

Rising wages have a dual effect: they increase consumers' purchasing power while also driving up production costs for labour-intensive goods. These have driven up the prices of some essential goods such as healthcare services.

a) Explain the likely impact of this increase in consumers' purchasing power on producers' revenue and producer surplus on different types of goods. [10]

b) Discuss whether subsidy is more effective than price ceiling in maintaining the affordability of essential goods. [15]

Command Word	'Explain' – Give reasons, establish causal links.
Content / Concept Words	Increase in consumers' purchasing power consider YED Producers' revenue Producer surplus On different types of goods (YED to consider different change in demand with the increase in consumers' purchasing power)
Context	No specific context

Qns Requirement	R1: Explain how an increase in consumers' purchasing power leads to an increase in demand for normal goods where $YED > 0$, and the corresponding effect on producers' revenue and producer surplus. R2: Explain how an increase in consumers' purchasing power leads to a decrease in demand for inferior goods where $YED < 0$, and the corresponding effect on producers' revenue and producer surplus. L3 Band [8 - 10] L2 Band [5 - 7] L1 Band [1 - 4]
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Suggested Answers

Introduction: With the increase in consumers' purchasing power, the change in the demand for different types of goods can still differ, and that depends on the different nature of the good, determined by the income elasticity of demand.

Requirement 1: Explain how an increase in consumers' purchasing power leads to an increase in demand for normal goods where $YED > 0$, and the corresponding effect on producers' revenue and producer surplus.

With the increase in consumers' purchasing power, it will lead to an increase in demand for normal goods, where the income elasticity of demand for these goods is positive. This implied that with a given change in income and purchasing power, the demand for the good will change in the same direction. In this case, with the increase in consumers' purchasing power, the demand for normal goods, such as essentials like healthcare, will increase, and at the original price level P_0 after the demand has increased from D_0 to D_1 as seen in figure 1 below, there will be a shortage where quantity demanded Q_d exceeds quantity supplied Q_0 . The shortage will result in upward pressure in the price, leading to increase in quantity supplied while decrease in quantity demanded of the goods. The price will continue to increase until it reached P_1 , where quantity demanded equates to quantity supplied at Q_1 . At the new equilibrium e_1 , the shortage is cleared at a higher equilibrium price P_1 and quantity Q_1 , ceteris paribus.

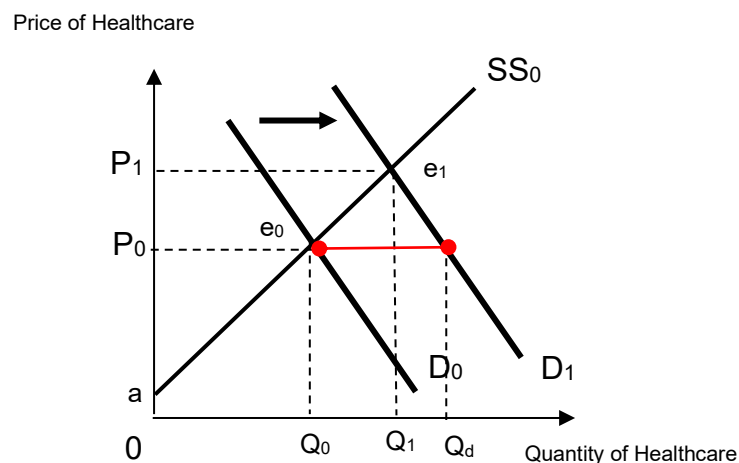


Figure 1: Increase in demand for healthcare due to increased purchasing power

Producer's total revenue earned will increase, since both equilibrium price and quantity have increased. As seen in figure 1 above, the area of total revenue has increased from area $OP_0e_0Q_0$ to $OP_1e_1Q_1$.

Producer's surplus is determined by the difference between producer's willingness to sell and the actual price sold, and in this case where both equilibrium price and quantity have increased, producer's surplus will also increase from area aP_0e_0 to area aP_1e_1 .

Requirement 2: Explain how an increase in consumers' purchasing power leads to a decrease in demand for inferior goods where $YED < 0$, and the corresponding effect on producers' revenue and producer surplus.

With the increase in consumers' purchasing power, it will lead to a decrease in demand for inferior goods, where the income elasticity of demand for these goods are negative. This implied that with a given change in income and purchasing power, the demand for the good will change in the opposite direction. In this case, with the increase in consumers' purchasing power, the demand for inferior goods, such as low quality canned food, will decrease, and at the original price level P_0 after the demand has decreased from D_0 to D_1 as seen in figure 2 below, there will be a surplus where quantity demanded Q_0 exceeds quantity supplied Q_s . The surplus will result in downward pressure in the price, leading to decrease in quantity supplied while increase in quantity demanded of the goods. The price will continue to decrease until it reached P_1 , where quantity demanded equates to quantity supplied at Q_1 . At the new equilibrium e_1 , the surplus is cleared at a lower equilibrium price P_1 and quantity Q_1 , *ceteris paribus*.

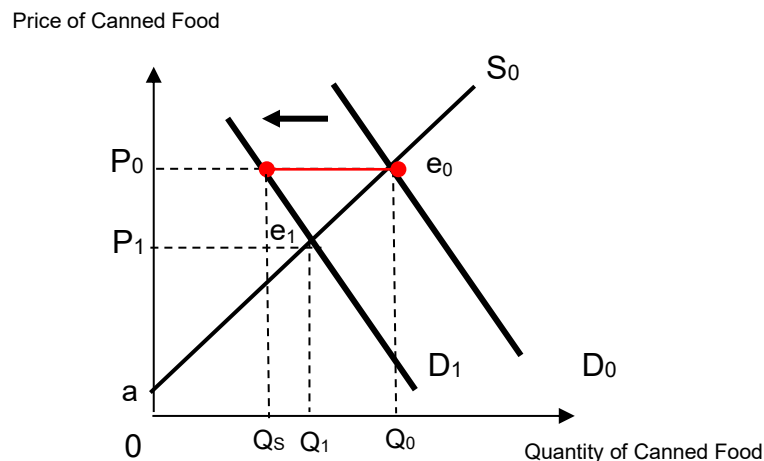


Figure 2: Decrease in demand for canned food due to increased purchasing power

Producer's total revenue earned will decrease, since both equilibrium price and quantity have decreased. As seen in figure 1 above, the area of total revenue has decreased from area $0P_0e_0Q_0$ to $0P_1e_1Q_1$.

Producer's surplus is determined by the difference between producer's willingness to sell and the actual price sold, and in this case where both equilibrium price and quantity have decreased, producer's surplus will also decrease from area aP_0e_0 to area aP_1e_1 .

Knowledge, Understanding, Application, Analysis		
L3	Analysis & Application For an analytical answer that addresses the question thoroughly with clear explanation well supported by tools of analysis, Answer is well-focused on question, with the good use of relevant economic concepts, theories or principles. Knowledge & Understanding For an answer that demonstrates an accurate knowledge and understanding of economic concepts, theories related to question. Note: To enter L3, answer should be applied to the context of the sugar market and information given in the preamble.	8-10
L2	Analysis & Application For an under-developed answer that attempts to address the question Answers may be descriptive, lack an analytical approach (e.g. not supported with tools of analysis, incomplete use of graph) or is incompletely explained with gaps in analysis, e.g. missing links. [Or For a one-sided analytical answer that address only one of the two question requirement. For an answer that is supported with some application to the context of the question. There is limited ability to organise ideas or discriminate between relevant and irrelevant materials. Answer has some relevance to the question context but is generic (e.g. pre-learnt answer that is not focused on addressing the question specifically) or addresses only selected parts of the question. Knowledge & Understanding For an answer that demonstrates largely accurate knowledge and understanding of economic concepts, theories related to question (i.e. no major conceptual errors)	5-7

L1	Knowledge & Understanding For an answer that shows limited knowledge and understanding of relevant economic concepts and theories (e.g. basic description or definitions). Few valid points made which are scant and inadequately explained. Answers are mostly irrelevant and inaccurate . Answer demonstrates that the meaning of question is not properly grasped or may contain basic errors of theory. Marks within L1: Note: K=1 - For basic and unexplained knowledge, e.g. an unexplained statement or definition of a concept that showed some correct knowledge but no understanding K=2 - For some additional explanation that shows understanding of the concept that is not applied to the context of question but show limited knowledge and understanding	1-4
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Examiners' comment:

Most of the candidates are able to explain that the increase in purchasing power will affect the demand for different types of goods based on their income elasticity of demand, where demand for normal (necessity & luxury) goods will increase while demand for inferior goods will fall. The stronger responses use diagrams to show the effect on the change in demand, and complete the economic analysis with detailed price adjustment process, followed by explaining how producer revenue and producer surplus are determined, before stating the specific changes accordingly. Inaccurate responses considered the effect of increase in purchasing power on the supply, taking it as an increase in cost of production. Weaker responses also attempted to analyse the extent of change in price and quantity using price elasticity of demand and supply, which is not required in this question in determining the change in producers revenue and producer surplus.

Rising wages have a dual effect: they increase consumers' purchasing power while also driving up production costs for labour-intensive goods. These have driven up the prices of some essential goods such as healthcare services.

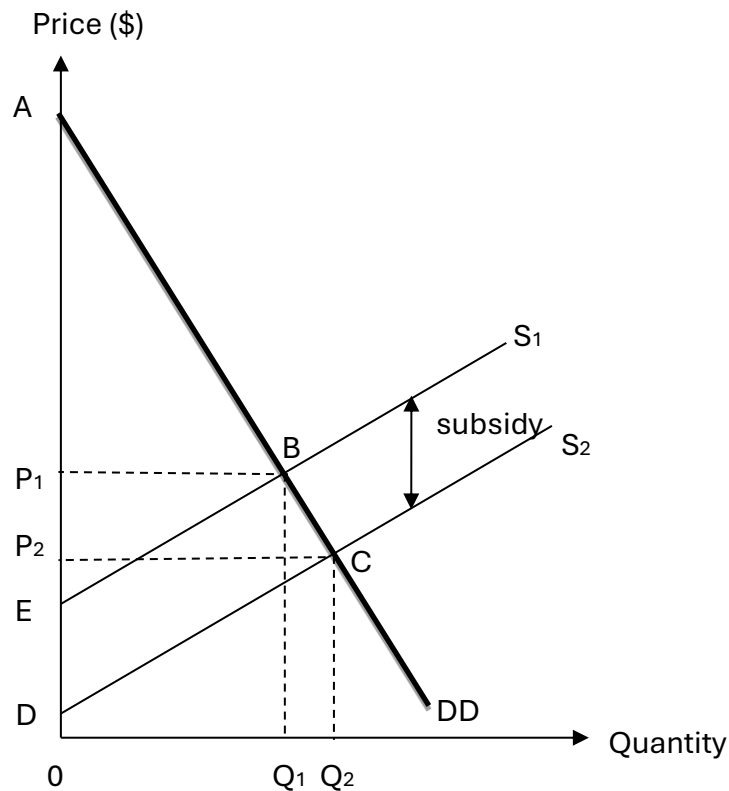
a) Explain the likely impact of this increase in consumers' purchasing power on producers' revenue and producer surplus on different types of goods. [10]

b) Discuss whether subsidy is more effective than price ceiling in maintaining the affordability of essential goods. [15]

Command Word	Discuss whether – Balanced approach
Content / Concept Words	Subsidy, Price ceiling More effective in maintaining affordability
Context	Essential goods – healthcare services
Qn Requirement	R1: How subsidy can be effective in maintaining affordability of essential goods R2: How price ceiling can be effective in maintaining affordability of essential goods To enter L3, application to the context should be clearly made and should include a discussion of both policies effectiveness and limitations. L3 Band [8 - 10] L2 Band [5 - 7] L1 Band [1 - 4] Evaluation Marks: Well-argued evaluative judgements about whether subsidy or price ceiling is more effective in maintaining affordability of essential goods. E3 Band [5] E2 Band [3 - 4] E1 Band [1 - 2]

Requirement 1: Explain how subsidy to the production can be effective in maintaining affordability for essential goods

Government can offer per-unit subsidies which are monetary grants to the producers of essential goods, this can partially offset their cost of production to encourage more production. For every unit of essential goods produced, the producers will receive an specific amount of subsidy, partially offsetting the cost of production which increases the profitability. Hence the supply of essential goods increases, shown by rightward shift of supply curve from S_1 to S_2 in the diagram below.



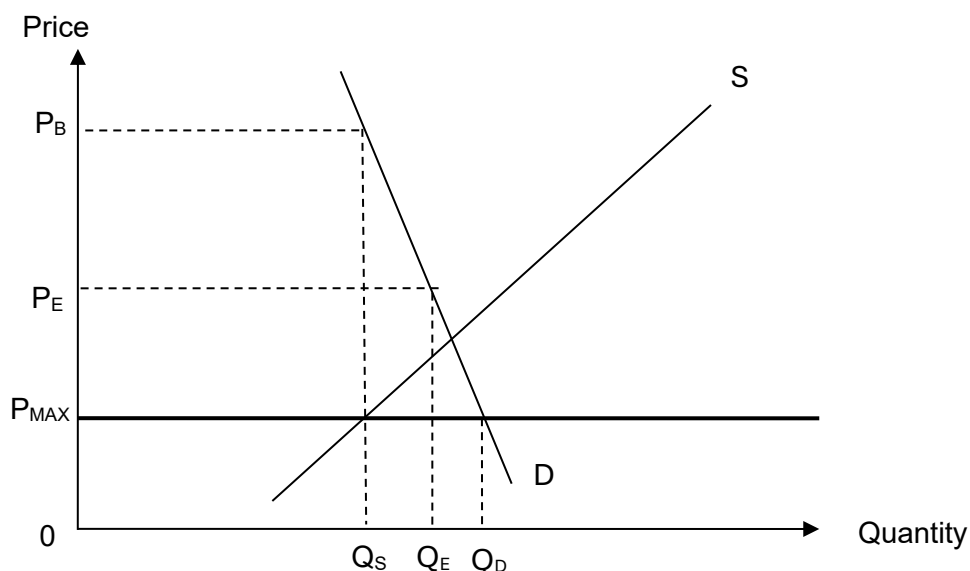
At initial equilibrium price, P_1 , there will be a temporary surplus which puts a downward pressure on the price of essential goods. Producers wanting to get rid of their surpluses will reduce price of essential goods, initiating downward pressure of price. As price of essential goods decreases, quantity demanded increases as more consumers are willing and able to purchase essential goods, at the same time, quantity supplied decreases due to lower profitability. The price will keep decreasing until the surplus is cleared. Eventually, market equilibrium price of essential goods decreases from P_1 to P_2 in ensuring affordability. Considering the demand for essential goods to be price inelastic, subsidy will be effective in reducing the price, since price will fall by a larger extent relative to the increase in quantity demanded with the per unit subsidy given.

However, subsidy can put a strain on government's budget, and this is especially so if the subsidy is given in a prolonged period of time. There will be an opportunity cost incurred by the government, since the monies used to finance the subsidy could have been used in other areas such as building of infrastructure to ramp up productive capacity of an economy, forgoing higher potential economic growth. Thus for subsidy to be an effective measure, the government should have a healthy budget surplus accumulation in order to implement this measure – which is an recurring expenditure to keep essential goods and services affordable.

Requirement 2: Explain how price ceiling can be effective in maintaining affordability for essential goods

Governments can also implement price ceiling to keep essential goods affordable for the consumers.

A price ceiling is a maximum permissible price that producers may legally charge for a good or service. As a result of events mentioned in part (a), with the increase in demand and fall in supply, the equilibrium prices of essential goods have increased, reducing affordability. The objective of maximum price control is to prevent prices from rising above a certain level to make goods and services more affordable. For the price ceiling to be effective, the maximum price to be implemented should be below the equilibrium price. Hence, the price ceiling of P_{MAX} will result in prices falling from P_E to P_{MAX} thereby ensuring that prices of essential goods are low and kept affordable. Compared to policies like subsidies or productivity improvements (which take time), a price ceiling immediately limits prices allowing essential goods to be immediately made more affordable for consumers, in particular lower income households thereby improving equity within the society for the lower income groups. Although a shortage of the essential goods would occur, as seen from the diagram below where $Q_D > Q_S$ at P_{max} , it is unlikely to be huge due to the price elasticity of demand for essential goods tend to be price inelastic. As such, this would therefore be a suitable tool.



However, such a policy would result in a shortage of essential goods and it implied that some consumers will be deprived of the satisfaction of essential goods at P_{max} and will be worse off. The shortage may also lead to essential goods such as rice or medical products to be being sold in black markets where Qs are purchased at P_{max} but resold based on consumers' demand at significantly higher prices at P_b . at rendering this policy ineffective. There is hence consideration of effectiveness of enforcement. If price ceiling enforcement is weak, black markets flourish, some consumers still pay higher prices, defeating the policy's purpose. If enforcement is strong with complementary rationing (e.g. coupon system), the government may reduce misallocation. Not only that, but a price ceiling will lead to producers of essential earning less total revenue, since price and quantity supplied are lowered. This may lead to firm earning subnormal profits. If firms earn subnormal profits, they may choose to leave the industry, further reducing supply of essential goods, which could worsen the shortage. The issue of black market occurrence may be lower for essential services like healthcare, where resale of the services is impossible.

Conclusion:

Both measures can be effective in reducing price of essential products in ensuring affordability, but price ceiling can take effect immediately, allowing the price to be reduced to an affordable level deemed by the government. On the other hand, subsidy can increase the supply of essential goods, allowing the price to fall. Government can consider implement both policies simultaneously, price ceiling to reduce the price of essential goods to an affordable level, while subsidy increase the production of essential goods and services to address the shortage that could arise due to price ceiling implementation. This can also help to minimize the occurrence of black market, when the shortage is reduced or eliminated due to the increase in supply of essential goods.

Knowledge, Understanding, Application, Analysis		
L3	Analysis & Application For an analytical answer that addresses the question thoroughly with clear explanation well supported by tools of analysis, Answer is well-focused on question, with the good use of relevant economic concepts, theories or principles. Knowledge & Understanding For an answer that demonstrates an accurate knowledge and understanding of economic concepts, theories related to question.	8-10

	Note: To enter L3, answer should be applied to the context of the sugar market and information given in the preamble.	
L2	Analysis & Application For an under-developed answer that attempts to address the question Answers may be descriptive, lack an analytical approach (e.g. not supported with tools of analysis, incomplete use of graph) or is incompletely explained with gaps in analysis, e.g. missing links. [Or For a one-sided analytical answer that address only one of the two question requirement. For an answer that is supported with some application to the context of the question. There is limited ability to organise ideas or discriminate between relevant and irrelevant materials. Answer has some relevance to the question context but is generic (e.g. pre-learned answer that is not focused on addressing the question specifically) or addresses only selected parts of the question. Knowledge & Understanding For an answer that demonstrates largely accurate knowledge and understanding of economic concepts, theories related to question (i.e. no major conceptual errors)	5-7
L1	Knowledge & Understanding For an answer that shows limited knowledge and understanding of relevant economic concepts and theories (e.g. basic description or definitions). Few valid points made which are scant and inadequately explained. Answers are mostly irrelevant and inaccurate. Answer demonstrates that the meaning of question is not properly grasped or may contain basic errors of theory.	1-4

	Marks within L1: Note: <table><tr><td>K=1 -</td><td>For basic and unexplained knowledge, e.g. an unexplained statement or definition of a concept that showed some correct knowledge but no understanding</td></tr><tr><td>K=2 -</td><td>For some additional explanation that shows an understanding of the concept that is not applied to the context of question but show limited knowledge and understanding</td></tr></table>	K=1 -	For basic and unexplained knowledge, e.g. an unexplained statement or definition of a concept that showed some correct knowledge but no understanding	K=2 -	For some additional explanation that shows an understanding of the concept that is not applied to the context of question but show limited knowledge and understanding	
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Level	Evaluation	Mark
E3	Well-explained evaluative judgements about 2 requirements PLUS a summative conclusion	5
E2	Well-explained evaluative judgements about 2 requirements	3- 4
	A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second requirement PLUS a summative conclusion	
	A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second requirement	
E1	A well-explained evaluative judgement about 1 requirement OR evaluative statements for 2 requirements	1-2
	An evaluative statement for 1 requirement	
E0	No attempt at Evaluation	0

Examiners' comment:

Most of the candidates are able to explain how subsidy can help to lower unit cost of production and result in a lower affordable price, as well as to explain how an effective price ceiling is to be set below the market price in order to keep price affordable. Stronger responses considered the price elasticity of demand for essential goods, to explain the larger extent of price reduction via subsidy, as well as the extent of smaller shortage via price ceiling. Many candidates mistook appropriateness as effectiveness by suggesting that countries facing debt will not be able to effectively provide subsidy. Underdeveloped responses also did not continue to explain the implication of a shortage on consumers where some may not get to buy at the reduced price when price ceiling is implemented. Likewise, while black market was mentioned, many did not explain how it might occur. The stronger responses explained the implication of black market occurrence on consumers paying a significant higher price while consuming at a lower quantity, compared to no intervention. Many also failed to recognise the fact that the likelihood of black market is low for the case of services, where resale is unlikely.

- 2 SkillsFuture is a national initiative that supports lifelong learning by enabling Singaporeans to continually upskill and reskill. The SkillsFuture Level-Up Programme provides additional financial support for Singaporeans aged 40 and above through training allowances for approved full-time and part-time courses, with the aim of encouraging greater participation in skills upgrading. MySkillsFuture portal service and media outreach programmes aim to encourage workers to advance their careers through continuous training.

Source: www.skillsfuture.gov.sg, accessed 1 July 2026

- (a) Explain how imperfect information in the market for skills training and factor immobility in the labour market, might be allocated undesirably in Singapore. [10]
- (b) Discuss the effectiveness of the policies available to the Singapore government in overcoming the imperfect information in Singapore's skills training market. [15]

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- (a) Explain how imperfect information in the market for skills training and factor immobility in the labour market, might be allocated undesirably in Singapore. [10]

Command word	Explain 2 sources of market failure
Content	Sources of market failure: imperfect information in skills training market immobility of factors of production in labour market and how these will result in inefficient allocation of resources
Context	Singapore
Approach	R1: Explain how imperfect information may result in underconsumption and allocation inefficiency & DWL. R2: Explain how factor immobility may lead to unemployment and underemployment => resource inefficiency

Introduction

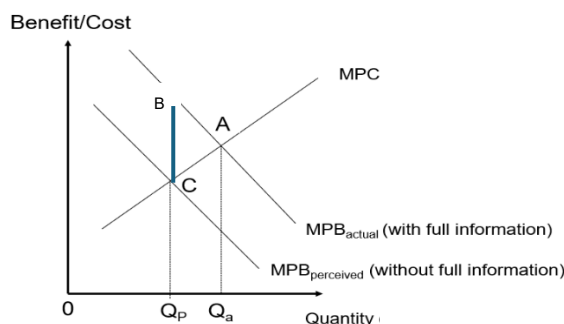
- Market failure occurs when the free market fails to allocate resources efficiently, resulting in over-consumption or under-consumption of a good or service relative to the socially optimal level => undesirable to society
- Market for Skills training may experience market failure due to imperfect information => underconsumption
- Labour market might factor immobility, especially occupational immobility in Singapore => allocation inefficiency

Body

R1: Imperfect information exists in the market for skills training when consumers (both workers & employers) do not possess complete or accurate information to make rational decisions.

For skills training market, individuals may underestimate the long-term private benefits of acquiring new skills, such as higher future wages, improved employability and greater job security. They may instead focus on the immediate costs of tuition fees, time commitment and forgone income. In Singapore, some mid-career workers may wrongly believe that training provides little benefit because they expect to remain in the same occupation, even though acquiring digital or AI-related skills may substantially improve future employment opportunities.

As a result, the perceived marginal private benefit (MPB_p) is lower than the actual marginal private benefit (MPB_a), shown in Fig 1.



With perfect information, private optimum consumption should be at $0Q_a$ instead of $0Q_p$. As a result, with the information gap, the consumer has under-consumed skills training since $0Q_p < 0Q_a$. The quantity of consumed by the consumers is sub-optimal at $0Q_p$ and does not maximise workers' welfare. Consequently, the market equilibrium quantity (Q_p) is lower than the socially efficient quantity (Q_a), resulting in under-consumption of adult education & skills training and a deadweight welfare loss resulted shown by ABC.

R2: Explain how factor immobility may lead to inefficient allocation

Factor immobility refers to the inability or difficulty of factors of production, particularly labour, to move between occupations or industries. If resources are immobile (either occupationally or geographically), firms face constraints in production decisions. Firms may not be able to produce goods and services at optimal levels, which leads to inefficient production choices, such as using inefficient labour-capital combinations and producing at higher costs than necessary.

Workers in Singapore may face occupational immobility because they lack the necessary qualifications or transferable skills to enter expanding sectors such as digital services or advanced manufacturing. Older workers may also experience psychological barriers or face adjustment costs when switching careers.

As industries restructure, labour cannot move quickly from declining sectors to growing industries.

This leads to:

- labour shortages in expanding sectors,
- unemployment or underemployment in declining industries,
- productive resources being misallocated.

Consequently, the economy operates inside its production possibility frontier, indicating productive inefficiency. May explained with a PPC diagram.

Singapore's rapidly changing economy increases the importance of continuous skills upgrading. Without sufficient participation in adult education, labour mobility remains limited and resources cannot be allocated efficiently across sectors.

Conclusion

Both imperfect information and factor immobility result in under-investment in skills training. This causes labour resources to be inefficiently allocated, reducing productivity and economic growth, thereby constituting market failure => undesirable to Singapore economy.

Mark Scheme

Level		Descriptor	Marks
L3	A+A A+C+K A+C	Answer addresses the question fully and contains excellent analytical explanations of R1 – Imperfect information and R2 – Factor immobility. Explanations use relevant economic concepts, theories and principles in a precise, logical and reasoned manner. Answer was well-contextualised.	8-10
L2	A+K C+C+K C+C A+0 C+K+K	Answer contains cursory explanations of R1 – Imperfect information and R2 – Factor immobility. Answer may not fully address question requirements (rehearsed answers eg medical screening). Answer is not so well-contextualised or irrelevant (For example, explained positive externality award K even with well-explained diagram)	5 – 7
L1	C+0 K+K	Answer shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant or superficial with many gaps and conceptual errors containing a few valid points made incidentally.	1 – 4

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- (b) Discuss the effectiveness of the policies available to the Singapore government in overcoming the imperfect information in Singapore's skills training market. [15]

Command	Discuss – 2 policies to overcome imperfect information in Singapore's skills training market + limitations
Content	Subsidies and another/ alternative policy in overcoming the imperfect information in Singapore's skills training market.
Context	Market for skills training in Singapore
Approach	R1: Explain how subsidies can increase the consumption of skills training + limitation R2: Explain an alternative policy eg public education can increase the consumption of skills training + limitation
Evaluation	Response contains well-explained evaluative judgments for two requirements and a well-justified summative conclusion

Government intervention may be justified because skills training positive externalities and helps reduce labour market rigidities. One major policy is the provision of government subsidies through programmes such as the SkillsFuture Level-Up Programme - Targets Singaporeans aged 40 and above. It includes mid-career training allowances (up to \$3,000 per month) for selected full-time courses, and a fixed monthly allowance (around \$300) to offset expenses for approved part-time training => differentiated approach, targeted at different age groups.

R1: Government subsidies eg SkillsFuture Level-Up Programme help to increase the consumption of skills training

Government subsidies reduce the private cost of training faced by individuals. As course fees fall, more adults are willing and able to participate in skills upgrading. The subsidy effectively increases consumption of training towards the socially optimal level by narrowing the gap between Q_p and Q_a . With lower MPC (explain with a diagram, how to achieve Q_a), it incentivised workers to **seek more information** on the various courses and course providers.

Higher participation also increases labour productivity, innovation and the adaptability of the workforce, producing positive spillover benefits for firms and the wider economy.

In addition, better-trained workers are more able to move between industries, reducing occupational immobility and improving labour allocation.

Skillsfuture Level-Up Programme gave more allowances to workers over 40 years old, as this group has more commitments & is less willing to attend courses => imperfect information. But studies have found this group of workers needs to upgrade their skills to prepare for future workforce. Hence, subsidies can improve both allocative efficiency and dynamic efficiency => incentive to seek more information, hence overcome imperfect information.

Evaluation of subsidies

However, subsidies may not always achieve the desired outcome.

Firstly, if individuals still underestimate the benefits of training, demand may remain relatively unresponsive despite lower prices. Behavioural biases, lack of motivation or time constraints may continue to discourage participation.

Secondly, some subsidised courses may not match industry needs. Resources may therefore be devoted to training programmes that do not significantly improve employability, creating government failure through inefficient allocation of public funds.

Thirdly, subsidies involve opportunity cost. Government expenditure on training may reduce resources available for healthcare, infrastructure or other public services.

Therefore, subsidies alone may not fully correct the market failure.

R2: Explain an alternative policy eg public education can increase the consumption of adult education & skills training

The government can provide better labour market information through career guidance, employment outlooks and publicity campaigns; working with employers, industries, and higher learning institutions to provide information on relevant courses (explain with a diagram towards $MPB_{perceived}$). Current programmes include:

Enhanced Employer Support: Through initiatives like NTUC's Company Training Committee the government provides information & funding to help businesses upgrade their workforce and redesign jobs to embrace digital and AI transformation.

Sectoral Training Pathways: The government integrates programs with Institutes of Higher Learning (IHLs) to provide modular courses with stackable credits, ensuring degrees and certificates can be earned progressively.

Inclusive Upskilling: Interventions are expanded for vulnerable groups, including specialized disability-employment programs and subsidies tailored for older workers to keep them relevant in the workforce.

This reduces imperfect information by helping workers understand:

- future labour market demand,
 - wage prospects,
 - available training opportunities,
 - expected returns from upgrading.
-
- As individuals make more informed decisions, demand for relevant training increases. This helps to increase the $MPB_{perceived}$ to the same level as the MPB_{actual} . Through the educational campaign, consumers can find out more information about the many benefits of consuming lifelong training leading to an increase in consumption of Q_a (figure 1).

However, information alone may not overcome financial barriers or income constraints, especially for lower-income workers.

Alternative policy: Direct government provision

The government can directly provide affordable, high-quality training through institutions such as SkillsFuture Singapore, ITE, polytechnics and Institutes of Higher Learning.

Direct provision allows closer alignment between training programmes and industry manpower needs.

- This improves the quality and relevance of skills acquired and reduces the risk of under-provision by private firms. Workers have more confidence in courses provided by government, hence willing to look for more information, moving from $MPB_{perceived}$ to the same level as the MPB_{actual} , leading to an increase in consumption of Q_a (figure 1).

However, government providers may lack flexibility in responding rapidly to changing industry demands and may incur high administrative costs.

Overall evaluation

Government subsidy is an effective policy because they directly lower the financial barriers to skills training, encourage greater participation. They are particularly effective when combined with income support, such as training allowances, which reduce the opportunity cost of learning for mid-career workers above 40 yrs old.

However, subsidies are unlikely to be the best policy when implemented in isolation. Persistent imperfect information, mismatches between training and industry needs, and behavioural barriers mean that subsidies alone may not achieve the socially optimal allocation of resources.

Judgement: The most effective approach is a **policy mix** comprising targeted subsidies, accurate labour market information, employer partnerships and high-quality government provision of relevant training. Together, these policies address imperfect information more comprehensively, leading to a more efficient allocation of resources in Singapore's adult education and skills training market.

Mark Scheme

Level		Knowledge, Application/Understanding/Analysis	Marks
L3	A+A A+C+K A+C	Answer addresses the question fully and contains excellent analytical explanations of R1- first policy and R2 – alternative policy using relevant economic concepts, theories and principles in a precise, logical	8-10

		and reasoned manner. Diagrams such as the subsidy diagram are well-drawn and well-explained. Answers are contextualised to the case of lifelong learning => skills training market	
L2	A+K C+C+K C+C A+0 C+K+K	Answer may contain cursory explanations of R1- first policy and R2 – alternative policy with ability to identify facts, some ability at diagrams but theory may be incompletely explained. Answer may not fully address question requirements (rehearsed answer). Answers may not be well-contextualised to the case of skills training market.	5-7
L1	C+0 K+K	Answer shows some knowledge but does not indicate that the meaning of the question has been properly grasped, thus, answer may be mostly irrelevant. There may be some basic errors in theory and may contain a few valid points made incidentally.	1-4
E3		Answer contains well-explained evaluative judgments for two requirements and a well-justified summative conclusion	5
E2		Answer contains a well-explained evaluative judgment for at least 1 requirement; the other requirement may not be well evaluated. Answer may not have a summative conclusion.	3-4
E1		Answer contains evaluative judgments that are unexplained or not supported by the arguments presented in the answer. Judgment may not be linked to the context of the question	1-2

- 3 Firms with substantial market power may restrict output and charge prices above marginal cost. Governments may therefore intervene through measures such as price controls like **average cost pricing** and regulations to influence the behaviour of these firms.

(a) Explain why a profit-maximising monopoly may be economically inefficient. [10]

(b) Discuss whether average cost pricing is the best form of government intervention for improving economic efficiency in monopoly market. [15]

Question Analysis 3a)

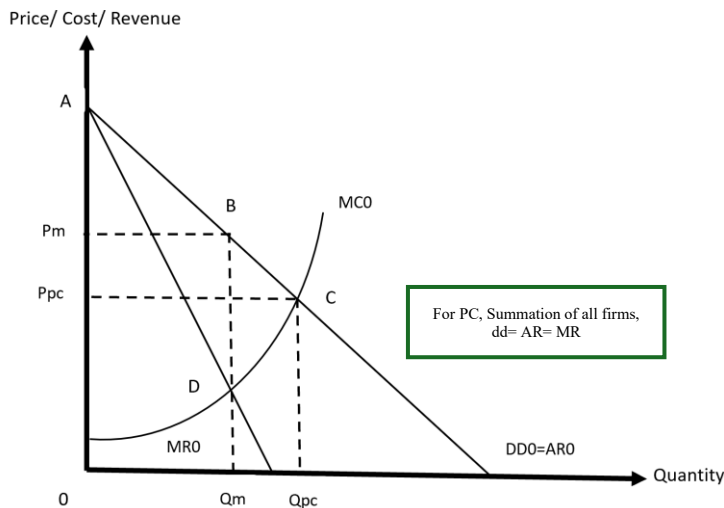
Command	Explain why
Content	Reasons for Economically inefficiency in Monopoly - Allocative Inefficiency - Productive Inefficiency
Context	Generic
QR1	Explain why a profit-maximising monopoly may be allocative inefficient
QR2	Explain why a profit-maximising monopoly may be productive inefficient

QR1: Explain why a profit-maximising monopoly may be allocative inefficient.

Example: A monopoly supplying electricity

Suppose a single electricity provider has substantial market power because entry into the market is difficult due to very high infrastructure costs and network requirements. A profit-maximising monopoly will produce where:

Linking the diagram to the economic analysis



- A profit-maximising monopoly may be allocatively inefficient because it maximises profit at the output where $MC = MR$, giving output Q_m .
- Since the monopoly faces a downward-sloping demand curve, MR lies below $AR = DD$ and therefore, at Q_m , the price P_m obtained from the demand curve exceeds marginal cost.
- As price represents consumers' marginal benefit, $P_m > MC$ implies that $MC > MB$.
- Hence, for units between Q_m (market equilibrium output) and Q_{pc} which is the socially efficient output
- Consumers value these units more highly than the opportunity cost of the resources needed to produce them.
- Yet the monopoly does not produce these units because doing so would not maximise its profit.

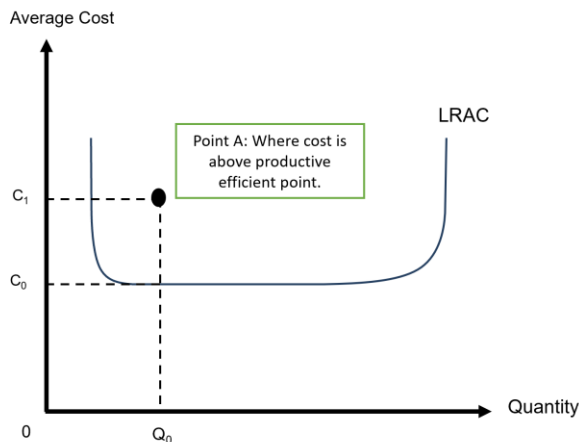
- Therefore, $Q_m < Q_{pc}$, resulting in underproduction and a deadweight welfare loss, represented by the area between the demand and MC curves from Q_m to Q_{pc} .
- Inefficient allocation of resources

QR2: Explain why a profit-maximising monopoly may be productive inefficient

Example

Electricity or water utilities: A monopoly utility may operate with excess administrative staff, outdated equipment, or weak cost control. Because consumers cannot easily switch provider, the firm faces less pressure to minimise costs. It may therefore produce at an average cost above the minimum possible average cost.

Rail operators: A monopoly rail operator may have inefficient scheduling, underused capacity, or high administrative costs. In a competitive market, such inefficiencies could cause the firm to lose customers to rivals. But with little competition, these higher costs may persist, creating X-inefficiency.



A profit-maximising monopoly may be productively inefficient because the output where it maximises profit, $MC=MC$, may not correspond to the minimum point of its average cost curve.

- If the monopoly produces at Q_0 , it might not be producing at the lowest possible average cost.
- Furthermore, high barriers to entry and long term possible supernormal profit, protect the monopoly from competitive pressure
- Reducing its incentive to eliminate organisational slack or adopt more cost-efficient production methods.
- Hence, resources may not be used in the least-cost manner, resulting in productive inefficiency.

Examiner's Report

Very few candidates attempted this question. Among those who did, responses often lacked accurate and well-developed economic analysis. Many candidates were able to identify relevant concepts associated with monopoly, but struggled to develop a clear chain of reasoning linking the profit-maximising condition to the resulting economic inefficiencies.

A common weakness was the presence of gaps in analysis, with assertions about inefficiency not adequately explained or supported using appropriate economic concepts and diagrams. Some candidates also demonstrated confusion between the different forms of economic efficiency, particularly **allocative efficiency and productive efficiency**, which limited the accuracy of their responses.

Stronger responses clearly established that a profit-maximising monopoly produces where **MR = MC**, before explaining why this output may differ from the allocatively efficient output where **P = MC**, resulting in underproduction and deadweight welfare loss. Where productive inefficiency was discussed, stronger candidates accurately explained the relationship between the monopoly's output and its average cost conditions rather than merely stating that monopolies are inefficient.

Overall, candidates would benefit from developing a more systematic analytical flow: **identify the profit-maximising equilibrium** → **establish the relevant efficiency condition** → **compare the two outcomes** → **explain the resulting welfare or resource-allocation implications**.

Mark Scheme:

Knowledge, Understanding, Application, Analysis															
L3	Analysis & Application For an analytical answer that addresses the question thoroughly with clear explanation well supported by tools of analysis . The explanation of why a profit-maximising monopoly may be economically inefficient There is good ability to organise ideas or discriminate between relevant and irrelevant factors. Answer is well-focused on question . Knowledge & Understanding For an answer that demonstrates an accurate knowledge and understanding of economic concepts, theories related to question, e.g. reasons for protectionism Marks within L3:			8 - 10											
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L2	Analysis & Application For an under-developed answer that attempts to address the question and explain the consequences of failing to achieve sustainable and inclusive growth. Answers may be descriptive , lack an analytical approach (e.g. not supported with tools of analysis, incomplete use of diagram) or is incompletely explained with gaps in analysis.			5 - 7											
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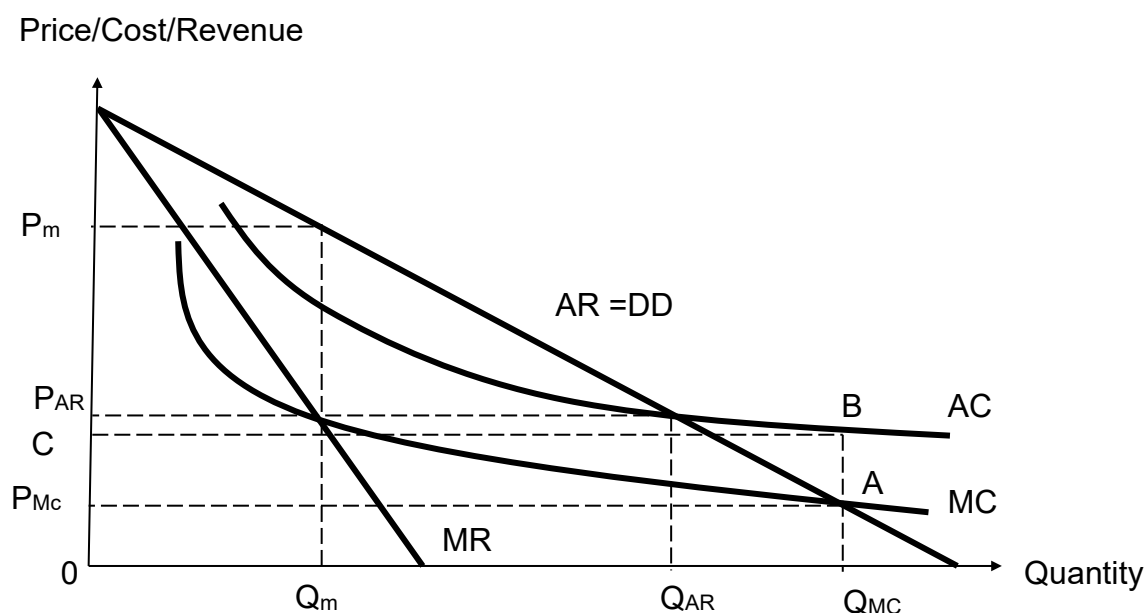
- (b) Discuss whether average cost pricing is the best form of government intervention for improving economic efficiency in monopoly market. [15]

Question Analysis 3b)

Command	Discuss whether
Content	Average cost pricing/ other policy is the best form of government intervention for improving economic efficiency in monopoly market
Context	Generic, best
QR1	Explain and evaluate how average cost pricing can improve economic efficiency in a monopoly market.
QR2	Explain and evaluate other policy to compare with AC pricing if it is the best form of government intervention for improving economic efficiency in monopoly market

QR1: Explain and evaluate how average cost pricing can improve economic efficiency in a monopoly market.

Economic Analysis



Average Cost Pricing

This is a pricing policy in which the **price is equals to average cost**.

From an economist's point of view, the basic objective is to limit profit to 'fair' level/'normal' level (zero economic profit) on all input, including capital input. Thus, the monopolist may be required by regulation to produce where the price it charges is the average cost of producing it.

- Referring to Figure 19, without regulation, the natural monopoly will restrict output to $0Q_m$ and charge at price P_m .

- As a result, the firm makes supernormal profit (or "above-normal" profit) because price is greater than the average cost of producing output Q_M .
- However, a regulatory commission will seek to limit the price that the monopoly can charge to P_{AR} . Consequently, the firm will produce Q_{AR} .
- As a result, the natural monopoly will earn a normal profit of zero or a "fair" rate of return on all factor input.
- At Q_{AR} , $P > MC$ to a smaller extent
- There exists lesser allocative inefficiency in the market as the output is higher than the output in which the firm operate as monopoly.
- Since buyers are paying lesser for the good than previously when operating without intervention, more of the good is produced, and lesser under production of goods at Q_{AR} than Q_M .

Limitations:

The first major limitation is **information asymmetry**. The regulator may not know the monopoly's true cost structure. The firm generally possesses more information about its average and marginal costs than the government. Hence, regulators may find it difficult to identify the correct price at which: A monopoly may even have an incentive to exaggerate or inflate reported costs so that the regulated price is set higher. This is sometimes described as **regulatory capture or cost padding**.

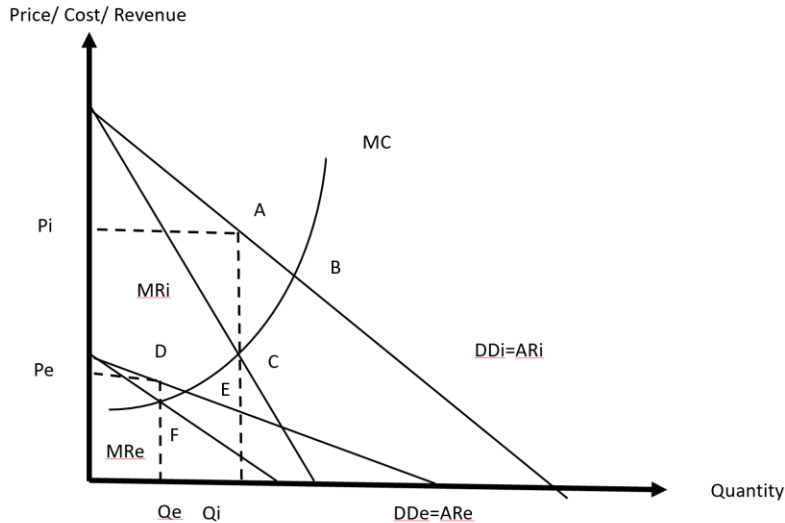
A second limitation is that average cost pricing may weaken **productive-efficiency incentives**. Since the regulated firm is allowed to cover its costs, it may have less incentive to minimise costs. If AC rises, the regulator may permit a higher regulated price. This can create **X-inefficiency**, such as excessive staffing, poor management or unnecessary expenditure.

A third limitation is that average cost pricing removes the firm's supernormal profits. While this may benefit consumers in the short run, retained profits may sometimes be a source of **research, innovation and capital investment**. This is especially important in industries such as utilities and telecommunications, where substantial infrastructure investment is required.

QR2: Explain and evaluate other policy to compare with AC pricing if it is the best form of government intervention for improving economic efficiency in monopoly market

Deregulation is the change of government regulation to promote competition in the private sector. Essentially, it is government's attempt to liberalise monopoly and remove market power of incumbent firms by introducing more competition. When new firms enter the industry, the incumbent firms will face a more price elastic demand due to the increased availability of close substitutes. This results in the reduction in the price setting abilities of the incumbent firms, leading to lower price (price becomes closer to marginal cost) and less allocative inefficiency.

For example, in the case of liberalisation, the telecommunication market in Singapore was deregulated to allow the entry of M1 and Starhub as competing telecommunication service providers to SingTel, the sole telecommunication service provider back then.



Deregulation:

- Increase in number of firms
- More substitutes and increasing PED value
- Demand curve is more price elastic from QQ_i to DDe
- Prices are now lowered from P_i to P_e
- Lower distance between price and marginal cost (AC to DF)
- Deadweight loss to society also reduced from (ABC to DEF)

Limitations of deregulation

The strongest limitation is that **deregulation may not be feasible in a natural monopoly**.

- Suppose the industry has very high fixed costs and substantial economies of scale, such as electricity grids, water supply or rail infrastructure. LRAC may continue to fall over a very large range of output.
- Allowing several firms to duplicate infrastructure may therefore cause each firm to operate at a smaller output and a higher average cost.
- Thus may cause and potentially worsen **productive efficiency**.
- For a natural monopoly, regulating the existing monopoly may be more efficient than breaking it up or encouraging excessive entry.

A second limitation is that **removing legal barriers does not necessarily eliminate economic barriers to entry**.

Even after deregulation, potential entrants may face:

- very high sunk costs,
- economies of scale,
- strong brand loyalty,
- control of essential infrastructure,
- network effects.

The incumbent may retain significant market power, so may remain substantially above .

A third limitation is the possibility of **wasteful duplication**. Multiple firms constructing parallel networks or infrastructure could raise total industry costs. This is especially relevant for utilities.

Conclusion	
Stand	Average cost pricing is likely to be an appropriate intervention when monopoly arises from strong economies of scale, particularly in a natural monopoly. On the other hand, Deregulation may be superior where barriers to entry can realistically be reduced.
Substantiate	Average cost pricing is likely to be an appropriate intervention when monopoly arises from strong economies of scale, particularly in a natural monopoly. By reducing price from P_m to P_{ac} and increasing output from Q_m to Q_{ac}, it reduces the extent to which $P > MC$, thereby reducing allocative inefficiency while preserving economies of scale. However, it does not achieve full allocative efficiency because P_{ac} generally remains above MC, and regulators may face information asymmetry and weak cost-minimisation incentives. Deregulation may be superior where barriers to entry can realistically be reduced. Greater competition can make firms' demand more price elastic, reduce their market power and create stronger incentives for cost reduction and innovation. However, where large economies of scale exist, encouraging multiple firms may raise average costs through duplication of infrastructure.
Suggest	Therefore, average cost pricing is more likely to be the best intervention for a natural monopoly, while deregulation is more appropriate where competition is technologically and economically feasible. The best policy should therefore depend mainly on the source of monopoly power and the industry's cost structure , rather than assuming that one intervention is universally superior.

Examiner's Report

Many candidates were unable to accurately explain **average cost pricing**, with some confusing it with other forms of price control. Those who identified it correctly often explained the policy only partially and did not clearly analyse how it could improve economic efficiency.

Evaluation was also uneven. Some responses explained the policy but lacked limitations, while others focused mainly on drawbacks without first showing how AC pricing works. Stronger answers recognised issues such as difficulty in estimating costs, weak incentives for cost reduction and the fact that **P may still exceed MC**.

The strongest responses also recognised the distinction between AC pricing being **feasible or sustainable** and it being the **most desirable intervention for improving economic efficiency**. They compared AC pricing with alternative interventions, such as marginal cost pricing, competition policies or measures to increase contestability, before making a reasoned judgement based on factors such as the nature of the monopoly, regulatory information requirements, incentives and the government's objectives.

The best responses compared AC pricing with alternative interventions and distinguished between it being **feasible** and being the **most desirable** policy. A clearer structure would be: **explain** → **analyse** → **evaluate** → **compare** → **judge**.

Mark Scheme:

Knowledge, Understanding, Application, Analysis														
L3	Analysis & Application For an analytical answer that addresses the question thoroughly with clear explanation well supported by tools of analysis, such as relevant policies analysis and diagram. There is good ability to organise ideas or discriminate between relevant and irrelevant factors. Answer is well-focused on question with the good use of relevant economic concepts, theories or principles. Good application to the context of the question. Knowledge & Understanding For an answer that demonstrates an accurate knowledge and understanding of economic concepts, theories related to question. Marks within L3: <table border="1"> <thead> <tr> <th>Annota tion</th><th>Description</th><th>Mark</th></tr> </thead> <tbody> <tr> <td>A + A</td><td>Analytical explanations for 2 question requirements</td><td>10</td></tr> <tr> <td>A + C + K</td><td>1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant</td><td>9</td></tr> <tr> <td>A + C</td><td>1 analytical and 1 cursory explanation for 2 question requirements</td><td>8</td></tr> </tbody> </table>	Annota tion	Description	Mark	A + A	Analytical explanations for 2 question requirements	10	A + C + K	1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant	9	A + C	1 analytical and 1 cursory explanation for 2 question requirements	8	8-10
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L2	Analysis & Application For an under-developed answer that attempts to address the question and explain the policies Singapore government could use to improve her balance of trade amidst rising protectionism. Answers may be descriptive, lack an analytical approach (e.g. not supported with tools of analysis, incomplete use of graph) or is incompletely explained with gaps in analysis, e.g. missing links in the impact of the strategies on price stability. Or For a one-sided analytical answer that addresses only 1 policy. For an answer that is supported with some application to the context of the question. There is limited ability to organise ideas or discriminate between relevant and irrelevant materials. Answer has some relevance to the question context but is generic (e.g. pre-learnt answer that is not focused on addressing the question specifically) or addresses only selected parts of the question (e.g. limited reference to the impact on prices). Knowledge & Understanding	5-7												

	For an answer that demonstrates largely accurate knowledge and understanding of economic concepts, theories related to question, e.g. revenue and cost analysis and diagram (i.e. no major conceptual errors) Marks within L2: <table> <tr> <th>Annotation</th><th>Description</th><th>Mark</th></tr> <tr> <td>A + K</td><td>1 analytical explanation for 1 question requirement and an explanation of additional factor that is relevant</td><td>7</td></tr> <tr> <td>C + C + K</td><td>Cursory explanations for 2 question requirements and an explanation of additional factor that is relevant</td><td>7</td></tr> <tr> <td>C + C</td><td>Cursory explanations for 2 question requirements</td><td>6</td></tr> <tr> <td>A + 0</td><td>1 analytical explanation for 1 question requirement</td><td>6</td></tr> <tr> <td>K + C + K</td><td>1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements and an explanation of additional factor that is relevant</td><td>6</td></tr> <tr> <td>K + C</td><td>1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements</td><td>5</td></tr> </table>	Annotation	Description	Mark	A + K	1 analytical explanation for 1 question requirement and an explanation of additional factor that is relevant	7	C + C + K	Cursory explanations for 2 question requirements and an explanation of additional factor that is relevant	7	C + C	Cursory explanations for 2 question requirements	6	A + 0	1 analytical explanation for 1 question requirement	6	K + C + K	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements and an explanation of additional factor that is relevant	6	K + C	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements	5				
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Level		Mark
E3	Well-explained evaluative judgements about 2 requirements PLUS a summative conclusion	5
E2	Well-explained evaluative judgements about 2 requirements	4
E2	A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second requirement PLUS a summative conclusion	4
E2	A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second requirement	3
E1	A well-explained evaluative judgement about 1 requirement OR evaluative statements for 2 requirements	2
E1	An evaluative statement for 1 requirement	1
E0	No attempt at Evaluation	0

- 4 Singapore has invested heavily in innovation and technology to strengthen its competitiveness in an increasingly digital global economy. At the same time, the government continues to invest in education, infrastructure and social support to achieve sustainable and inclusive growth.
- (a) Explain the key determinants of actual and potential economic growth in an economy. [10]
- (b) Discuss whether technological advancement contributes to sustainable and inclusive growth in Singapore. [15]

Part (a) Explain the key determinants of actual and potential economic growth in an economy. [10]

Question Analysis	
Command Word	‘Explain’ – Give elaboration, establish causal links. Identify the key determinants and explain how each determinant leads to actual and potential economic growth with clear causal links.
Content / Concept Words	Actual economic growth: An increase in real GDP or the level of output. Key determinants that have contributed to actual growth i.e usually caused by an increase in aggregate demand, including consumption, investment, government spending and net exports. Potential economic growth: An increase in an economy’s productive capacity or long-run aggregate supply. Key determinants that have contributed to potential growth i.e caused by increases in the quantity or quality of factors of production and improvements in productivity. Relevant determinants include investment in capital and infrastructure, technological progress and innovation, education and training, growth in the labour force, improved natural resources, entrepreneurship and government policies.
Context	No context/ generic

Requirement	R1: Explain how changes in the components of aggregate demand (C, I, G and (X–M)) can affect the level of actual economic growth in an economy. R2: Explain how improvements in the quantity and quality of factors of production, such as labour, capital, land and entrepreneurship, or technological advancement and improvements in productivity can increase potential economic growth of an economy by increasing LRAS. Or R3: Explain how government policies, such as investment in education, infrastructure and research and development, can increase both actual and potential economic growth.
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Introduction:

Economic growth refers to an increase in the real output of an economy over time. Actual economic growth occurs when an economy produces more goods and services due to an increase in aggregate demand, while potential economic growth occurs when the productive capacity of the economy increases, reflected by an increase in LRAS.

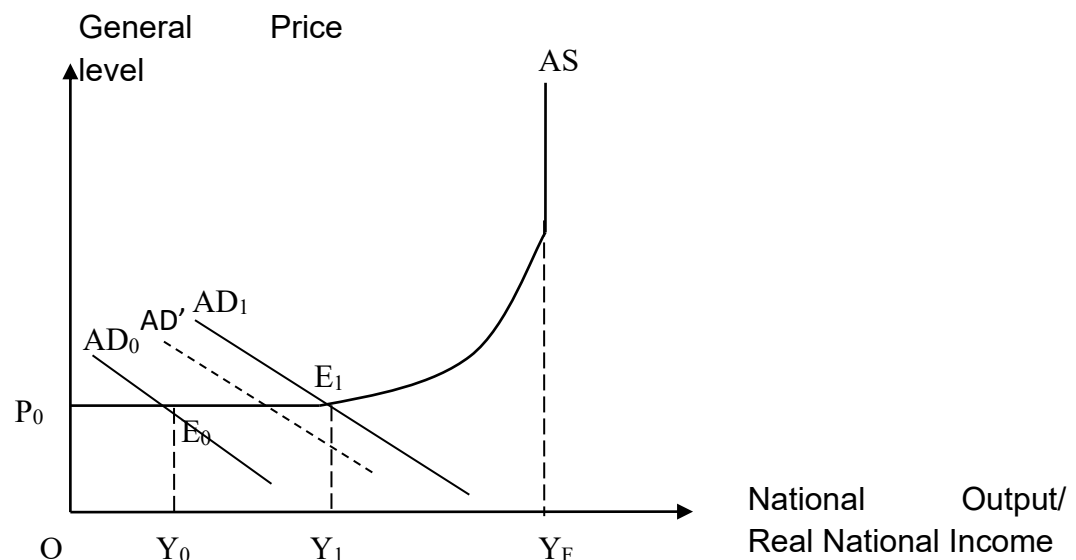
Requirement 1: Explain key determinants of actual growth

A key determinant of actual economic growth is aggregate demand (AD), which consists of consumption (C), investment (I), government expenditure (G) and net exports (X-M). An increase in any component of AD increases demand for goods and services.

For example, suppose the **Singapore government increases expenditure on infrastructure**, such as the development of the **Cross Island Line (CRL)**. This increases government expenditure (G), causing AD to increase. As shown in Figure 1, AD increases from AD_0 to AD_1 . **Assuming that the Singapore economy is operating at excess capacity range**, the increase in AD will result mainly in an increase in real output rather than prices.

At the initial price level P_0 , there is an **unplanned fall in inventories** as firms are unable to immediately meet the higher demand for goods and services. Firms respond by increasing their production to meet the increase in demand and restore their desired level of inventories. To increase output, firms require more factors of production, particularly **labour**, since the demand for labour is a **derived demand** arising from the demand for goods and services. For example, construction firms involved in the Cross Island Line may hire additional workers and increase working hours. The resulting increase in **employment and household incomes** leads to higher consumption expenditure. This creates a **multiplier effect**, as the initial increase in government expenditure generates further increases in consumption, AD and national output. Consequently, real national output and real national income increase from Y_0 to Y_1 , representing **actual economic growth**.

Figure 1: Actual Growth



Requirement 2: Explain key determinants of potential growth

A key determinant of **potential economic growth** is an increase in the **quantity and quality of factors of production**, such as labour, capital and technology. Improvements in the quality of these factors increase their **productivity**, enabling firms to produce more goods and services with the same amount of resources and therefore increasing the economy's productive capacity.

For example, the Singapore government's **SkillsFuture initiative** provides workers with opportunities to acquire new skills and upgrade their existing skills through education and training. This can increase both the **quality and productivity of Singapore's labour force**, as workers become more skilled and efficient. Firms are therefore able to produce a higher level of output using the available resources. This increases the economy's **productive capacity**, causing **LRAS to shift rightward from $LRAS_0$ to $LRAS_1$** , as shown in Figure 2.

Consequently, the **full-employment level of output increases from Y_{f0} to Y_{f1}** . Since the economy can now produce a greater quantity of goods and services without an increase in the general price level, this represents an **increase in potential economic growth**. In addition, higher labour productivity can improve firms' competitiveness and reduce their average cost of production, potentially allowing Singapore to sustain a higher level of output in the long run.

Therefore, **investment in education and skills development through SkillsFuture** can improve the quality and productivity of Singapore's labour force, expand its productive capacity and contribute to **higher potential economic growth**.

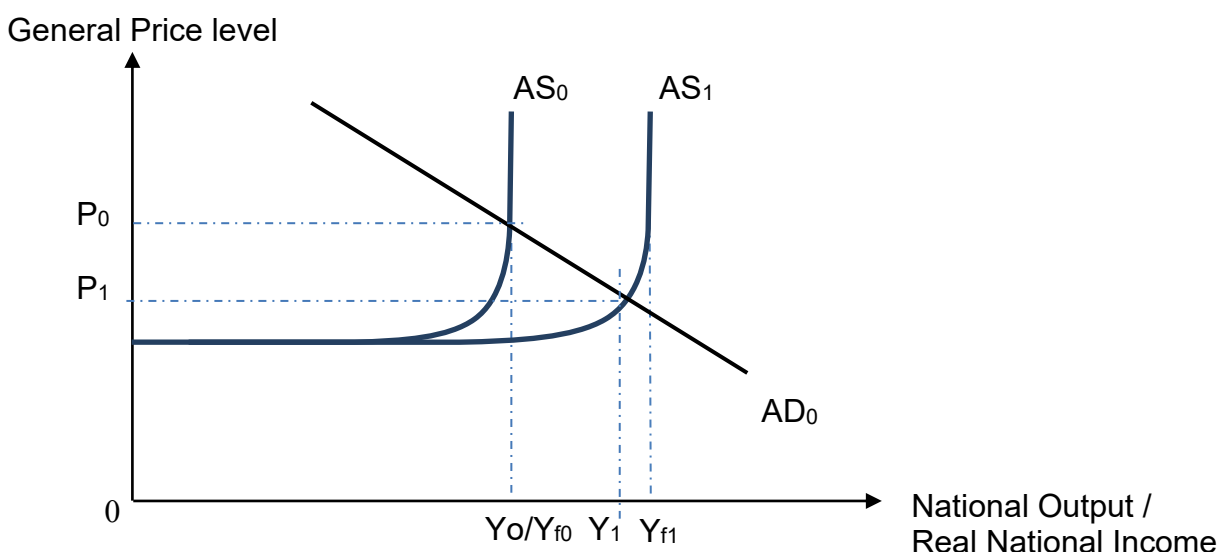


Figure 2: Potential growth

Mark Scheme:

Knowledge, Understanding, Application, Analysis														
L3	Analysis & Application For an analytical answer that addresses the question thoroughly, with clear explanations supported by relevant economic analysis, such as aggregate demand and aggregate supply diagrams. The answer should explain the key determinants of both actual economic growth and potential economic growth. The answer should demonstrate a good ability to organise ideas and distinguish between relevant key determinants. It should be well focused on the question and may apply analysis to Singapore, for example through investment in innovation, technology, education, infrastructure and social support. Knowledge & Understanding: Demonstrates accurate knowledge and understanding of relevant economic concepts and theories, including: • The distinction between actual economic growth and potential economic growth. • Actual growth as an increase in an economy's real output or real GDP. • Potential growth as an increase in the economy's productive capacity or long-run aggregate supply. • Determinants of actual growth, particularly changes in aggregate demand. • Determinants of potential growth, particularly changes in the quantity and quality of factors of production and productivity. Marks within L3: <table border="1"> <thead> <tr> <th>Annotation</th><th>Description</th><th>Mark</th></tr> </thead> <tbody> <tr> <td>A + A</td><td>Analytical explanations for 2 question requirements</td><td>10</td></tr> <tr> <td>A + C + K</td><td>1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant</td><td>9</td></tr> <tr> <td>A + C</td><td>1 analytical and 1 cursory explanation for 2 question requirements</td><td>8</td></tr> </tbody> </table>	Annotation	Description	Mark	A + A	Analytical explanations for 2 question requirements	10	A + C + K	1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant	9	A + C	1 analytical and 1 cursory explanation for 2 question requirements	8	8 - 10
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L2	Analysis & Application For an underdeveloped answer that attempts to address the question and explains some determinants of actual and/or potential economic growth. Answers may be descriptive, lack an analytical approach, make incomplete use of economic tools such as AD/AS diagrams, or contain gaps in the explanation of cause and effect. Alternatively, an answer may provide a one-sided analytical explanation addressing only actual growth or only potential growth. Knowledge & Understanding For an answer that demonstrates largely accurate knowledge and understanding of economic concepts, theories related to question, e.g. actual	5 - 7												

	and potential economic growth and AD/AS diagram (i.e. no major conceptual errors) Marks within L2: <table> <tr> <th>Annotation</th><th>Description</th><th>Mark</th></tr> <tr> <td>A + K</td><td>1 analytical explanation for 1 question requirement and an explanation of additional factor that is relevant</td><td>7</td></tr> <tr> <td>C + C + K</td><td>Cursory explanations for 2 question requirements and an explanation of additional factor that is relevant</td><td>7</td></tr> <tr> <td>C + C</td><td>Cursory explanations for 2 question requirements</td><td>6</td></tr> <tr> <td>A + 0</td><td>1 analytical explanation for 1 question requirement</td><td>6</td></tr> <tr> <td>K + C + K</td><td>1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements and an explanation of additional factor that is relevant</td><td>6</td></tr> <tr> <td>K + C</td><td>1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements</td><td>5</td></tr> </table>	Annotation	Description	Mark	A + K	1 analytical explanation for 1 question requirement and an explanation of additional factor that is relevant	7	C + C + K	Cursory explanations for 2 question requirements and an explanation of additional factor that is relevant	7	C + C	Cursory explanations for 2 question requirements	6	A + 0	1 analytical explanation for 1 question requirement	6	K + C + K	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements and an explanation of additional factor that is relevant	6	K + C	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements	5				
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L1	Knowledge & Understanding: For an answer that shows limited knowledge and understanding of relevant economic concepts and theories. It may contain basic descriptions or definitions of economic growth or isolated factors affecting growth. Few valid points are made, and they are scant, inadequately explained, mostly irrelevant or inaccurate. Marks within L1: <table> <tr> <th>Annotation</th><th>Description</th><th>Mark</th></tr> <tr> <td>C + 0</td><td>One cursory explanation for 1 question requirement</td><td>4</td></tr> <tr> <td>K + K</td><td>Knowledge and understanding of 2 question requirements</td><td>4</td></tr> <tr> <td>K + K</td><td>Knowledge and understanding of 1 question requirement and knowledge of the second requirement</td><td>3</td></tr> <tr> <td>K + K</td><td>Knowledge of 2 question requirements</td><td>2</td></tr> <tr> <td>K + 0</td><td>Knowledge and understanding of 1 question requirement</td><td>2</td></tr> <tr> <td>K + 0</td><td>Knowledge of one question requirement</td><td>1</td></tr> <tr> <td>0</td><td>Nothing of relevance in the answer</td><td>0</td></tr> </table>	Annotation	Description	Mark	C + 0	One cursory explanation for 1 question requirement	4	K + K	Knowledge and understanding of 2 question requirements	4	K + K	Knowledge and understanding of 1 question requirement and knowledge of the second requirement	3	K + K	Knowledge of 2 question requirements	2	K + 0	Knowledge and understanding of 1 question requirement	2	K + 0	Knowledge of one question requirement	1	0	Nothing of relevance in the answer	0	0 - 4
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0	Nothing of relevance in the answer	0																								

Part (b) Discuss whether technological advancement contributes to sustainable and inclusive growth in Singapore. [15]

Question Analysis	
Command Word	'Discuss' – Provide balance viewpoint before giving a judgement. Assess whether technological advancement contributes to both sustainable and inclusive growth in Singapore and the extent to which it does.
Content / Concept Words	Sustainable growth: The economy growing at a strong and stable rate without resulting in significant economic problems, environmental degradation and resource depletion. Inclusive growth: Sustained economic growth that is broad-based across sectors, without resulting in worsening income inequality, and creates opportunities for all. Technological advancement: Improvements in technology and innovation that increase productivity, improve efficiency and create new products, processes and industries.
Context	Singapore: Heavy investment in innovation and technology to strengthen competitiveness in an increasingly digital global economy, alongside government investment in education, infrastructure and social support .
Requirement	R1: Technological advancement leads to Sustainable growth and Inclusive growth. R2: Technological advancement alone is insufficient to achieve SEG and IEG

Introduction:

Economic growth refers to a sustained increase in an economy's real output over time. **Actual economic growth** occurs when real GDP increases due to an increase in aggregate demand, while **potential economic growth** occurs when the economy's productive capacity increases, reflected by an increase in LRAS. Sustainable growth refers to the economy growing at a strong and stable rate without resulting in significant environmental degradation and resource depletion, while inclusive growth refers to sustained economic growth that is broad-based across sectors without resulting in worsening income inequality and creates opportunities for all. Technological advancement can contribute to both actual and potential economic growth while promoting sustainable and inclusive growth. However, government intervention is also important in ensuring that the benefits of technological advancement are widely distributed and that environmental costs are addressed.

R1: Technological advancement can lead to sustainable and inclusive growth

Technological advancement can contribute to sustainable growth by promoting **strong and stable economic growth while reducing environmental degradation and resource depletion** and promote inclusive growth.

In Singapore, investment in digitalisation, automation and green technologies can therefore improve firms' productivity and competitiveness while supporting the country's environmental objectives.

In the short run, technological advancement can increase firms' productivity and profitability, encouraging firms to increase investment in new technologies and capital. For example, firms adopting AI and digital technologies may increase their investment expenditure on new software, machinery and equipment. This increases **investment (I)**, Investment is a component of AD, so **AD increases from AD_0 to AD_1** . Assuming that the

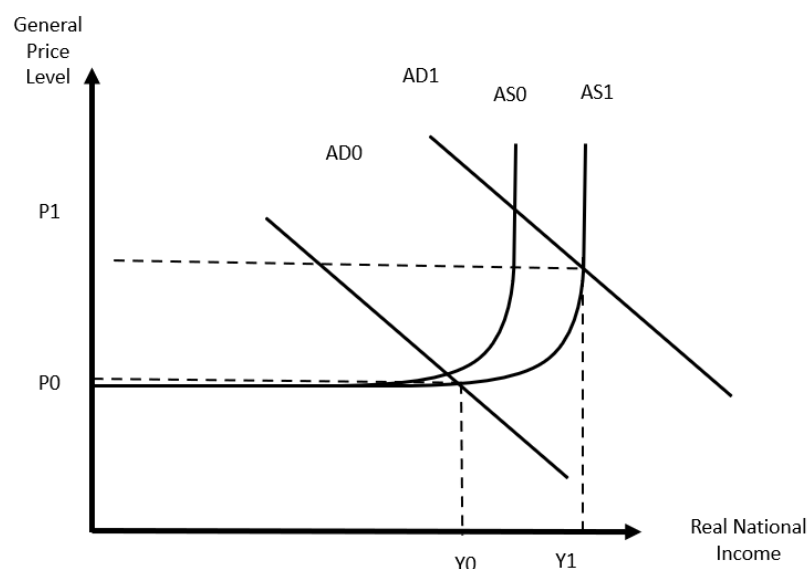


Figure 3: AD-AS diagram

Singapore economy has sufficient spare capacity; firms respond to the higher demand by increasing production. As firms increase output, they may hire more workers, increasing employment and household incomes. The resulting increase in consumption generates further increases in AD through the **multiplier effect**, causing real national output and real GDP to increase. Hence, technological advancement can contribute to **actual economic growth** in the short run. Resulting in an increase in real GDP from Y_0 to Y_1 , representing **actual economic growth**.

At the same time, technological advancement increases the productivity of factors of production, causing **LRAS to increase from $LRAS_0$ to $LRAS_1$** , which increases the economy's productive capacity. This allows Singapore to sustain higher levels of output in the long run without generating excessive inflationary pressure. Furthermore, technologies such as energy-efficient machinery and smart energy systems can reduce energy and resource use per unit of output, reducing environmental degradation and resource depletion.

Technological advancement can also promote **inclusive growth** by improving access to digital education, training and employment opportunities. For example, digital learning platforms allow workers, including those who may have limited access to traditional forms of education and training, to acquire new skills at a lower cost and with greater flexibility. This improves their **human capital and employability**, allowing them to take advantage of new job opportunities created by technological advancement. As more workers gain the skills required for higher-productivity jobs, their employment opportunities and incomes may increase, allowing a wider proportion of the population to benefit from economic growth. In addition, digital technologies can reduce barriers to accessing goods, services and information, such as through online banking and e-government services, improving participation in economic activity. Hence, technological advancement can make economic growth more **inclusive by enabling lower-skilled and disadvantaged groups to participate in and benefit from the opportunities created by economic growth**.

Hence, technological advancement can contribute to **sustainable and inclusive growth by generating both actual and potential economic growth while reducing the environmental costs associated with production and create opportunities for all**.

R1's Evaluation:

However, technological advancement does not necessarily result in inclusive and sustainable growth in **Singapore**. The adoption of AI and automation may replace some routine and lower-skilled jobs, creating **structural unemployment** if displaced workers do not possess the skills required for new jobs. This could widen income inequality, as higher-skilled workers are more likely to benefit from higher productivity and wages, while lower-skilled workers may face difficulties securing new employment. Hence, technological advancement may increase Singapore's real GDP without ensuring that the

benefits of economic growth are **equally distributed across different groups of workers**.

Technological advancement may also create environmental costs for Singapore. For example, the expansion of **AI and data centres** requires substantial amounts of electricity. If this additional electricity demand is met through carbon-intensive energy sources, greater adoption of AI could increase carbon emissions and undermine Singapore's environmental sustainability.

Therefore, in Singapore, technological advancement is likely to contribute significantly to economic growth, given the economy's highly skilled workforce and strong digital infrastructure. However, its contribution to inclusive and sustainable growth is conditional rather than automatic. The extent to which the gains are inclusive depends on whether workers who are displaced by automation can acquire relevant skills and participate in new employment opportunities, while sustainability depends on Singapore's ability to meet rising energy demand through cleaner and more energy-efficient technologies. Hence, technological advancement is an important driver of sustainable and inclusive growth, but complementary government policies are necessary to ensure that its benefits are widely shared and its environmental costs are minimised.

R2: Technological advancement alone is insufficient to achieve SEG and IEG

While technological advancement contributes to sustainable and inclusive economic growth in Singapore, it is insufficient on its own to fully achieve both goals. Complementary measures such as education, reskilling programmes and environmental regulation are necessary for technology to deliver its full benefits.

The rapid adoption of automation and artificial intelligence in Singapore has displaced lower-skilled workers in sectors such as manufacturing and retail. Without complementary policies such as SkillsFuture to reskill these workers, displaced workers are unable to transition into new higher-productivity roles in the digital economy. As a result, the supply of labour in lower-skilled sectors exceeds demand, creating structural unemployment. At the same time, demand for higher-skilled workers rises, driving up wages and widens income inequality where the Gini coefficient rises. Thus, the gains from technological advancement benefit disproportionately to highly skilled workers. Since inclusive economic growth requires that growth benefits are broad-based and do not worsen income inequality, technological advancement alone fails to achieve IEG in Singapore.

Similarly, without environmental regulation, profit-maximising firms and individuals operate where Marginal Private Cost (MPC) equals Marginal Private Benefit, ignoring the negative externalities of carbon emissions. Green technologies typically carry higher upfront capital costs, so in the absence of regulatory incentives, firms underinvest in clean production methods relative to the socially optimal level and consumers also do not change to greener or more efficient goods to use. This results in a market failure due to presence of negative externality where there is overproduction or overconsumption of carbon-intensive goods. Where units of carbon intensive goods were overconsumed or overproduced, Marginal Social Cost (MSC) exceeds MPC, generating a deadweight

welfare loss. Carbon emissions per unit of GDP therefore remain elevated, undermining the environmental dimension of sustainable economic growth. On the environmental dimension, Singapore's carbon tax which is set to rise progressively to S\$50–80 per tonne of emissions by 2030 under the Green Plan 2030 would force firms to internalise the negative externality by raising the MPC of carbon-intensive production closer to MSC, thus correcting market failure, reduces the deadweight welfare loss, and creates price incentives for firms and consumers to shift towards cleaner alternatives to achieve SEG. Complementing this, the clean-energy vehicle registration policy directly eliminates a pollutive transport emission, addressing overconsumption of carbon-intensive goods at the regulatory level. Technological advancement alone, without regulation is insufficient to internalise these externalities and achieve SEG.

R2's Evaluation:

However, the extent to which education and skills development promote **inclusive growth in Singapore depends on the relevance and effectiveness of training**. If workers acquire skills that do not match the demands of emerging industries, their employability and income may not increase significantly. This limits the extent to which the benefits of economic growth are distributed more widely. There is also a **time lag** between investment in education and improvements in labour productivity, so its impact on **actual economic growth may be limited in the short run**, while its impact on **potential economic growth is likely to be greater in the long run** as human capital accumulates and labour productivity increases.

Education and skills development can contribute to **sustainable growth** by providing workers with skills to develop and adopt cleaner technologies, improving resource efficiency and reducing environmental damage per unit of output. However, this effect is **indirect**, as education alone cannot correct negative externalities. **Overall, education and skills development is likely to have a stronger impact on inclusive than sustainable growth in Singapore.**

Summative Conclusion:

[Stand] Overall, technological advancement is an important driver of sustainable and inclusive growth in Singapore, but it is not sufficient on its own.

Technological advancement can generate both actual economic growth through higher investment and AD and potential economic growth through higher productivity and LRAS. It can also support sustainability through cleaner technologies. However, technological advancement alone is unlikely to ensure that growth is inclusive, particularly if AI and automation displace lower-skilled workers.

Therefore, **education and skills development is also an important complement to technological advancement**, as it enables workers to adapt to technological change and participate in higher-productivity employment.

Overall, **technological advancement** is likely to contribute significantly to **sustainable and inclusive growth** in Singapore, but only when supported by **education and skills development** and **appropriate environmental policies** that ensure its benefits are widely shared and its environmental costs are controlled.

Mark Scheme:

Knowledge, Understanding, Application, Analysis														
L3	Analysis & Application For an analytical answer that addresses the question thoroughly, with clear and well-developed economic analysis supported by appropriate tools of analysis, such as relevant AD/AS diagrams, showing how technological advancement and another relevant alternative factor (e.g. education and skills development, government policies, investment in infrastructure or green technologies) can affect actual and potential economic growth. There is good ability to organise ideas and discriminate between relevant and irrelevant factors. The answer is well-focused on the question, with good use of relevant economic concepts, theories and principles to explain how technological advancement can contribute to sustainable and inclusive growth or not. Good application to the Singapore context, with relevant examples of technological advancement, with clear links to AD, productivity, employment, income, productive capacity and environmental sustainability. Knowledge & Understanding For an answer that demonstrates accurate knowledge and understanding of economic concepts and theories relevant to the question, including technological advancement, actual and potential economic growth, AD, LRAS, productivity, sustainable growth and inclusive growth, as well as relevant concepts relating to the alternative factor considered. Marks within L3: <table border="1"> <thead> <tr> <th>Annota tion</th><th>Description</th><th>Mark</th></tr> </thead> <tbody> <tr> <td>A + A</td><td>Analytical explanations for 2 question requirements</td><td>10</td></tr> <tr> <td>A + C + K</td><td>1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant</td><td>9</td></tr> <tr> <td>A + C</td><td>1 analytical and 1 cursory explanation for 2 question requirements</td><td>8</td></tr> </tbody> </table>	Annota tion	Description	Mark	A + A	Analytical explanations for 2 question requirements	10	A + C + K	1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant	9	A + C	1 analytical and 1 cursory explanation for 2 question requirements	8	8-10
Annota tion	Description	Mark												
A + A	Analytical explanations for 2 question requirements	10												
A + C + K	1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant	9												
A + C	1 analytical and 1 cursory explanation for 2 question requirements	8												

L2	Analysis & Application For an under-developed answer that attempts to address the question and explain how technological advancement (e.g. education and skills development, government policies, infrastructure investment) can contribute to sustainable and inclusive growth or not. Answers may be descriptive, lack a sufficiently developed analytical approach (e.g. limited or incomplete use of AD/AS diagrams) or contain gaps in the causal links between technological advancement and actual and potential economic growth, sustainable growth or inclusive growth. For a one-sided analytical answer that addresses only one of the question requirements, such as explaining how technological advancement contributes to sustainable and inclusive growth without considering the other perspective or focusing on only one dimension such as sustainable or inclusive growth. For an answer that is supported with some application to the Singapore context. There is limited ability to organise ideas or discriminate between relevant and irrelevant material. The answer may be generic or rely on pre-learned material that is not sufficiently focused on the question, or address only selected aspects of actual/potential, sustainable or inclusive growth. Knowledge & Understanding For an answer that demonstrates largely accurate knowledge and understanding of economic concepts and theories related to the question, with no major conceptual errors. This may include concepts such as technological advancement, AD, LRAS, productivity, sustainable and inclusive growth. (i.e. no major conceptual errors)	5-7
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Marks within L2:		
Annotation	Description	Mark
A + K	1 analytical explanation for 1 question requirement and an explanation of additional factor that is relevant	7
C + C + K	Cursory explanations for 2 question requirements and an explanation of additional factor that is relevant	7
C + C	Cursory explanations for 2 question requirements	6
A + 0	1 analytical explanation for 1 question requirement	6
K + C + K	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements and an explanation of additional factor that is relevant	6
K + C	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements	5
L1	Knowledge & Understanding For an answer that demonstrates limited knowledge and understanding of relevant economic concepts and theories related to the question, such as technological advancement, actual and potential economic growth, sustainable growth, inclusive growth, AD, LRAS and productivity. Few valid points are made and these are scant and inadequately explained. Answers are mostly irrelevant, generic or inaccurate, with limited or no meaningful application to the Singapore context. The answer may demonstrate that the requirements of the question are not properly grasped, such as failing to distinguish between actual and potential economic growth, or between sustainable and inclusive growth. The answer may also contain basic errors in economic theory, such as incorrectly linking technological advancement to economic growth or confusing a shift in AD with an increase in LRAS.	0-4

Marks within L1:		
Annot ation	Description	Mark
C + 0	One cursory explanation for 1 question requirement	4
K + K	Knowledge and understanding of 2 question requirements	4
K + K	Knowledge and understanding of 1 question requirement and knowledge of the second requirement	3
K + K	Knowledge of 2 question requirements	2
K + 0	Knowledge and understanding of 1 question requirement	2
K + 0	Knowledge of one question requirement	1
0	Nothing of relevance in the answer	0

Evaluation detailed marking guide

Level		Mark
E3	Well-explained evaluative judgements about 2 requirements PLUS a summative conclusion	5
E2	Well-explained evaluative judgements about 2 requirements	4
E2	A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second requirement PLUS a summative conclusion	4
E2	A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second requirement	3
E1	A well-explained evaluative judgement about 1 requirement OR evaluative statements for 2 requirements	2
E1	An evaluative statement for 1 requirement	1
E0	No attempt at Evaluation	0

5 In recent years, some economies have faced persistent deflationary pressures. Governments and central banks have adopted a range of policy responses in their efforts to reflate their economies.

(a) Explain the likely impact of deflation on a country's domestic and external economy. [10]

(b) Discuss whether **devaluation of the domestic currency** is the most appropriate policy to tackle deflation for all countries. [15]

(a) Explain the likely impact of deflation on a country's domestic and external economy. [10]

Part (a) Suggested Answer

Question Analysis	
Command Word	'Explain' – Give reasons, establish causal links. Identify and explain the impact of deflation on domestic and external economy .
Content / Concept Words	Deflation: persistent decrease in general price level Domestic economy: Impact on economic growth & unemployment External economy: Impact on balance of trade
Context	No context

Requirement	R1: Explain the likely impact of deflation on a country's domestic economy . R2: Explain the likely impact of deflation on a country's external economy .
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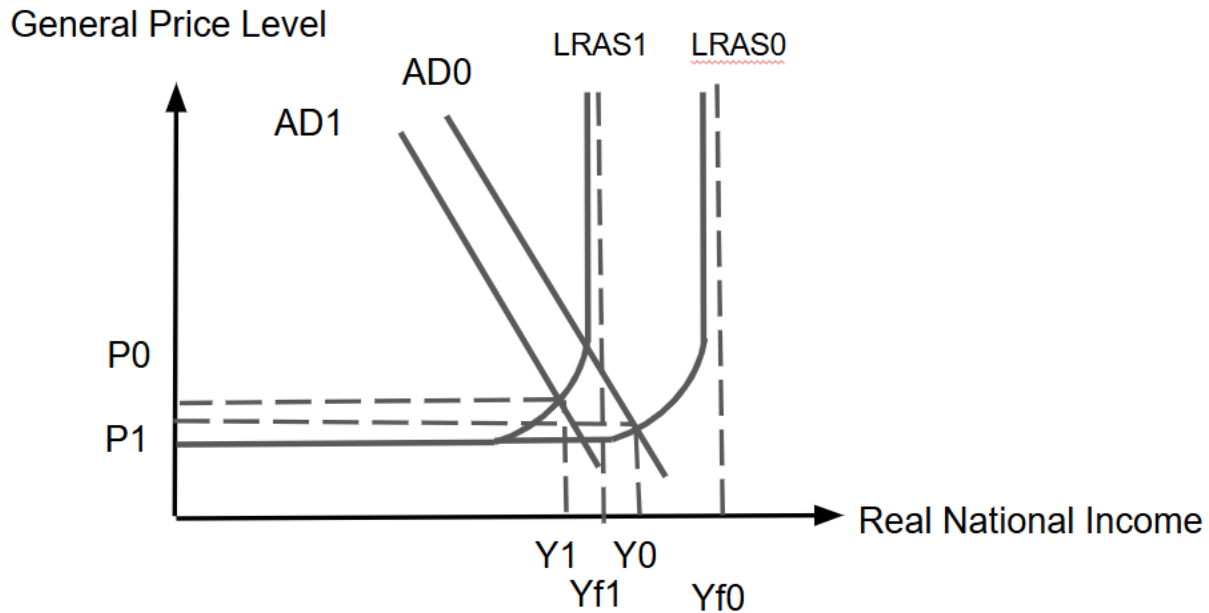
Introduction

Deflation is defined as a persistent fall in the general price level in an economy, indicated by a negative inflation rate. It can bring about negative impacts on the country's domestic economy such as a fall in both actual and potential economic growth and higher demand-deficient unemployment. However, it can bring about positive impacts on the country's external economy such as an improvement in its balance of trade.

Requirement 1: Explain the likely impact of deflation on a country's domestic economy

Deflation due to persistent fall in AD is usually associated with prolonged economic recession which occurs due to too little spending and investment. This creates a pessimistic economic environment for both consumers and producers.

Consumers may form the expectations that the general price level will continue falling and choose to postpone consumption, consumption expenditure (C) will thus decrease. For producers, in the face of depressed demand, producers' revenue falls, inventories piled up and firms are forced to lower prices and cut back on production. In addition, due to loss of business confidence, investment expenditure (I) falls. Since Consumption (C) and Investment expenditure (I) are components of Aggregate Demand (AD), this leads to a fall in the AD.



With reference to the diagram above, since AD curve falls and shift leftwards, this led to an unplanned fall in inventories. Firms will have to cut back on production, hence demand less factors of production. With a decrease in national income, this will lead to a decrease in income induced consumption and result in a further decrease in AD. This triggers a reverse multiplier effect where there will be successive rounds of decrease in national income and decrease in income induced consumption. The multiplier process will end when the decrease in national income is too small to generate further decrease in induced consumption. This leads to a multiplied decrease in RNY from Y_0 to Y_1 , hence a fall in actual economic growth.

In addition, a fall in investment expenditure will also mean that there is a fall in investment on research and development, which can reduce the quality and quantity of factors of production like labour and capital. Thus, this leads to a fall in productive capacity, which will lead to a fall in LRAS to LRAS1, potential output decreases from Y_{f0} to Y_{f1} , hence a fall in potential growth.

As firms respond to the fall in output by demanding less labour, demand-deficient unemployment increases.

Requirement 2: Explain the likely impact of deflation on a country's external economy

Assuming deflation in Singapore, a lower inflation rate in Singapore relative to the other countries can cause Singapore's exports to become relatively cheaper, increasing the price competitiveness of domestically produced goods compared to foreign goods.

Ceteris paribus, as prices of Singapore's exports falls, the quantity demanded for its exports rises. Assuming that the demand for the country's exports is price elastic, a fall in export prices will lead to a more than proportionate increase quantity demanded for its exports, resulting in an overall increase in export earnings for Singapore. As imports become relatively more expensive compared to domestically produced substitutes, consumers' demand for imported substitutes falls, leading to a fall in import expenditure. The rise in export revenue together with the fall in import expenditure hence improving Singapore's balance of trade (BOT).

Mark Scheme:

Knowledge, Understanding, Application, Analysis			
L3	For a well-developed answer that has: ● good scope – explains both the internal and external effects of deflation; ● good rigour – utilises a suitable AD/AS and economic diagram to explain, with application to a context.		8 - 10
	Annotation	Description	
	A + A	Analytical explanations for 2 question requirements	
	A + C + K	1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant	
	A + C	1 analytical and 1 cursory explanation for 2 question requirements	
L2	For an underdeveloped answer that is: ● lacking in scope – only explains either the internal OR external effects of deflation; and/or lacking in rigour – descriptive answer without a suitable framework or diagram or application to the context.		5 - 7

	Annotation	Description	Mark	
	A + K	1 analytical explanation for 1 question requirement and an explanation of additional factor that is relevant	7	
	C + C + K	Cursory explanations for 2 question requirements and an explanation of additional factor that is relevant	7	
	C + C	Cursory explanations for 2 question requirements	6	
	A + 0	1 analytical explanation for 1 question requirement	6	
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L1	Annotation	Description	Mark	0 - 4
	C + 0	One cursory explanation for 1 question requirement	4	
	K + K	Knowledge and understanding of 2 question requirements	4	
	K + K	Knowledge and understanding of 1 question requirement and knowledge of the second requirement	3	
	K + K	Knowledge of 2 question requirements	2	
	K + 0	Knowledge and understanding of 1 question requirement	2	
	K + 0	Knowledge of one question requirement	1	
	0	Nothing of relevance in the answer	0	
	For an answer that shows some knowledge of the consequences of deflation on the different macroeconomic objectives of the government.			

- (b) Discuss whether **devaluation of the domestic currency** is the most appropriate [15]
policy to tackle deflation for all countries.

Part (b) Suggested Answer

Question Analysis	
Command Word	Discuss whether- 2 sided argument with stand
Content / Concept Words	Devaluation of the domestic currency is the most appropriate policy to tackle deflation for all countries "Most appropriate" → need to bring in another policy (e.g. expansionary fiscal policy) "All countries" → small, open, export-oriented economies vs large domestically-driven economies
Context	All countries

Requirement	R1: Explain how devaluation of the domestic currency is appropriate to tackle deflation for countries with small and open/export-oriented economies like Singapore. R2: Explain how another policy (e.g. expansionary fiscal policy) is appropriate to tackle deflation for countries have large domestic market like China.
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Introduction

Deflation refers to a sustained fall in the general price level, which is typically associated with falling aggregate demand (AD) and depressed economic activity. Devaluation refers to a deliberate reduction in the value of the domestic currency under a fixed exchange rate system. While devaluation can be an effective tool to tackle deflation, its appropriateness varies significantly across countries depending on their economic structures. While devaluation is most suitable for small, open, export-oriented economies, alternative policies such as expansionary fiscal policy may be more appropriate for large, domestically-driven economies.

Requirement 1: Explain how devaluation of the domestic currency is appropriate to tackle deflation for countries with small and open/export-oriented economies like Singapore.

For small and open economies, where trade forms a large proportion of GDP, devaluation can help to combat deflation through increasing net exports. For example, in the case of Singapore, zero appreciation is used as the country's form of devaluation.

Devaluation will cause its exports to become cheaper in foreign currency. Foreigners will then demand more of the country's exports thereby increasing export revenue (X).

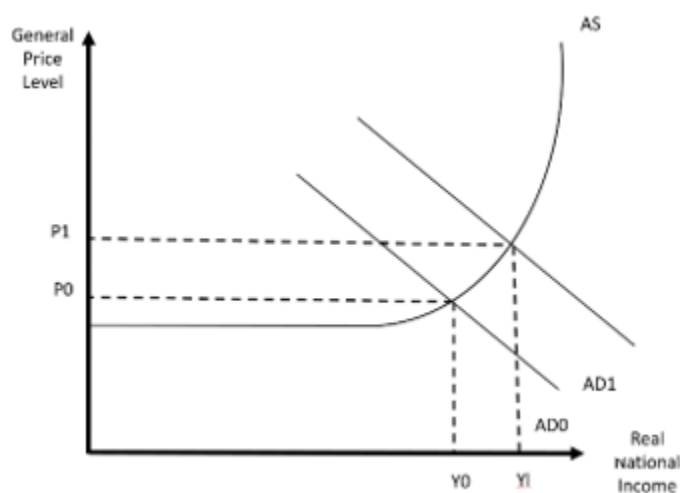
On the other hand, prices of imports (P_m) into the country will become relatively more expensive in domestic currency. This will discourage locals from buying imported goods and services.

Assuming that the demand for imports is price elastic, ($PED_m > 1$), quantity demanded decreases more than proportionately, import expenditure (M) will decrease.

Devaluation can also encourage the domestic sector to switch from purchasing imports to domestically produced substitutes, therefore increasing demand for domestic goods hence increasing consumption expenditure on domestically produced goods and services (C), *ceteris paribus*.

Since both net export revenue and consumption expenditure on domestically produced goods and services have increased and are components of Aggregate Demand (AD), AD will increase. The AD curve will shift rightwards from AD0 to AD1. Due to the rise in AD, firms will experience unplanned fall in inventory. Thus, firms will raise production and hire more factor inputs including labour and pay out more factor income.

However, as the economy moves closer to the full employment output level, there is limited spare capacity which leads to the bidding up of factor prices. This causes firms to pass on some of the higher factor costs onto consumers by raising prices of final goods and services. Hence, there will be a rise in general price level from P0 to P1, counteracting deflation, while also raising real GDP and employment.



For export-oriented economies, this policy is highly appropriate because exports constitute a large share of national income. A devaluation therefore has an outsized impact on AD relative to what it would achieve in a more closed economy. Furthermore, in small open economies, the government's ability to use fiscal policy is often constrained by a small domestic multiplier. This makes the exchange rate a relatively more effective lever for managing AD compared to fiscal tools.

IE1: Limitations of devaluation which may limit its appropriateness to tackle deflation

However, for economies heavily dependent on imported inputs such as Singapore, devaluation raises the cost of imported raw materials in domestic currency. Since these imported inputs feed

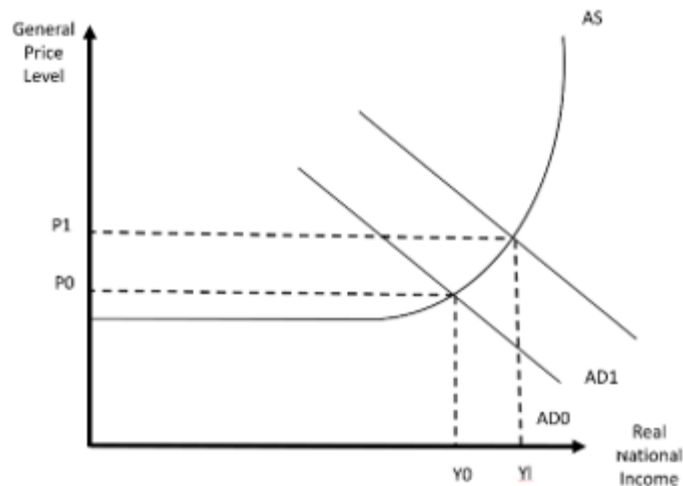
directly into the production process, firms face higher unit cost of production, decreasing the short run aggregate supply. Firms may respond by passing higher costs onto consumers through higher export prices, which undermines the price competitiveness that devaluation was intended to create. Hence, the rise in AD may be dampened, limiting the effectiveness of the policy to tackle deflation.

Additionally, there is the risk of retaliatory devaluations by trading partners. If one country devalues its currency to gain a competitive edge, its trading partners, facing a loss of export competitiveness, may respond by devaluing their own currencies in turn. This can trigger a "beggar-thy-neighbour" dynamic, where successive rounds of competitive devaluation leave no country with a lasting advantage in relative prices. For a small, open economy like Singapore that is deeply integrated into global trade networks and relies on stable trading relationships, such a breakdown in international monetary cooperation could be particularly damaging. The expenditure-switching gains that motivated the initial devaluation would be neutralised, while the broader disruption to trade and investor confidence could worsen the very deflationary conditions the policy sought to address.

Requirement 2: Explain how alternative policies like Expansionary Fiscal Policy is appropriate to tackle deflation for countries with big and large domestic market like China.

However, for economies that has a large domestic market like China where consumption expenditure forms a large proportion of GDP, expansionary fiscal policy may be more appropriate to combat deflation.

For example, to tackle persistent domestic deflation in China, the central government has authorized 1.3 trillion yuan (~\$190.7 billion) in mapping this money directly to heavy infrastructure like funding major transport infrastructure and logistical shipping networks along the Yangtze River basin, funding for large-scale urban underground pipeline renovation projects, and financing major national water resource systems and environmental ecological restoration projects. Thus, this increases government expenditure (G). In addition, the central government also allocated a massive 12.4 trillion yuan (~\$1.8 trillion) focusing on providing household reliefs like childcare tax allowances and subsidized elderly care. Since disposable income increases for households, purchasing power increases and hence consumption expenditure (C) increases



Hence, an increase in G and C would increase the level of aggregate demand (AD), leading to a rightward shift of AD curve from AD_1 to AD_2 as shown in figure 1. With the increase in AD , firms will face an unplanned run down of inventory stocks and would step up production to meet the increased demand & restore the optimal level of inventory. In turn, firms will hire more factors of production (e.g. labour) and pay out more factor incomes (e.g. wages). The increase in factor owners' income will induce a further increase in consumption expenditure and set off the multiplier process. The result is an increase in real national income (Y_1 to Y_2) by multiples, more than proportionally to the initial increase in G and C . Since the economy moves closer to the full employment output level, there is limited spare capacity which leads to the bidding up of factor prices. This causes firms to pass on some of the higher factor costs onto consumers by raising prices of final goods and services. Hence, there will be a rise in general price level from P_0 to P_1 , leading to a higher general price level from P_0 to P_1 , tackling deflation.

**Supply-side policy to tackle deflation is not accepted. Policies like EFP with supply-side intent/ interest rate policy to tackle deflation for big economies will be accepted.*

IE2: Limitations of expansionary fiscal policy which may limit its appropriateness to tackle deflation

For countries which have been accumulating reserves through persistent budget surpluses, these governments can just draw from their reserves should they require to run an expansionary fiscal policy.

However, for countries which have accumulated high amounts of government debt due to persistent budget deficits, these governments can only finance government expenditure through borrowing (which could be limited). Borrowing also accumulates more debt which will require even more interest payments. This may limit the usage of expansionary fiscal policy, which will then limit the increase in AD and hence the deflationary issue.

Evaluative Conclusion

[STAND] Whether devaluation is the most appropriate policy to tackle deflation depends on the characteristics of the economy and the root cause of deflation.

- **[Nature of economy]** For small, open, export-oriented economies like Singapore, devaluation is a well-suited tool given the large role of external demand, particularly net exports ($X - M$), in driving AD, and the relatively limited potency of fiscal policy due to high import leakages that reduce the fiscal multiplier. In contrast, for large economies with sizeable domestic markets like China, expansionary monetary policy through interest rate cuts is more appropriate. This is because consumption (C) and investment (I) constitute the dominant components of AD in such economies, and lowering interest rates directly stimulates both. Reducing the cost of borrowing encourages firms to invest and households to spend, generating a substantial rightward shift in AD. Devaluation, by contrast, acts primarily through net exports, which form a relatively smaller share of AD in large, domestically-driven economies, and carries significant international risks such as retaliatory devaluations and potential disruptions to China's trading relationships.
- **[Root cause]** As mentioned in part (a), if the causes of deflation are due to poor consumer and business confidence or a poor expectation of future economy which results in a persistent fall in AD, then expansionary demand-management policies like monetary policy and fiscal policy will not be appropriate to stimulate a rise in C and I and hence a rise in AD to combat deflation. Nonetheless, if the cause of deflation is due to a fall in unit cost of production which results in a rise in SRAS, then demand management policies are deemed appropriate.
- **[State of economy]** Nevertheless, demand management policies may generate inflationary pressures. As AD increases and approaches full employment output level, this will cause GPL rise substantially. Hence, relying solely on demand management policies is unsustainable, they should be complemented by supply-side policies to ensure a gradual and stable increase in the price level in the long run.

Mark Scheme

Level	Descriptor	Mark
L3	For an analytical answer that addresses the question thoroughly with clear explanation, well-supported by relevant economic concepts and tools of analysis. Answers should include the different nature of economies and provide reasoning for certain policies which may not be appropriate. There is clear and thorough explanation of how devaluation of domestic currency is the most appropriate to tackle deflation for small and open economies and how other policies are more appropriate for large domestically driven economies. In addition, answers should also include the limitations of the policies introduced.	8 – 10 [A+A: 10] [A+C: 8-9]

	The answer makes effective use of relevant economic concepts such as AD-AS and linking to general price level. There is good application to relevant examples and contexts.	
L2	For an underdeveloped answer that attempts to explain how devaluation of domestic currency is the most appropriate to tackle deflation for small and open economies and how other policies are more appropriate for large domestically driven economies There may be gaps in the economic analysis, limited use of economic concepts, or limited application to relevant contexts Or for a one-sided analytical answer that addresses only one of the two question requirements.	5 – 7 [A+K: 7] [C+C: 6-7] [A+O: 6] [K+C: 5-6]
L1	For an answer that shows limited knowledge and understanding of how devaluation of currencies can address deflation. Few valid points are made and these are mostly basic, descriptive or inadequately explained.	1 – 4 [C+O: 4] [K+K: 2-4] [K+O: 1-2]
Evaluation		
E3	Well-explained evaluative judgements about 2 requirements + a summative conclusion.	5
E2	Well-explained evaluative judgements about 2 requirements. OR A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second + a summative conclusion.	4
	A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second.	3
E1	A well-explained evaluative judgement about 1 requirement. OR evaluative statements for 2 requirements.	2
	An evaluative statement for 1 requirement.	1
E0	No attempt at evaluation.	0

Globalisation has accelerated in recent decades, increasing the interconnectedness of economies through international trade and investment. However, geopolitical tensions and supply chain disruptions have raised questions about whether governments should continue to promote globalisation.

(a) Explain the factors that have contributed to globalisation. [10]

(b) Discuss the extent to which governments should continue to promote globalisation to improve standard of living. [15]

Part (a) Explain the factors that have contributed to globalisation. [10]

Question Analysis	
Command Word	'Explain' – Give reasons, establish causal links. Identify the factors and explain how each factor leads to greater globalisation.
Content Concept Words /	Factors that have contributed to globalisation i.e factors that lead to greater trade of goods and services, flows of capital and labour/ resources across countries.
Context	No context

Requirement	R1: Explain how <u>major technological improvements in transport and communications</u> have lead to increase in trade of goods and services, flow of capital and labour/ resources across countries. R2: Explain how <u>development of multilateral and bilateral economic cooperation</u> led to increasing liberalization of trade and globalisation.
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Introduction

Globalisation refers to the increasing interconnectedness and integration of economies through greater flows of goods and services, capital and labour across countries. It has been driven by factors such as advances in transport and communication technology and greater economic cooperation and liberalisation of trade and investment.

R1: Technological advances

Technological improvements in transport and communication have been a major driver of globalisation by reducing the costs of conducting economic activities across national borders.

Firstly, improvements in transport technology, such as containerisation and more efficient shipping and air transport, have reduced transport costs and delivery times. This lowers the cost of exporting goods to overseas markets and increases the geographical range over which firms can profitably trade.

Lower transport costs also enable firms to fragment their production processes and locate different stages of production in different countries according to their comparative advantage and cost advantages. For example, a firm may source raw materials from one country, manufacture components in another and assemble the final product elsewhere. This increases specialisation and trade in intermediate goods between economies.

Secondly, improvements in communication and information technology have reduced information and coordination costs. Firms can communicate and coordinate their operations across countries in real time, reducing the difficulty of managing geographically dispersed production.

This has encouraged MNCs/TNCs to offshore and outsource different stages of production. As firms establish production facilities overseas, FDI and international capital flows increase, while the movement of intermediate goods and services between countries also increases.

For example, an aircraft manufacturer may source metals from Africa, manufacture wings in Germany, produce electronic components in Japan and assemble seats in Mexico. Improvements in transport and communication technology make it increasingly feasible for these different stages of production to be coordinated across countries.

Therefore, technological advances reduce the costs of transporting, communicating and coordinating economic activities across borders, encouraging international trade, specialisation, FDI and the fragmentation of production. This increases the interdependence and integration of economies, thereby accelerating globalisation.

R2: Trade and Investment Liberalisation

A second major factor is the liberalisation of international trade and investment through greater bilateral and multilateral economic cooperation.

Governments have increasingly recognised the potential gains from specialisation according to comparative advantage. Rather than producing all goods domestically, countries can specialise in goods and services in which they have a comparative advantage and trade for those in which they have a comparative disadvantage. This has encouraged governments to reduce protectionist trade barriers, such as tariffs and quotas, and enter into bilateral and multilateral free trade agreements (FTAs). For example, when tariffs are reduced, the domestic price of imported goods falls, making imports more price competitive and increasing the quantity of imports demanded. At the same time, domestic firms gain greater access to overseas markets, increasing their potential export demand. Hence, the volume of international trade increases. Trade liberalisation therefore facilitates greater international specialisation, allowing resources to be allocated towards activities in which countries have a comparative advantage. This strengthens economic interdependence as countries become increasingly reliant on international trade.

For example, agreements such as the China–Singapore Free Trade Agreement reduce trade barriers between participating economies, encouraging greater bilateral trade. Investment liberalisation has also contributed to globalisation. The removal or relaxation of restrictions on foreign investment reduces the barriers faced by foreign firms seeking to establish operations overseas. This encourages FDI and the expansion of MNCs/TNCs, increasing international capital flows.

Hence, trade and investment liberalisation reduces barriers to the movement of goods, services and capital across national borders. This encourages greater specialisation, trade and FDI, resulting in greater economic integration and globalisation.

Mark Scheme:

Knowledge, Understanding, Application, Analysis														
L3	Analysis & Application For an analytical answer that addresses the question thoroughly, with clear explanation of two factors contributing to globalisation, supported by relevant economic concepts and examples. The answer clearly explains how each factor leads to greater international flows of goods and services, capital and/or labour, resulting in greater economic integration and globalisation. There is good ability to organise ideas and distinguish between relevant and irrelevant factors. Answer is well-focused on the question. Knowledge & Understanding: Demonstrates accurate knowledge and understanding of relevant economic concepts and theories, such as comparative advantage, trade liberalisation, FDI, MNCs/TNCs, specialisation and economic integration. <table border="1"> <thead> <tr> <th>Annotation</th><th>Description</th><th>Mark</th></tr> </thead> <tbody> <tr> <td>A + A</td><td>Analytical explanations for 2 question requirements</td><td>10</td></tr> <tr> <td>A + C + K</td><td>1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant</td><td>9</td></tr> <tr> <td>A + C</td><td>1 analytical and 1 cursory explanation for 2 question requirements</td><td>8</td></tr> </tbody> </table>	Annotation	Description	Mark	A + A	Analytical explanations for 2 question requirements	10	A + C + K	1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant	9	A + C	1 analytical and 1 cursory explanation for 2 question requirements	8	8 - 10
Annotation	Description	Mark												
A + A	Analytical explanations for 2 question requirements	10												
A + C + K	1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant	9												
A + C	1 analytical and 1 cursory explanation for 2 question requirements	8												
L2	Analysis & Application Analysis & Application: For an under-developed answer that attempts to address the question but contains gaps in the explanation of how the identified factors contribute to globalisation. Answers may be descriptive, contain incomplete chains of analysis, or provide limited application of relevant economic concepts/examples. Or for a one-sided analytical answer that explains only one factor.	5 - 7												

	Annotation	Description	Mark
	A + K	1 analytical explanation for 1 question requirement and an explanation of additional factor that is relevant	7
	C + C + K	Cursory explanations for 2 question requirements and an explanation of additional factor that is relevant	7
	C + C	Cursory explanations for 2 question requirements	6
	A + 0	1 analytical explanation for 1 question requirement	6
	K + C + K	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements and an explanation of additional factor that is relevant	6
	K + C	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements	5
L1	Knowledge & Understanding: For an answer that demonstrates limited knowledge of factors contributing to globalisation. Responses may merely identify or list factors, with little or no economic explanation of how they increase globalisation.		
	Annotation	Description	Mark
	C + 0	One cursory explanation for 1 question requirement	4
	K + K	Knowledge and understanding of 2 question requirements	4
	K + K	Knowledge and understanding of 1 question requirement and knowledge of the second requirement	3
	K + K	Knowledge of 2 question requirements	2
	K + 0	Knowledge and understanding of 1 question requirement	2
	K + 0	Knowledge of one question requirement	1
	0	Nothing of relevance in the answer	0

Marker's Comments

Part (a) was not a popular choice, with relatively few students attempting the question. Among the answers given, some students were able to identify factors contributing to globalisation but were unable to explain clearly how these factors have caused or

accelerated globalisation. Students should recognise that the question is asking for the **causes or drivers of globalisation**, rather than its benefits or outcomes. Some students, for example, wrote about how globalisation leads to higher economic growth, which describes a benefit of globalisation rather than a factor contributing to it. For the concept of **comparative advantage**, many students were also unable to explain the concept accurately and fully. Students should focus on how differences in opportunity costs provide the basis for specialisation and trade. This can be linked to the **development of bilateral and multilateral economic cooperation**, where countries recognise the gains from specialisation and trade and establish agreements to reduce barriers to trade, thereby facilitating and accelerating globalisation. Overall, students should ensure that each factor is developed with a clear **cause-and-effect link to the growth of global economic interconnectedness**.

Part (b) Discuss the extent to which governments should continue to promote globalisation to improve standard of living. [15]

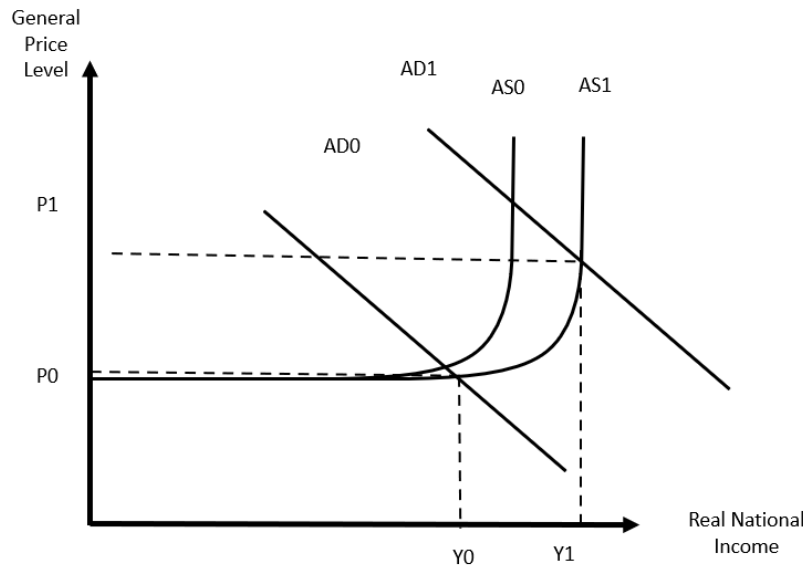
Question Analysis	
Command Word	Discuss the extent to which - Consider both sides of whether governments should continue to promote globalisation; - Develop economic analysis for each side; - Evaluate the arguments; - Reach a substantiated judgement on the extent to which governments should continue to promote globalization to improve SOL
Content Concept Words /	Promote globalization to improve SOL Students must consider whether the benefits of government-promoted globalisation justify continued government support, given the potential costs, with an objective of improving SOL. Students should cover both aspects of material and non material SOL.
Context	No context

Requirement	R1: Explain how <u>major technological improvements in transport and communications</u> have lead to increase in trade of goods and services, flow of capital and labour/ resources across countries. R2: Explain how <u>development of multilateral and bilateral economic cooperation</u> led to increasing liberalization of trade and globalisation.
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Introduction

Governments should continue to promote globalisation because greater international flows of **goods and services, labour and capital** can increase economic growth and improve both material and non-material standard of living. Greater international trade allows countries to specialise according to **comparative advantage**, resulting in a more efficient allocation of resources. As countries specialise in producing goods and services in which they have a comparative advantage and trade with other countries, the availability and variety of goods and services increase. Greater competition from foreign producers also encourages firms to improve productive efficiency, which may lower unit costs and prices. As consumers are able to purchase more goods and services with the same money income, their **real purchasing power increases**, leading to greater consumption and satisfaction and hence higher material SOL.

Requirement 1: Globalisation can improve both material and non-material SOL



Greater globalisation can also contribute to economic growth through aggregate demand. When there is more trade and investment, this causes a rightward shift of the AD curve from AD_1 to AD_2 , as shown in Figure 1. At P_0 , there is an unplanned fall in inventories and stock. Firms increase production of goods and services to meet the rise in demand and hire more factors of production, such as labour since labour is derived demand. A rise in factor income from increased employment will lead to rise in income induced consumption triggers the multiplier effect resulting in AD rise further to AD_1 where national output increases and real national income rises from Y_0 to Y_1 , by a multiplied effect, representing actual economic growth. Higher household incomes increase consumers' purchasing power and their ability to consume goods and services, thereby improving material SOL.

At the same time, greater investment leads to more capital flows, particularly FDI, increase the availability of capital in recipient economies. MNCs may also bring new technology, knowledge and skills, increasing the productivity and quality of factors of production. Greater labour flows can also improve the allocation of labour resources as workers move to economies where their skills are in greater demand. Together, these increase the quantity and quality of factors of production, causing LRAS to shift rightwards from $LRAS_1$ to $LRAS_2$, as shown in Figure 2. The economy is therefore able to achieve a higher level of potential output, supporting long-run economic growth without generating significant inflationary pressure. The expansion of productive capacity can also create employment opportunities and raise household incomes, further improving material SOL.

Globalisation may also improve non-material SOL. Technology and knowledge transfer associated with FDI can contribute to improvements in education, skills and health, while greater employment opportunities can provide individuals with greater financial security and social well-being. Hence, globalisation can improve not only material welfare through higher real incomes, purchasing power and consumption, but also aspects of non-material welfare.

The extent to which globalisation improves SOL depends on whether its gains are broadly distributed and sustainable. Although greater trade, labour and capital flows may increase average real income and employment, some workers may lose their jobs when less competitive domestic firms contract due to greater international competition. In addition, greater global production and trade may create environmental costs that reduce environmental quality and hence non-material SOL. Therefore, an increase in real GDP and material welfare does not necessarily translate into an improvement in overall SOL for all individuals.

Requirement 2: Governments may not want to continue promoting globalisation as it increases exposure to external shocks and accelerates structural changes

However, governments may not want to continue promoting globalisation because greater economic interdependence increases an economy's exposure to external supply shocks, which can adversely affect both price stability and real output.

Greater reliance on international trade means that disruptions occurring overseas can be transmitted to the domestic economy. For example, the recent US–Iran conflict and disruptions to oil shipments through the Strait of Hormuz can reduce global oil supply and cause world oil prices to rise. For oil-importing economies, higher oil prices increase firms' costs of production and transportation. As firms face higher unit costs, SRAS decreases and shifts left, resulting in a rise in the general price level and a fall in real GDP.

The fall in real GDP reduces firms' derived demand for labour, causing unemployment to rise and household incomes to fall. At the same time, the higher general price level reduces households' purchasing power. Hence, households experience both lower real income and reduced purchasing power, reducing their ability to consume goods and services and therefore lowering material SOL. Higher unemployment and reduced job security may also adversely affect non-material SOL.

However, the extent of the impact depends on the economy's dependence on imported energy and its ability to diversify its sources of supply. For an economy that is highly dependent on imported oil, a rise in global oil prices will result in a larger increase in firms' costs, causing a greater leftward shift of SRAS and a larger fall in real GDP. In contrast, economies with diversified energy sources or strategic reserves may be less affected. Hence, the adverse impact of globalisation on SOL is likely to be greater for economies that are highly dependent on global supply chains and imported energy.

Furthermore, governments may be concerned that globalisation can **accelerate structural change**, resulting in * economy has a comparative advantage. While this improves the efficiency of resource allocation in the long run, it may cause significant adjustment costs in the short run.

Workers displaced from declining industries may not possess the skills required by expanding industries, resulting in a **skills mismatch and structural unemployment**. The increase in unemployment reduces household income and hence **consumption**

expenditure (C). Since consumption is a component of aggregate demand, **AD decreases and shifts left**, causing a fall in real GDP.

The resulting fall in household income and purchasing power reduces households' ability to consume goods and services, lowering **material SOL**. Prolonged unemployment may also cause financial stress and reduce social well-being, thereby lowering **non-material SOL**. Hence, if workers are unable to adapt quickly to the structural changes brought about by globalisation, the resulting adjustment costs may outweigh some of its benefits to SOL.?

Conclusion

Nature of economy

Overall, governments should generally continue to promote globalisation, but the extent to which they should do so depends on the characteristics of the economy. For a small and highly open economy such as Singapore, which relies heavily on international trade and capital flows, withdrawing from globalisation would impose significant opportunity costs, as access to overseas markets, FDI and international resources is important for sustaining economic growth and employment. However, economies that are less competitive in particular industries may face greater adjustment costs from increased international competition and offshoring.

Global economic environment

The global economic environment also matters. Rising trade tensions and protectionist policies, particularly the increase in US tariffs, have contributed to greater uncertainty and fragmentation of the global trading system. In such an environment, greater global integration may increase an economy's exposure to external shocks and supply-chain disruptions. Hence, governments may need to prioritise resilience and diversification rather than simply pursuing maximum global integration.

Government policies and ability to adapt

Ultimately, the impact of globalisation on SOL depends not only on the extent of globalisation but also on how effectively governments manage its costs. Education and retraining can help workers adapt to structural changes, while support for workers affected by structural unemployment can facilitate the movement of labour towards new areas of comparative advantage. Appropriate environmental and social policies can also mitigate some of the negative effects of globalisation.

Therefore, governments should continue to promote globalisation, but not unconditionally. The benefits of trade, investment and specialisation are likely to be greatest when economies are able to adapt to structural change and manage external vulnerabilities. Hence, an open but managed approach to globalisation is more likely to generate broad-based and sustainable improvements in SOL than either unrestricted globalisation or a retreat into protectionism.

Level of Response Mark Scheme (LORMS)

Level	Descriptor	Mark
L3	For an analytical answer that addresses the question thoroughly with clear explanation, well-supported by relevant economic concepts and tools of analysis. There is clear and thorough explanation of how promoting globalisation can improve SOL and how promoting globalisation may not improve SOL . The answer makes effective use of relevant economic concepts such as comparative advantage, AD/AS, economic growth, structural unemployment, income inequality, negative externalities and material/non-material SOL . There is good application to relevant examples and contexts.	8 – 10 [A+A: 10] [A+C: 8-9]
L2	For an underdeveloped answer that attempts to explain how promoting globalisation can improve SOL and/or how it may not improve SOL. There may be gaps in the causal analysis, limited use of economic concepts, or limited application to relevant contexts. Or for a one-sided analytical answer that addresses only one of the two question requirements.	5 – 7 [A+K: 7] [C+C: 6-7] [A+O: 6] [K+C: 5-6]
L1	For an answer that shows limited knowledge and understanding of globalisation and its effects on SOL. Few valid points are made and these are mostly basic, descriptive or inadequately explained. Answers may focus on general benefits/costs of globalisation without clearly linking them to SOL.	1 – 4 [C+O: 4] [K+K: 2-4] [K+O: 1-2]
Evaluation		
E3	Well-explained evaluative judgements about 2 requirements + a summative conclusion.	5
E2	Well-explained evaluative judgements about 2 requirements. OR A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second + a summative conclusion.	4
	A well-explained evaluative judgement about 1 requirement + an evaluative statement for the second.	3
E1	A well-explained evaluative judgement about 1 requirement. OR evaluative statements for 2 requirements.	2
	An evaluative statement for 1 requirement.	1
E0	No attempt at evaluation.	0

Marker's Comments

The question focuses on **standard of living (SOL)**, so students needed a good grounding in economic concepts, particularly the **AD–AS framework**. Globalisation refers to increasing connectedness and integration among economies through increased trade in

goods and services, flows of capital and flows of labour. Students were therefore expected to use **at least two of these channels** to broaden their analysis of how globalisation can affect national income and, subsequently, material and non-material SOL.

For Requirement 1, students needed to explain how globalisation can bring about **higher and sustained economic growth** and how this translates into improvements in SOL. However, many responses were **significantly shorter than required**, while some students made no attempt due to poor time management. Among the responses attempted, analysis was often incomplete, with students missing key steps in the **AD–AS chain**. For example, some explained the impact on AD but did not explain how globalisation could increase productive capacity through **LRAS**. Others simply described how greater trade provides consumers with more choices and a wider variety of goods, and then linked this directly to higher SOL. Such responses were **too descriptive and lacked sufficient economic analysis**.

For Requirement 2, students should focus on **increased exposure to external shocks** and **accelerated structural change**, as these are key reasons why governments may be reluctant to continue promoting globalisation. Relevant examples can be used to strengthen the explanation. Students do not need to reverse the AD–AS analysis from Requirement 1 when explaining external shocks; instead, they should explain how exposure to external shocks can affect the economy and how accelerated structural change can result in **structural unemployment**, which can adversely affect SOL.

Overall, students should manage their time more effectively and ensure that their responses contain **sufficiently developed, step-by-step economic analysis**, rather than relying on descriptive statements or making an unsupported link to SOL.