it will take time for the new coal mine to be built and to begin operating at full capacity.

Significance of the new coal mine: it will produce 2.8 million tonnes of coal a year, which will allow the production of 3.6 million tonnes of steel. This would increase current UK steel production by 50% per year, meaning that the effects are likely to be very significant.

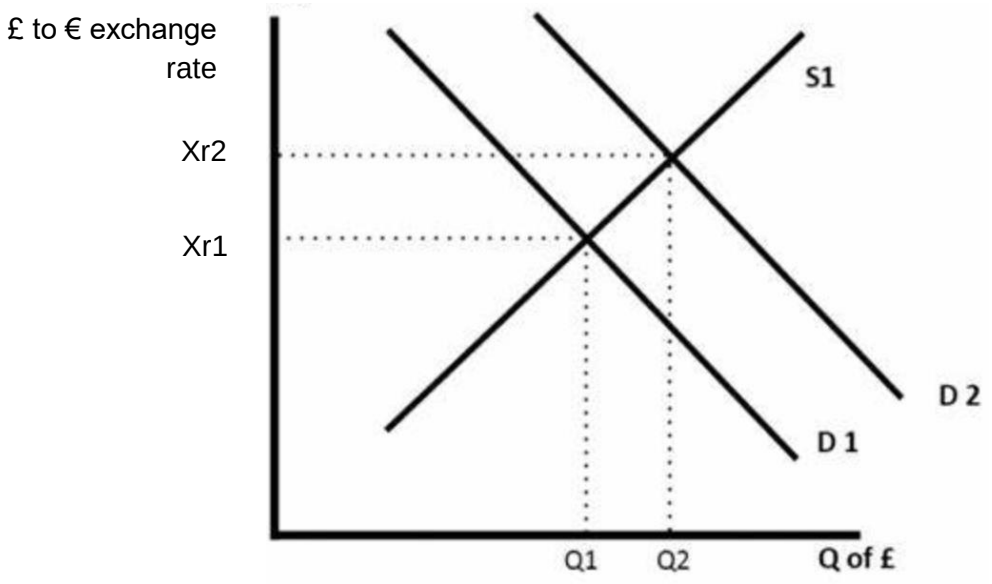
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Q2(d)	**Assess the likely impact of the new coal mine on the exchange rate of the pound to the euro. Illustrate your answer with an exchange rate diagram. [10]**				
Band	**AO1**		**AO2**	**AO3**	**AO4**
	2 marks	**1 mark**	**1 mark**	**2 marks**	**4 marks**
	Does the candidate use a S&D diagram to illustrate their answer?	*Does the candidate show a good understanding of the term exchange rate?*	*Is the answer applied to the context?*	*Does the candidate explain the impact on the exchange rate?*	*Has economic theory been used to evaluate the question effectively?*
3					**4 marks** Excellent evaluation. An excellent range and depth of evaluation.
2	**2 marks** Good knowledge. Diagram shows an increase in D for £. 1 minor error allowed.			**2 marks** Good analysis. Candidate explains the impact in depth.	**2-3 marks** Good evaluation. One evaluative point in depth, or multiple evaluative points in less depth.
1	**1 mark** Limited knowledge. 2 minor errors or 1 major error but the understanding is still clear.	**1 mark** Clear understanding of the term 'exchange rate' is demonstrated or implied.	**1 mark** Clear reference to context.	**1 mark** Limited analysis. Candidate explanation is superficial/lacks depth.	**1 mark** Limited evaluation. Evaluation is generic.
0	**0 marks** No diagram or incorrect diagram.	**0 marks** No understanding.	**0 marks** No application.	**0 marks** No analysis.	**0 marks** No evaluation.

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Indicative content:

AO1
The exchange rate is the value of one currency in terms of another.



AO2
- '85% of the coal produced by the new mine is likely to be exported to the EU'
- '2.4 billion worth of exports over the first ten years of the mine's operation'

AO3
The pound to euro exchange rate is determined by the forces of demand and supply for the two currencies: a free float system.

An increase in UK exports to the EU will cause an increase in demand (D1 to D2) for the £ from the EU to pay for the coal. This increase in demand will cause the exchange rate to appreciate (Xr1 to Xr2), so that £1 is worth more euros than previously.

Other valid explanations: e.g. opening a coal mine in the UK could mean less coal imported, this would decrease the supply of £s on the foreign exchange market, leading to an appreciation of the £.

AO4
Possible lines of argument include:
- Not all EU countries use the euro, so effects may not be as large as expected, e.g., if coal is exported to Denmark, Sweden etc. it will not affect the £ to € exchange rate.
- Given that 'many European steel-makers are turning away from the use of coal', there may not be demand for it in the EU, meaning that the new coal is not exported to Europe, and there is no/less increase in demand for the pound.
- An increase in average incomes in the area as the new mine creates jobs may lead to more goods and services being imported to the UK. If these imports come from the euro area, this will increase supply of the pound and put downwards pressure on the exchange rate.
- Significance: is the export of coal likely to create enough additional demand for the pound to produce a noticable change in the exchange rate?
- Criticism of the ceteris paribus assumption: demand and supply for the pound are likely to change at the same time due to changes in the value of imports/exports of other goods/services, investment flows etc. This may outweigh the upward pressure on the exchange rate due to increased coal exports.

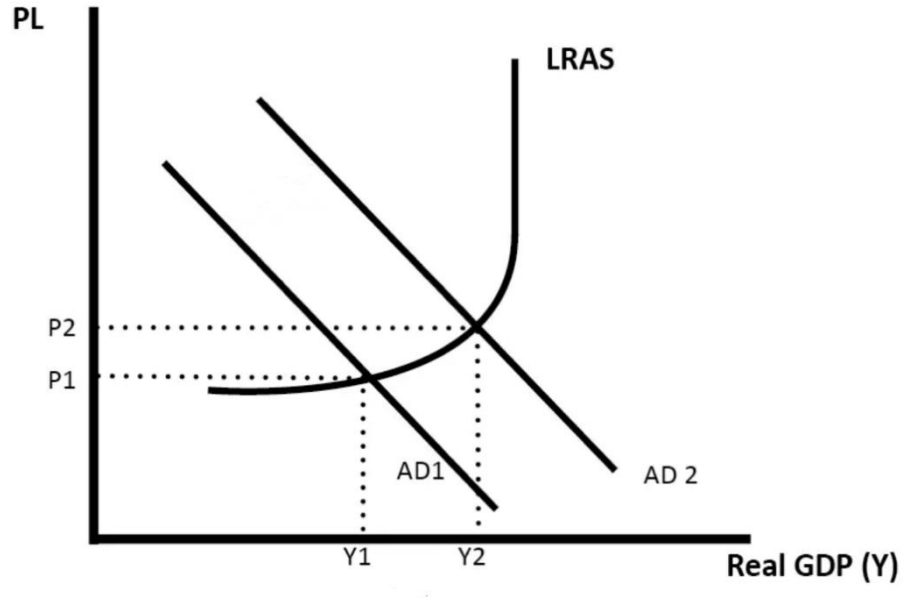
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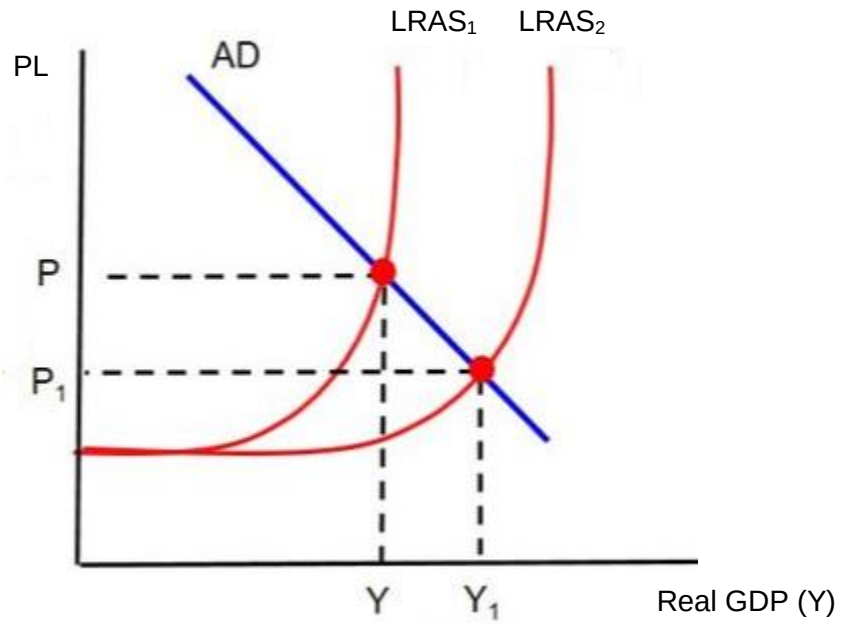
Q2(e)	**Evaluate the view that the new coal mine will 'add £1.5 billion to UK GDP … over the first ten years of the mine's operation' (lines 27 and 28). Illustrate your answer with an aggregate demand and aggregate supply (AD/AS) diagram. [12]**			
Band	**AO1**	**AO2**	**AO3**	**AO4**
	2 marks	**2 marks**	**4 marks**	**4 marks**
	Does the candidate use an AD/AS diagram to illustrate their answer?	*Is the answer well applied to the context?*	*Did the candidate use economic theory to explain the impact of the new coal mine on UK GDP?*	*Has economic theory been used to evaluate the argument(s) made in AO3?*
3			**4 marks** Excellent analysis. Candidate explains in depth two likely reasons why GDP may increase.	**4 marks** Excellent evaluation. An excellent range and depth of evaluation which leads to an overall reasoned judgement.
2	**2 marks** Good knowledge. Diagram shows an increase in AD and/or AS. 1 minor error allowed.	**2 marks** Good application. Use of data is integral to the explanation.	**2-3 marks** Good analysis. Candidate explains one reason why GDP may increase in depth, or multiple likely reasons in less depth.	**2-3 marks** Good evaluation. One evaluative point in depth, or multiple evaluative points in less depth.
1	**1 mark** Limited knowledge. 2 minor errors or 1 major error but the understanding is still clear.	**1 mark** Limited application. It is likely that quotes have been identified but that they are not tied in (integrated) to the explanation.	**1 mark** Limited analysis. Superficial analysis of the reasons.	**1 mark** Limited evaluation.
0	**0 marks** No diagram or incorrect diagram.	**0 marks** No application.	**0 marks** No analysis.	**0 marks** No evaluation.

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Indicative content:

AO1
Accept an AD/AS diagram showing either/or an increase in AD and/or AS.





NB Also accept classical LRAS and SRAS curves.

AO2
References might include:
- 'an estimated investment of £165 million'
- 'the creation of about 500 direct jobs'
- '85% of the coal produced by the new mine is likely to be exported to the EU'
- '£2.4 billion worth of exports over the first ten years of the mine's operation'

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AO3
AD may increase as:
- The new coal mine will represent a significant investment in new capital, and investment is a component of AD.
- The new coal mine will lead to an increase in exports from the UK, improving the trade balance (X-M), which is a component of AD.
- The new coal mine may supply some steel-producing firms in the UK, meaning that they no longer need to import coal from the USA and Canada. This will improve the trade balance (X-M), which is a component of AD.
- There is likely to be a multiplier effect creating subsequent increases in AD.

AS may increase as:
- SRAS may increase as the cost of coal and of steel falls in the UK. These are both important raw materials, so will lower firms' costs of production.
- LRAS may increase as investment in the new coal mine increases the productive capacity of the UK economy.

An increase in either AD or AS is likely to lead to an increase in the equilibrium level of real GDP in the UK economy (Y to Y1 / Y1 to Y2).

Candidates' written explanations must match their AD/AS diagram e.g. if they have drawn an increase in AD, their AO3 marks must be an explanation of an increase in AD.

AO4
Possible lines of argument include:

Significance of the effects: £165 million in investment is unlikely to create a large increase in AD/GDP. £2.4 billion of exports will come over ten years, not in the first few years.

Time lag: time taken to build the mine and get it to full operating capacity before the full effect is seen on AD/AS and hence on UK GDP.

Debate as to whether or not there is an export market for the coal in the EU, given the adoption of green production methods. Additionally, the text implies that imports of coal will not fall significantly as UK steel-producers are happy with the coal they have sourced from Wales, the USA and Canada. Therefore there may not be a significant improvement in the UK's trade balance and hence in AD.

The size of the multiplier effect – if the firm will pay a significant amount of tax, this will reduce the significance of the multiplier process. Although employees spending their incomes locally and the company sourcing machinery domestically will add to its significance.

The impact of an increase in AD on the UK economy's GDP depends on:
- Whether a classical or Keynesian LRAS curve is used: in the former case, no LR growth is created without an increase in LRAS too.
- The level of spare capacity in the economy if a Keynesian LRAS curve is used.

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AS UNIT 2: Economics in Action						
	AO1	AO2	AO3	AO4	**Total**	QS
1. (a)	2	-	-	-	**2**	-
(b)	2	2	2	4	**10**	-
(c)	-	2	2	4	**8**	-
(d)	4	1	3	-	**8**	2
(e)	2	2	4	4	**12**	-
2. (a)	2	2	-	-	**4**	-
(b)	2	2	-	-	**4**	1
(c)	-	2	4	4	**10**	2
(d)	3	1	2	4	**10**	2
(e)	2	2	4	4	**12**	1
Total	**19**	**16**	**21**	**24**	**80**	**8**

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