

Markscheme

November 2023

Economics

Higher level

Paper 3

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Notes for examiners:

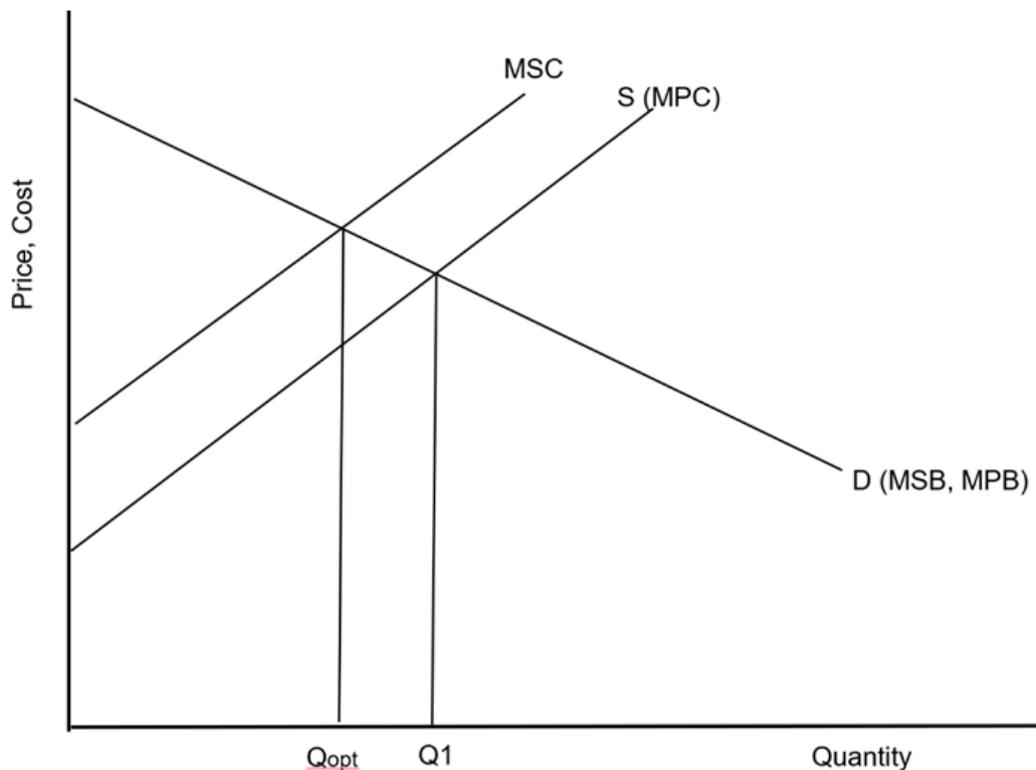
1. Whenever relevant, carry over marks must be awarded. If a candidate makes an error in calculation, but then uses the incorrect figure appropriately and accurately in later question parts, then the candidate may be fully rewarded. This is the “own-figure rule” and you should put OFR on the script where you are rewarding this.
2. Alternative approaches may be taken in responses to the [4] questions that use A02 command terms. If this is the case and the alternative approaches are valid, then full credit should be given.
3. A candidate may be penalized for not rounding correctly, failing to give answers correct to 2 dp or, in some cases, for not including the appropriate units. However, a candidate may only be penalized ONCE per script (not per part) for each type of error.

1. (a) (i) Define the term *common pool resources* (*common access resources*). [2]

Level		Marks
0	<i>The work does not meet a standard described by the descriptors below</i>	0
1	<i>Vague definition</i>	1
	For the idea that they are rivalrous OR non-excludable	
2	<i>Accurate definition</i>	2
	For an understanding that they are rivalrous AND non-excludable	

- (ii) The phrase “tragedy of the commons” is associated with examples of common pool resources (common access resources). Using a production externalities diagram, explain the meaning of this phrase. [4]

Level		Marks
0	<i>The work does not meet a standard described by the descriptors below.</i>	0
1	<i>The written response is limited.</i>	1-2
	For a negative production externalities diagram in which the MSC curve lies above the S, MPC curve and shows that the market output is greater than the socially optimum level of output OR that explains that the use of common pool resources is responsible for negative externalities due to depletion (or unsustainable use) of resources which leads to overproduction/overuse (free market equilibrium is greater than the socially optimum level of output).	
2	<i>The written response is accurate.</i>	3-4
	For a negative production externalities diagram in which the MSC curve lies above the S, MPC curve and shows that the market output is greater than the socially optimum level of output AND that explains that the use of common pool resources is responsible for negative externalities due to depletion (or unsustainable use) of resources which leads to overproduction/overuse (free market equilibrium is greater than the socially optimum level of output).	



NB If a response draws a consumption externality diagram, it cannot be rewarded. However, if the explanation refers to the depletion/overconsumption of a resource, the response may receive [2] with the stamp ECF (error carried forward).

Candidates who incorrectly label diagrams can be awarded with a maximum of [3]. The y axis may be labelled price but could be costs or benefits and the x axis is labelled quantity.

- (iii) Using the data in **Table 2**, calculate the price elasticity of demand for European seabass following the change in price from 2017 to 2018. [3]

$P(2018) = 33\,522 / 5587 = 6.00$ [1]

$PED = (\% \Delta Qd) / (\% \Delta P) = 24.05 / (-4.31)$

OFR applies if the price has been calculated incorrectly.

Any valid working (correct %Δ Qd or %Δ P, provided the formula is not inverted) is sufficient for [1].

= -5.58 OR 5.58 [1]

An answer of -5.58 or 5.58 without any valid working is sufficient for [2].

- (iv) Using the data in **Table 1 and Table 2**, calculate the income elasticity of demand for European seabass when per capita incomes in Portugal changed from 2017 to 2018. [2]

$YED = (\% \Delta Qd) / (\% \Delta Y) = 24.05 / 5.70$ [1]

Any valid working (correct %Δ Qd or %Δ Y, provided the formula is not inverted) is sufficient for [1].

= 4.22 [1]

An answer of 4.22 without any valid working is sufficient for [1].

- (v) Using **Figure 1**, calculate the impact of this tax on the producer surplus for the island nation’s fishermen. [2]

$PS1 = (14 \times 28) / 2 = 196$

$PS2 = (12 \times 24) / 2 = 144$

Any valid working is sufficient for [1]

144 – 196

OR $[(24 + 28) \times 2] / 2$

= – \$52 000 OR decrease of \$52 000 OR decreased by 26.53%

An answer of 52 000 or 52 without any valid working is sufficient for [1].

For full marks to be awarded the response must provide valid working and include correct units.

- (vi) Explain why this tax is regressive. [2]

Level		Marks
0	<i>The work does not meet a standard described by the descriptors below.</i>	0
1	<i>Vague explanation</i>	1
	The idea that high- and low-income earners pay the same tax per unit OR low-income earners are burdened (affected) more by the tax.	
2	<i>Accurate explanation</i>	2
	For a clear understanding that it is regressive since the same dollar tax amount is paid by all individuals, so it is a bigger proportion of the income of low-income earners.	

- (vii) State **one** kind of regulation this island nation could adopt to decrease the risk of depleting the pollock fish stock in its sea. [1]

Possible regulations may include:

- Minimum length of caught fish
- Establishment of (shorter) fishing seasons / hours
- Regulation of the size / type of trawlers used
- Quotas (fishing)

Any other valid response.

- (viii) Explain why collective self-governance can, under certain conditions, lead to sustainable management of common pool resources. [4]

NB Candidates may take one of two approaches to this question, each of which are valid.

Approach 1

Level		Marks
0	<i>The work does not meet a standard described by the descriptors below.</i>	0
1	<i>The written response is limited.</i>	1–2
	For an explanation that collective self-governance is a system where users [1] of resources manage the resources by themselves [1] OR that because users realise that it is in their interests to limit the use of these resources/not to focus only on their own benefit [1] the resources will be used in a sustainable manner [1] .	
2	<i>The written response is accurate.</i>	3–4
	For an explanation that collective self-governance is a system where users [1] of resources manage the resources by themselves [1] AND that because users realise that it is in their interests to limit the use of these resources/not to focus only on their own benefit [1] the resources will be used in a sustainable manner [1] .	

Approach 2 (students may focus on the conditions)

Level		Marks
0	<i>The work does not meet a standard described by the descriptors below.</i>	0
1	<i>The written response is limited.</i>	1-2
	<i>For a limited explanation of one condition, award a maximum of [1]. For an accurate explanation of one condition (refer to level 2) OR a limited explanation of two conditions, award a maximum of [2].</i>	
2	<i>The written response is accurate.</i>	3-4
	<i>For an accurate explanation of one condition AND a limited explanation of one other condition, award a maximum of [3]. <i>For an accurate explanation of two conditions, award a maximum of [4].</i> <i>Accurate explanations may include:</i> The idea of local communities realizing that self-interested behaviour risks depletion of the resource in the long term and that for such arrangements to succeed. <i>Accurate conditions may include:</i> <ul style="list-style-type: none"> • The resource is not at a point of deterioration so that there is little or no advantage to organizing • Users are dependent on the resource for a major portion of their livelihood • Users must be able to communicate and engage in face-to-face bargaining • They must develop rules of enforcement, monitoring and conflict-resolution mechanisms <i>Any other valid condition.</i></i>	

- (b) Using the text/data provided and your knowledge of economics, recommend a policy which could be introduced to limit the unsustainable use of fisheries around the world. **[10]**

*Possible policies **may** include (but are not restricted to):*

- Fishing quotas (including transferable quotas)
- Taxation (on various fishing related activities)
- Ending subsidies
- Education/consumer nudges
- International agreements

Any other valid policy.

NB *If more than one policy is recommended, only the best policy should be rewarded, unless the policies are shown to be complementary or if they are compared/contrasted with the student's one chosen policy.*

Assessment Criteria

Recommend—present an advisable course of action with appropriate supporting evidence/reason in relation to a given situation, problem or issue.

Marks	Level descriptor
0	<ul style="list-style-type: none"> • The work does not reach a standard described by the descriptors below.
1–2	<ul style="list-style-type: none"> • The response identifies a policy. • The response uses no economic theory to support the recommendation. • Economic terms are stated but are not relevant. • The response contains no use of text/data to support the recommendation. • The response contains no evidence of synthesis or evaluation.
3–4	<ul style="list-style-type: none"> • The response identifies an appropriate policy. • The response uses limited economic theory to support the recommendation in a superficial manner. • Some relevant economic terms are included. • The response contains no use of relevant text/data to support the recommendation. • The response contains evidence of superficial synthesis or evaluation.
5–6	<ul style="list-style-type: none"> • The response identifies and explains an appropriate policy. • The response uses relevant economic theory to partially support the recommendation. • Some relevant economic terms are used appropriately. • The response includes some relevant information from the text/data to support the recommendation. • The response contains evidence of appropriate synthesis or evaluation but lacks balance.
7–8	<ul style="list-style-type: none"> • The response identifies and fully explains an appropriate policy. • The response uses relevant economic theory to support the recommendation. • Relevant economic terms are used mostly appropriately. • The use of information from the text/data is generally appropriate, relevant and applied correctly to support the recommendation. • The response contains evidence of appropriate synthesis or evaluation that is mostly balanced.
9–10	<ul style="list-style-type: none"> • The response identifies and fully explains an appropriate policy. • The response uses relevant economic theory effectively to support the recommendation. • Relevant economic terms are used appropriately throughout the response. • The use of information from the text/data is appropriate, relevant and supports the analysis/evaluation effectively. • The response contains evidence of effective and balanced synthesis or evaluation.

2. (a) (i) Distinguish between a common market and a monetary union. [3]

For any **two** features of a common market:

- Free trade
- Common external tariff/common policies towards non-member countries
- Free movement of capital
- Free movement of labour

[2]

AND that a monetary union (additionally) has (**one** of):

- Common currency
- Common central bank

[1]

(ii) Outline **one** disadvantage of joining a monetary union. [1]

Any one valid disadvantage, such as:

- Members are deprived of independent monetary policy
- Members are deprived of independent exchange rate policy
- Members have limited room to pursue an independent fiscal policy
- Loss of sovereignty

Any other valid response.

(iii) Using **Table 3**, calculate the expenditures of the typical consumer in the Czech Republic in 2019. Enter your results in **Table 4**. [1]

	2018	2019	2020
Annual expenditures (CZK)	5970	6274	6362
CPI	100	105.09	106.57

6274

NB An accurate figure which is in the text box but not inserted into the table may be rewarded.

(iv) Using **Table 4** and assuming 2018 is the base year, calculate the CPI for the Czech Republic for 2020. Enter your results in **Table 4**. [1]

106.57

An accurate figure which is in the text box but not inserted into the table may be rewarded.

(v) Using **Table 4**, calculate the rate of inflation in the Czech Republic for 2019 **and** for 2020. [2]

2019: $(105.09 - 100)/100 \times 100 = 5.09\%$ **OR** 5.09 [1]

2020: $(106.57 - 105.09) / 105.09 \times 100 = 1.41\%$ **OR** 1.41 **OR** 1.4 [1]

Workings are not required.

OFR applies from part (iv).

- (vi) Using your answer to part (a)(v), calculate the real rate of interest in 2019, given that the nominal interest rate was 12.44 %. **[1]**

$12.44 - 5.09 = 7.35\%$ **OR** 7.35 **[1]**

Workings are not required.

OFR applies from part (v).

(vii) Explain **two** limitations of using the CPI to measure inflation. **[4]**

Level		Marks
0	<i>The work does not meet a standard described by the descriptors below.</i>	0
1	<i>The written response is limited.</i>	1–2
	<p><i>For a limited explanation of one limitation, award a maximum of [1].</i></p> <p><i>For an accurate explanation of one limitation (refer to level 2) OR a limited explanation of two limitations, award a maximum of [2].</i></p> <p><i>Limited reasons may include:</i></p> <ul style="list-style-type: none"> • Quality of many products improves over time • Consumers buy goods from a variety of outlets/markets • Consumers may buy less of a good that has become more expensive • The basket of goods consumers buy changes • Different groups have different expenditure patterns • Different locations have different prices • Households changing their expenditure. 	
2	<i>The written response is accurate.</i>	3–4
	<p><i>For an accurate explanation of one limitation AND a limited explanation of one other limitation, award a maximum of [3].</i></p> <p><i>For an accurate explanation of two limitations, award a maximum of [4].</i></p> <p><i>Accurate explanations may include:</i></p> <ul style="list-style-type: none"> • Although the price of a good (in the basket) has risen, its quality has also improved • Consumers/households may now be buying their goods from outlets/markets that are not sufficiently surveyed by the government • Consumers/households may have substituted cheaper items when the price of one item increased, but their weights are fixed • New goods appear in the market and are bought by consumers but are included only at a later date in the CPI basket • Different groups have different expenditure patterns and, therefore, the calculated inflation rate does not apply to all groups • Prices may vary significantly between areas of a country and, therefore, the calculated inflation rate does not apply to all areas • Households changing their expenditure patterns significantly because of tastes changing after the basket was constructed. <p><i>Any other valid explanation.</i></p>	

- (viii) If in 2018 US\$ 1.00 = CZK 22.72, calculate how many US dollars (US\$) an American would need in order to buy the same basket of goods that the typical Czech consumer bought in 2018. [1]

US\$ 262.76 **OR** 263

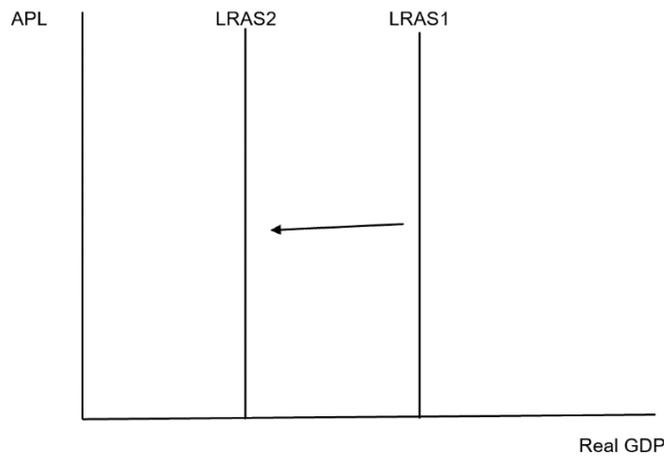
US\$ sign not required.

- (ix) Define the term *crowding out*. [2]

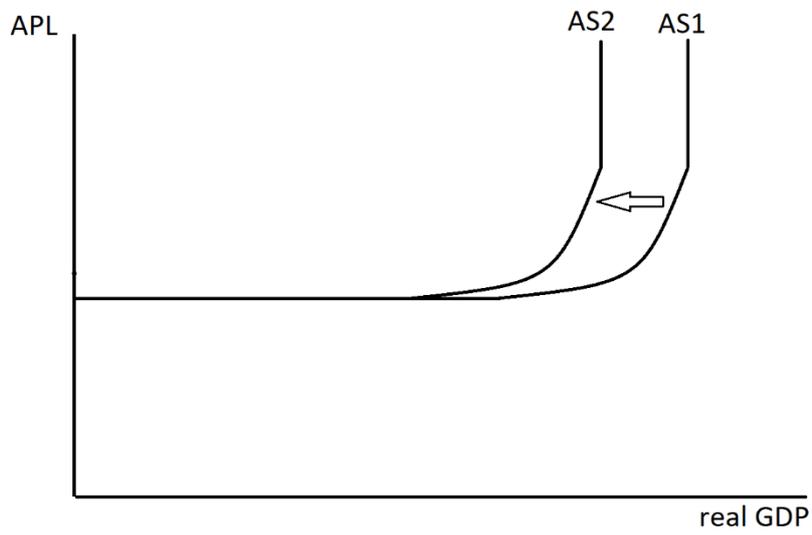
Level		Marks
0	<i>The work does not meet a standard described by the descriptors below.</i>	0
1	<i>Vague definition</i>	1
	For the idea that increased government expenditures leads to less private investment OR expansionary fiscal policy is ineffective	
2	<i>Accurate definition</i>	2
	For a clear understanding that financing a budget deficit requires that the state borrow funds, which may lead to higher interest rates decreasing private investment. OR that if the state employs more resources, this will limit their availability for private investment	

- (x) Using an appropriate diagram, explain the impact of deteriorating infrastructure on Kenya's potential output. [4]

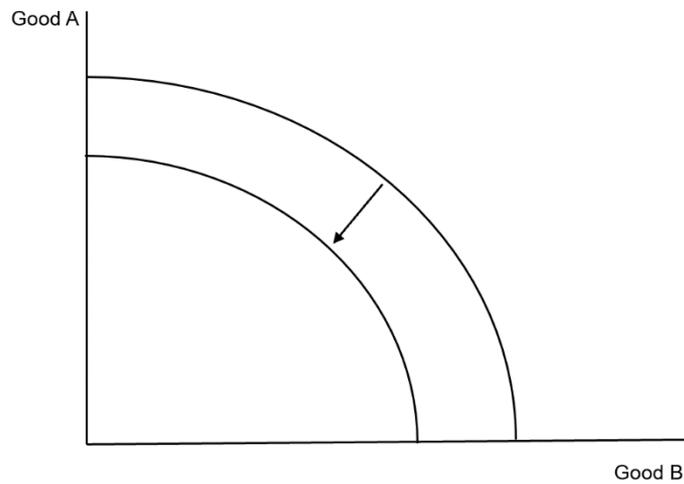
Level		Marks
0	<i>The work does not meet a standard described by the descriptors below.</i>	0
1	For drawing a correctly labelled diagram with LRAS shifting left (or a Keynesian AS 'shifting' left or a PPF shifting inwards) OR for an explanation that productive capacity decreases/factors of production decrease, which leads to potential output decreasing.	1-2
2	<i>The written response is accurate.</i>	3-4
	For drawing a correctly labelled diagram with LRAS shifting left (or a Keynesian AS 'shifting' left or a PPF shifting inward). AND for an explanation that productive capacity decreases/factors of production decrease, which leads to potential output decreasing.	



OR



OR



An alternative approach, which may be rewarded, is to use a business cycle diagram that shows the potential output curve becoming flatter.

Candidates who incorrectly label diagrams can be awarded with a maximum of [3]. For AD/AS, the vertical axis may be Average (General) Price Level, APL or Price level. The horizontal axis may be real output, real national output, real income, real national income, real GDP or real Y. A title is not necessary.

For a PPC diagram, there must be two goods or groups of goods competing for the same resources on the axes. Good X and Good Y are appropriate, but simply X and Y are not sufficient. A title is not necessary.

- (b) Using the text/data provided and your knowledge of economics, recommend a policy to the government of Kenya that would lead to higher investment. **[10]**

*Possible policies **may** include (but are not restricted to):*

- Decreasing the size of the budget deficit
- Structural reforms in the banking sector
- Improving access to credit for SMEs
- Providing incentives and decreasing regulations so that SMEs merge
- Decreasing business taxes
- Investing in necessary infrastructure
- Programs to lower corruption
- Expansionary monetary policy

Any other valid policy.

NB *If more than one policy is recommended, only the best policy should be rewarded, unless the policies are shown to be complementary or if they are compared/contrasted with the student's one chosen policy.*

Assessment Criteria

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