



EUNOIA JUNIOR COLLEGE
JC2 Preliminary Examination 2022
General Certificate of Education Advanced Level
Higher 2

ECONOMICS

Paper 1 Case Studies

9757/01

12 September 2022

2 hours 15 minutes

Additional Materials: Answer Booklet

READ THESE INSTRUCTIONS FIRST

An answer booklet will be provided with this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper ask the invigilator for a continuation booklet.

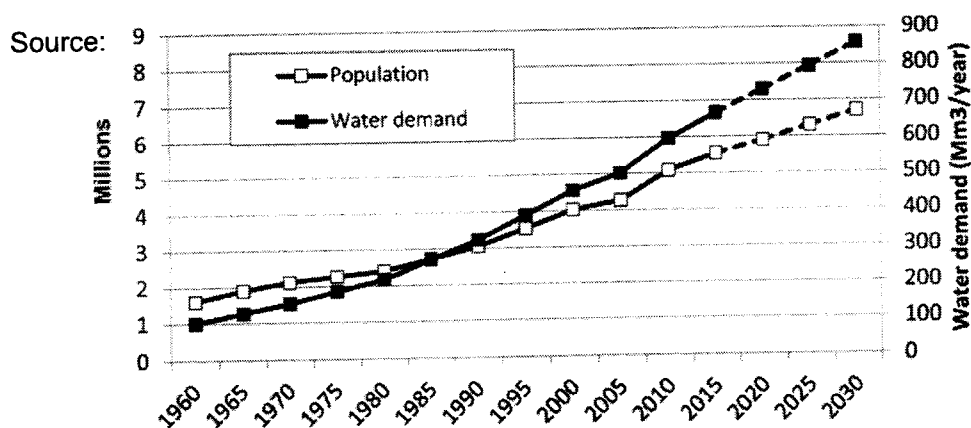
Answer **all** questions.

The number of marks is given in brackets [] at the end of each question or part question.

Please note that Paper 1 takes up 40% of the total score.

This document consists of **8** printed pages.

[Turn over

Question 1: Water stress**Figure 1: Population and water demand in Singapore**

Environmental Science: Water Research & Technology, September 2015

Extract 1: Singapore's water pricing strategy

Often, the price of water reflects its market value. On one hand, this price is indicative of the utility that consumers accord to it. Hence, upward revising of Singapore water price is an important and effective mechanism to reflect the scarcity value of water. On the other hand, water is priced to incorporate the higher cost of producing water from unconventional sources, specifically NEWater and desalinated water. The rising water price goes towards meeting the cost of water treatment, reservoir operations, NEWater production, desalination, used water collection and treatment, as well as the maintenance and expansion of the island-wide network of water pipelines. It is estimated that a rise in price of water by 30% will lead to higher water bills for the average household from \$37.50 to \$50 a month.

Adapted: Public Utilities Board, Water Price Revision, 2017

Extract 2: Singapore's water crisis

Singapore is one of the most water-scarce countries in the world. She is the fifth most likely country in the world to face extremely high water stress by 2040. Singapore is heavily dependent on rainfall due to the lack of natural water resources.

Prolonged dry spells cause or threaten to cause water shortages, as limited land is available for water storage facilities. Coupled with rising demand for industrial and residential purposes, the pressure is on to find alternative sources of water.

Unfortunately, the nature of water production necessitates the need for long-term heavy investments in infrastructure, such as the network of pipes, in addition to water treatment facilities. As such, producers may not be able to respond quickly to changes in demand. Scarce supplies of water also have a significant financial and economic impact. Corporates across all sectors are also increasingly facing financial risk from lack of investment in addressing water risks.

Source: Centre for Liveable Cities accessed 2022 and Reuters 7 June 2019

Extract 3: Water industry in different countries

Water management is the control and movement of water resources. It includes various activities like proper planning, efficient distribution, and optimal use of water resources so that it can meet current and future needs. The nature of the industry necessitates the need for heavy investment into infrastructure, such as the network of pipes, in addition to water treatment facilities. This means that a substantial part of the cost of supplying water services is a fixed cost.

Singapore

Singapore's entire water cycle is managed by the Public Utilities Board (PUB), Singapore's national water agency. PUB is perhaps one of the best-run utilities in East Asia and the world. Over the years, PUB has shown impressive performance improvements. Clear and measurable targets are set for drinking water quality, customer service, and financial performance. The provision of Public Utilities Act for PUB's financial performance states that its total revenues must be sufficient to meet its obligations, including depreciation and interest on capital and a reasonable proportion of the cost of infrastructure development.

England

Decades of underinvestment by successive governments has led to poor water quality, polluted rivers and beaches badly affected by sewage. Simply put, the water industry was not high up the list of priorities for Ministers when its funding came out of the same pot as the money for schools, hospitals and police officers.

But since privatisation, investment of nearly £160 billion has seen a strong and steady improvement in the industry, with customers now enjoying access to world-class drinking water. Having privatised the water industry, there are currently 23 private regional water companies in England and Wales. Two of the leading water utilities in the UK are Thames Water and United Utilities.

Despite the benefits that privatisation was purported to bring, research has shown that privatisation brought higher prices and lower investment in water infrastructure. At times, there was blatant disregard for environmental damages, such as when Thames Water was fined £20.3m in fines and costs in 2017, for a series of significant pollution incidents on the River Thames.

Adapted from: *Various*

Questions

- (a) Why might the changes shown in Figure 1 lead to an increase in per capita water usage in Singapore from 1960 to 2015? [2]
- (b) Explain how a consumer can make use of the concept of price and utility in deciding on the amount of water to consume. [2]
- (c) With reference to Figure 1 and Extract 1, discuss whether demand or supply factors have a greater impact on the market for water. [8]
- (d) 'Singapore is one of the most water-scarce countries...Prolonged dry spells cause or threaten to cause water shortages...' (Extract 2)
Explain what is meant by 'scarcity' and 'shortage'. [4]
- (e) (i) Identify and explain the type of market structure operating in the Singapore water industry. [4]
- (ii) 'With water scarcity looming, governments throughout the world have prioritised water management.'
Discuss why some countries choose to nationalise water management while others have chosen to privatise it. [10]

[Total: 30]

Question 2: Slowbalisation – the Endgame of Globalisation?**Extract 4: What is Slowbalisation?**

Slowbalisation is a phenomenon which involves a slowing down of the pace of global integration.

In recent decades globalisation has become so dominant, that we often assume the process is never-ending. Between 1970 and 2008, world exports as a share of GDP rose from 13% to 31%, and it seemed that globalisation was an unstoppable force. However, since 2008, something unexpected has happened. Exports as a share of GDP has flatlined and even started to fall. Other metrics show a similar fate, a fall in global bank loans, foreign direct investment has fallen quite sharply, and multinationals share of profit has decreased.

Source: *economicshelp.org*, accessed 11 August 2022

Table 1: Imports of goods and services (% of GDP)

	2016	2017	2018	2019	2020
US	14.6	15.0	15.2	14.5	13.2
China	17.3	17.9	18.4	17.4	16.0
Singapore	138.5	144.9	147.7	146.5	150.0
World	26.6	27.5	28.5	27.7	25.5

Source: *World Bank national accounts data*, accessed 11 August 2022

Table 2: Exports of goods and services (% of GDP)

	2016	2017	2018	2019	2020
US	11.9	12.2	12.3	11.7	10.1
China	19.5	19.6	19.1	18.4	18.5
Singapore	164.7	171.3	176.5	175.2	181.7
World	27.3	28.2	29.1	28.2	26.3

Source: *World Bank national accounts data*, accessed 11 August 2022

Table 3: Foreign direct investment, net inflows (% of GDP)

	2016	2017	2018	2019	2020
US	2.54	1.95	1.04	1.41	1.01
China	1.55	1.35	1.69	1.31	1.72
Singapore	20.5	28.9	21.5	29.6	21.6
World	3.53	2.67	1.05	1.68	1.44

Source: *World Bank national accounts data*, accessed 11 August 2022

Extract 5: Trump prods General Motors over its auto plants in China

The world has seen a shift in their approach towards globalisation. US President Donald Trump, who is engaged in a trade war with Beijing, said on Friday that the largest US automaker, General Motors (GM), should begin moving its operations back to the US.

'General Motors, which was once the Giant of Detroit, is now one of the smallest auto manufacturers there. They moved major plants to China, BEFORE I CAME INTO OFFICE. This was done despite the help given to them by the US. Now they should start moving back to America again?' Trump said in a post on Twitter.

He refers to a Bloomberg News story that reported GM's hourly workforce of 46,000 US workers has fallen behind that of Fiat Chrysler as the smallest of the Detroit Three automakers. Over the past four decades, GM has dramatically cut the size of its overall US workforce, which numbered nearly 620,000 in 1979. GM's decision to close four plants in the United States is a central issue in the contract talks.

Trump has made boosting auto jobs a key priority and has often attacked automakers on Twitter for not doing enough to boost US employment. China is the world's largest auto market, and its government policy favours automakers assembling vehicles there, and not importing them from overseas.

Source: Reuters, 4 May 2020

Figure 2: Composition of US Imports (2020)

Nuclear Reactors, Boilers, Machinery and Mechanical Appliances ; parts thereof 15.9%	Pharmaceutical products 5.97%	Mineral fuels, mineral oils 5.3%	
	Furniture 2.75%		
Electrical machinery and equipment and parts thereof 14.9%	Precious metals, gems and jewellery 4.12%		
	Vehicles 11.3%	Optical, Photographic, instruments etc 4.28%	Plastic 2.82%
Apparel 1.9%			Iron or steel articles 1.6%

Adapted from *oec.world*, accessed 12 August 2022

Figure 3: Composition of US Exports (2020)

Nuclear Reactors, Boilers, Machinery and Mechanical	Electrical machinery and equipment and parts thereof	Mineral fuels, mineral oils 11.8%	Precious metals, gems and jewellery 3.49%
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Adapted: *oec.world*, accessed 12 August 2022

Extract 6: The great manufacturing shift out of China

Over the past four years, the United States have been discouraging imports to safeguard and return jobs back home. From the Chinese perspective, however, this is a strategic shift whereby China switches its focus from economic growth to economic control. To that end, it is pursuing three key objectives: (1) eliminating its dependence on foreign countries and corporations for critical technology and products; (2) facilitating the dominance of domestic firms; and (3) leveraging that dominance into global competitiveness.

It's not just economic ties between China and the US that are in danger. Europe, too, is increasingly talking of rolling back the deep trade and investment ties it has developed with Beijing in recent decades as well as its Brexit departure from the European Union (EU). Perhaps today's unprecedented level of economic integration has gone too far, bringing more pain and less gain.

How will China respond? In some ways, China has launched a campaign to develop more advanced technologies at home and rely less on US and other Western suppliers. Of late, many Chinese firms have proved adept at surviving the fallout with the US — Huawei, for example, once relied on US firms for many of the components of its smartphones but now thrives without. Still, China's quest to bolster its own capacity for innovation and to become a leader in advanced technologies relies on easy access to firms and researchers around the world, and it doesn't want to see those connections severed entirely. At the same time, with an already-slowing economy hammered by the pandemic this year, China will likely do what it can to ease the economic tensions with the US.

Adapted: *Foreign Policy*, 14 May 2020; *HBR*, May 2021

Extract 7: FTAs and globalisation critical to Singapore's survival

Embracing globalisation is critical to Singapore's survival and pursuing free trade agreements (FTAs) are key to the country's existence, said Health Minister Ong Ye Kung.

Singapore is also growing into a centre for technology, research and development, with many global tech firms choosing the country to set up their regional or global innovation centres, he said. Singapore's network of FTAs is not just a major selling point for the Government to persuade investors to come and do business, but is also fundamentally important to the country because it needs the world to "earn a living", he added.

FTAs are especially important to small and medium-sized enterprises (SMEs) because they free these businesses from being constrained by Singapore's small domestic market and give them access to overseas customers. The country's investments overseas have increased five times, from \$200 billion in 2005 to more than \$930 billion in 2019, he added.

FTAs also require governments to protect foreign investments and ensure that regulations are imposed fairly and equally on both local and foreign companies. They also set standards to protect intellectual property. These agreements also help local companies that are expanding overseas because they hope that Singapore can negotiate similar protections for them in overseas markets.

Source: *The Straits Times*, 6 July 2021

Questions

- (a) With reference to Figures 2 and 3, explain one reason why the theory of comparative advantage may not be applicable to US and its trade partners. [2]
- (b) With reference to Tables 1 to 3:
- (i) What evidence is there to suggest that globalisation has slowed down over the period between 2016-2020? [2]
- (ii) Explain whether the size of Singapore's multiplier is likely to be small or large and identify **one** difficulty in using the given data to determine it. [3]
- (c) (i) With the aid of a diagram, explain how President Trump's push for GM to move operations back to the US will improve its labour market. [3]
- (ii) Suggest one possible reason why it may be difficult for the US government to accurately calculate its unemployment rate. [2]
- (d) (i) Using AD/AS analysis, discuss whether the exit of global manufacturing firms from China brings about more opportunities than threats to the Chinese economy. [8]
- (ii) Singapore is actively signing FTAs with more countries to diversify trade risk.

Discuss whether the above policy is the most effective option for China to mitigate the costs of slowbalisation. [10]

[Total: 30]



EUNOIA JUNIOR COLLEGE
JC2 Preliminary Examination 2022
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ECONOMICS

Paper 2 Essays

9757/02

16 September 2022

2 hours 15 minutes

Additional Materials: Answer Booklet

READ THESE INSTRUCTIONS FIRST

An answer booklet will be provided with this question paper. You should follow the instructions on the front cover of the answer booklet. If you need additional answer paper ask the invigilator for a continuation booklet.

Answer **three** questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

The number of marks is given in brackets [] at the end of each question or part question.

Please note that Paper 2 takes up 60% of the total score.

This document consists of 3 printed pages and 1 blank page.

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section.

- 1** Health insurance protects consumers against the risk of expensive and unanticipated medical treatment. However, the elderly may not adequately insure themselves as they may downplay the need for medical attention. Moreover, insurance premiums, which reflect the risk that individuals have, can be prohibitively high for the elderly, resulting in a situation of adverse selection.
- (a) Explain how imperfect information can lead to underconsumption of health insurance for the elderly. [10]
- (b) Discuss possible measures that could be adopted to increase consumption of health insurance for the elderly. [15]
- 2** When production exceeds consumption in a free market, a drop in price will normally restore equilibrium. However, in the case of an agricultural product like corn, high price floors are set by governments to protect the income of farmers.

Source: www.tandfonline.com, accessed 17 August 2022

- (a) Explain why a surplus of agricultural product like corn might exist and why a fall in price cannot eradicate the surplus. [10]
- (b) Discuss the alternative policies that could be adopted by a government to address future surpluses. [15]
- 3** Sembcorp Solar Singapore manufactures solar energy equipment. In 2021, the firm embarked on building solar panel systems across 1,154 rooftops in Singapore. With Singapore's commitment towards sustainability, the firm's emphasis on process innovation has positioned it well to further boost its profits.
- (a) Explain how Sembcorp Solar Singapore arrived at its output decision to build solar panel systems for 1,154 rooftops. [10]
- (b) Discuss whether process innovation is the best strategy for Sembcorp Solar Singapore to increase its profits. [15]

Section B

One or two of your three chosen questions must be from this section.

4 The US Federal Reserve cut interest rates to essentially zero to shelter the economy from the effects of COVID-19, such as falling prices and rising unemployment. This policy will be maintained until the economy is on track to achieve its economic goals.

- (a) Explain why the cut in interest rates is instrumental in achieving low unemployment in the US. [10]
- (b) Assess whether maintaining low interest rates, on balance, will allow the US to attain price stability. [15]

5 The COVID-19 pandemic has resulted in Singapore introducing circuit breaker measures, which include a stay-at-home order coupled with international border closures. The government introduced a Job Support Scheme to offset labour costs for affected industries such as the aviation and tourism sectors.

- (a) Explain how circuit breaker measures might have consequences on Singapore's aggregate demand and aggregate supply. [10]
- (b) Singapore has a high Gini coefficient.

Discuss whether inclusive growth remains a macroeconomic priority during an economic downturn. [15]

6 Australia achieved a record high trade surplus of over A\$75 billion in 2020. This is commendable despite China, its biggest trade partner, imposing trade restrictions on Australia like a quota on cotton. One reason for the trade surplus was strong prices for Australia's main exports like agricultural products and iron ores.

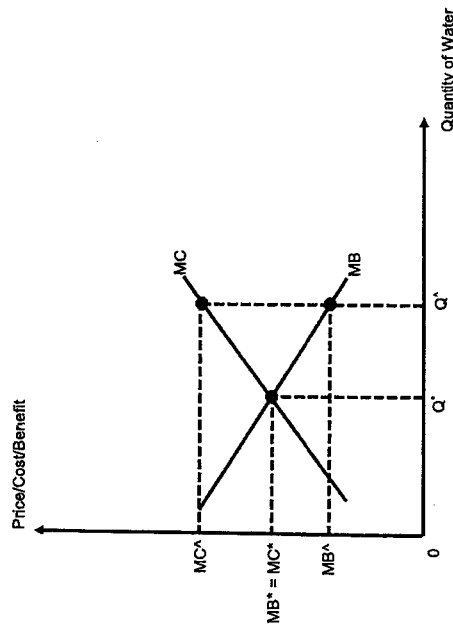
- (a) Explain how Chinese import quotas will affect Chinese cotton producers and consumers and its effect on Australia's balance of trade. [10]
- (b) Discuss whether net exporters like Australia should pursue free trade at all costs. [15]

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2022 JC2 H2 Prelims Paper 1 SAMS

CSQ1

(a)	<p>Why might the changes shown in Figure 1 lead to an increase in per capita water usage in Singapore from 1960 to 2015?</p> <p>As demand for water increases at a faster rate/more than/greater extent/greater than population increase from 1960 to 2015, this suggests that there is increase in per capita water usage on Singapore.</p>	[2]
(b)	<p>Explain how a consumer can make use of the concept of price and utility in deciding on the amount of water to consume.</p> <p>A rationale consumer's objective is to maximise his/her utility when consuming a good/service. To maximise his/her utility in water consumption, consumer will consume up to the point where marginal benefit (MB) (additional utility/value of satisfaction) of doing so equal to the marginal cost (MC) (additional price incurred to consume the water).</p>	[2]



For instance, at $Q^$, $MC^ > MB^$. Hence, consumers will decrease the amount of water consume until Q^* where $MC^ = MB^$.

(c)	<p>With reference to Figure 1 and Extract 1, discuss whether demand or supply factors have a greater impact on the market for water.</p>	[8]
<p>Demand factor (from Figure 1): Figure 1 suggests that there is a rising demand for water due to rising size of population. There would be an increase in the demand for water. The demand curve to shift right from D_0 to D_1, as shown in Figure 1 below, ceteris paribus, resulting to an increase in total expenditure to $OP_1E_1Q_1$ for water consumers and increase total revenue for water companies.</p> <p>Supply factor (from Extract 1): Extract 1 mentioned that the price of water increases due to the need to cover higher cost of water production using unconventional methods such as NEWater and desalination. With increased costs of production, firms are less willing and able to produce water at ever price level. This means that the supply of water will decrease, and the supply curve will shift from S_0 to S_1, as shown on Figure 2 below.</p>		

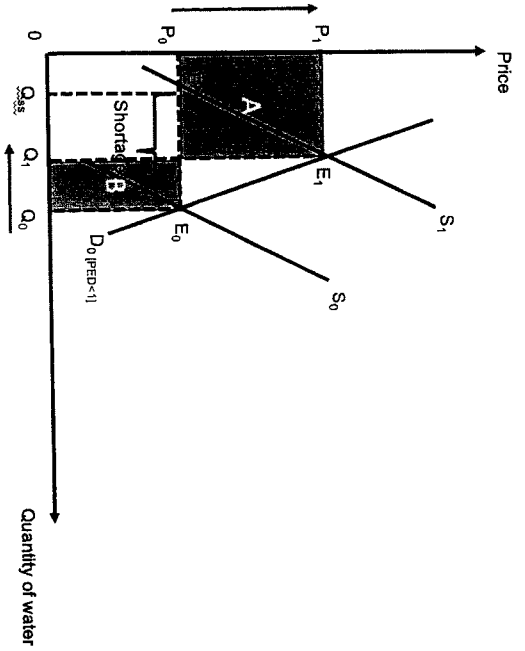


Figure 2. Fall in supply of water

Figure 2 shows that when the supply of water falls from S_0 to S_1 , at the initial P_0 , there will be a shortage of distance E^*E_0 resulted as quantity demanded (Q_d) is greater than quantity supplied (Q_s). This shortage will contribute to an upward pressure on price. (Optional: The upward pressure on price will act as a signal to consumers to decrease their quantity demanded for water along demand curve, D_0 and the firms generating water production to decrease their quantity of water supplied along supply curve, S_1 , until the shortage is eliminated at higher equilibrium level E_1 .)

As evident from Extract 1, the rise in price of water by 30% is estimated to lead to higher water bills for the average household from \$37.50 to \$50 a month. This suggests that the demand for water is relatively price inelastic for consumers because water has a high degree of necessity with limited substitutes for essential activities such as cooking and washing. Hence, the higher price of water will result to a less than proportionate fall in quantity demanded from Q_0 to Q_1 and the consumers of water will see an increase in water consumption expenditure of Area $0Q_1E_1P_1$, as the increase in consumer expenditure of Area A is greater than the fall in consumer expenditure of Area B.

Evaluation (2m)

Stand (Weigh which curve shifts more) + justification

E.g: Increase in demand < fall in supply because Figure 1 shows that the increase in population size is tapering off in the long run. This could be attributed to aging population and falling birth rates. Furthermore, the increase in the costs of production would be hard to mitigate as Singapore faces higher water stress and

incurs higher costs of production when investing in new infrastructure and technology.

Notes:
 o Evaluative marks are awarded as long as there is some well-contextualised justification that covers the extent of the increase in the demand and/or the fall in the supply.

o Alternative approaches to evaluation are accepted. For example, evaluative marks are awarded when students considered the impact on the extent of the increase in price of water: if demand is price-inelastic, (this is relevant only when the supply changes), so the key issue addressed is whether the inelasticity of demand has greater impact in this case or the shift in supply.

Level of response and descriptors
 L2 Good analysis of outcomes of water price on equilibrium price, equilibrium quantity and total expenditure/revenue using BOTH Figure 1 (demand factor) and Extract 1 (supply factor), supported with good linkages to economic theories.

L1: 6m requires use of case evidence and diagrammatic interpretations, PAP explanation and application of PED analysis.

L1 Listing of theories with little to no reference to extract materials 1-3

L1: 3m max for well explained outcomes on EITHER Figure 1 or Extract 1 with some hints of PAP analysis.

Evaluation

E2 Justified stand with reference to extract, with considerations to other parameters. 2-3

E1 Some attempt to justify a stand 1

(d)	<p>'Singapore is one of the most water-scarce countries...Prolonged dry spells cause or threaten to cause water shortages...' (Extract 2)</p> <p>Explain what is meant by 'scarcity' and 'shortage'. [4]</p> <p>Water scarcity refers to a finite number of natural resources (e.g., river and groundwater drying out) that are unable to meet unlimited wants, particularly in megacities with strong population growth.</p> <p>Water shortage refers to a very high demand for water and a decrease in supply. As a result, there was a water shortage since the quantity demanded for water exceeded the quantity supplied at a specified price.</p>
(e) (i)	<p>Identify and explain the type of market structure operating in the Singapore water industry. [4]</p> <p>Singapore water industry is likely operating like a monopoly. This is because Extract 3 mentioned that there is only one dominant water firm in Singapore that is the Public Utilities Board (PUB). PUB is operating like a monopoly due to high natural and artificial barriers to entry into this industry. Examples of natural barriers to entry include financial BTE such as the higher start-up/sunk costs of installing underground water pipes to supply water to all parts of Singapore. Moreover, such high fixed costs meant that internal EOS (lower unit costs) are enjoyed by the dominant firm which produces on a larger scale of production. This would deter new firms from entering as they need to incur high capital outlay and they might not be able to match the low unit costs of PUB.</p> <p>(Examples of artificial barriers to entry are also accepted and these include high licensing and certification costs to ensure the safety of the water for consumption.)</p>
(ii)	<p>'With water scarcity looming, governments throughout the world have prioritised water management.'</p> <p>Discuss why some countries choose to nationalise water management while others have chosen to privatise it. [10]</p> <p>Why some countries such as Singapore choose to nationalise water management and NOT PRIVATISED</p> <p>Nationalisation refers to government taking over ownership of certain industries. For example, Singapore government chose to take over control of key industries such as water supply. This is to prevent the provision of such essential services to be subjected to the private firm's profit-maximising behaviour.</p> <ul style="list-style-type: none"> How nationalisation works With government ownership, the objective changes from profit-maximising to that of welfare-maximising. Hence, the government bases its price and output decision on maximising efficiency and equity. For example, a government might choose to produce water at the socially optimal quantity, Q_s, where

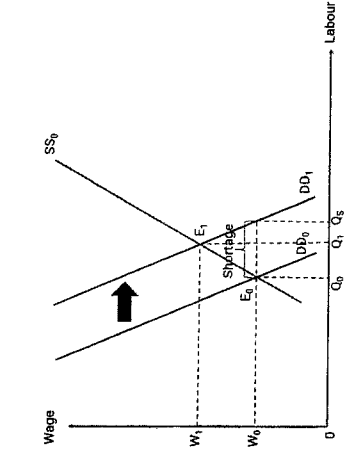
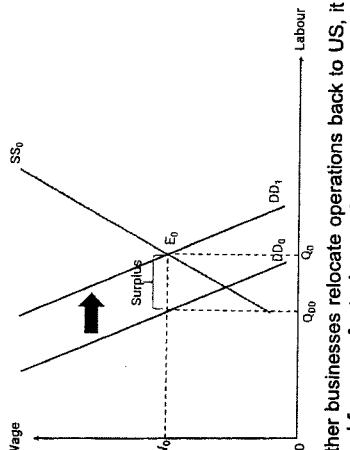
<p>$P=MC$ as shown on Diagram 4 below. This helps to remove the allocative inefficiency associated with market dominance.</p>	<div data-bbox="239 224 638 828"> </div> <p>Diagram 4: Nationalisation of Monopoly</p> <ul style="list-style-type: none"> Advantages of nationalisation By taking over water production, the Singapore government can directly and promptly ensure the quality of water delivered all through the island. This maintains the security of its residents and their general health, as well as keeping water prices affordable, particularly for lower-income households, at P_s as opposed to P_m, ensuring equity. Limitations of privatisation Countries may choose to nationalise as there might be even higher monitoring cost incurred in monitoring the service quality of the private firms e.g. regular maintenance of the water plants across all 23 private regional water companies in England and Wales will require significant labour expertise and high costs. Extract 3 also suggested that due to lack of monitoring, private firms like Thames Water causes water pollution by letting untreated sewage water to leak into surrounding rivers. The firm does not account for the fact that farmers and fishermen who use the river (third parties) bear the external cost of financial losses due to falling crop yields and shrinking fishery stocks caused by polluted water from sewage water discharged. UK government might have to end up shouldering such financial losses in order to help the farmers and fishermen in the agricultural sectors. In certain case, subnormal profits is incurred when producing at $P=MC$. Governments will have to cover the subnormal profits with
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<p>tax revenue, or by diverting subsidies for other industries (such as healthcare), which may worsen allocative efficiency overall.</p> <p>Some countries such as UK choose to privatise water management and NOT NATIONALISED</p> <p>Some countries might engage private companies to design and build the water treatment plant, operate, maintain and secure financing to supply water to the public.</p> <ul style="list-style-type: none"> • Advantages of privatisation There will be clearer accountability when water services are delivered by respective private water companies with which consumers signed a contract, and they will know who to approach for service queries and feedback, thus improving quality and consumer welfare, as shown in UK's situation in Extract 3. Due to the absence of substitutes of water for consumer (PED<1), these private water firms are also able to charge a higher price (Extract 3) and hence are more likely to achieve supernormal profits. Such profits might then be spent to increase the quality of water delivered to customers, as stated in Extract 3 that UK residents are drinking 'world-class water.' • Limitations of nationalisation Some nations may lack the technical competence required to run the company. Governments in developing countries, for example, may be unable to run a water purification plant efficiently because their residents lack the education/qualifications and expertise required to manage such large and high-tech infrastructure, resulting in higher production costs and worsening productive inefficiency. This would further deteriorate water quality owing to inadequate management, thus impacting customer welfare. In Thailand, for example, the central water agency lacks local participatory planning and awareness of water-related concerns in each particular state. Its agency mostly concentrates its limited resources on megaprojects like dam construction while ignoring the rural sections of its country. <p>Evaluation</p> <ul style="list-style-type: none"> • Stand: The size of the country and the competency of the operating government may influence whether a country chooses to nationalise or privatise. Because Singapore has a small land area, it makes sense for our water to be administered through nationalization to ensure consistency of water quality provided. • Contextualised: Nevertheless, whether nationalisation or privatisation, the position may not be set in stone. Even if Thames Water was fined £20.3m in 2017 for a number of serious pollution events, as a private firm, they can simply pass on the fines to end consumers in the form of higher prices, deteriorating 	
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<p>equity and consumer surplus. As a result, while the UK is now privatising its water services, the government may opt to take over and nationalise them after the government has built up its own expert team and the water pipe across the country has been fully built-up and well established by private entities.</p>	
Level of response and descriptors	
L2	Good analysis of reasons of BOTH nationalisation AND privatisation with references to extracts, supported with good linkages to economic theories.
L1	Requires use of case evidence and diagrammatic interpretations. Listing of theories with little to no reference to extract materials
Well-explained reasons on either nationalisation OR privatisation	
Evaluation	
E2	Justified stand with reference to extract, with considerations to other parameters to weigh the reasons of the policies.
E1	Some attempt to justify a stand with the interpretation of either country's choice of policy.
	5-7 1-4 2-3 1

CSQ 2

(a)	<p>With reference to Figures 2 and 3, explain one reason why the theory of comparative advantage may not be applicable to US and its trade partners. The theory of comparative advantage (CA) states that countries should specialize and export goods they have a relatively lower opportunity cost in production, while importing goods that they have relatively higher opportunity cost. Hence US should export and import different goods and services. [1] However, from Figures 2 and 3, US is importing and exporting goods the same goods, for example vehicles and nuclear reactors as given by their relative similar percentage. This shows that intra-industry trade has occurred, hence theory of CA may not be applicable. [1]</p>	[2]
(b)	<p>With reference to Tables 1 to 3:</p> <p>(i) What evidence is there to suggest that globalisation has slowed down over the period between 2016-2020? The total trade as a percentage of world GDP has fallen - From Tables 1 and 2, the figure fell from 53.9% to 51.8%. [1] There is a fall in net inflow of world FDI as a percentage of world GDP - From Table 3, the figure fell from 3.53% to 1.44% [1]</p>	[2]
(ii)	<p>Explain whether the size of Singapore's multiplier is likely to be small or large and identify one difficulty in using the given data to determine it. Singapore's multiplier size is likely to be small [1] As seen in Table 2, the imports of goods and services as percentage of GDP is large (above 100%). This could imply that the marginal propensity to import (MPM) for Singapore is large. Given that the multiplier is $k = \frac{1}{1/\text{marginal propensity to withdraw (MPW)}}$, which consists of MPM, it is therefore likely that the size of multiplier will be small. [1] One difficulty would be a lack of information from Tables 1 to 3 to determine the other components of MPW, for example savings and tax rates for Singapore which can be used to determine the size of marginal propensity to tax and marginal propensity to save, which could affect the size of the multiplier as well. [1] Alternatively: It will not be accurate to use imports as a % of GDP because this is the average propensity to import rather than the marginal propensity to import. Any other plausible difficulty should be accepted.</p>	[3]

(c)	(f)	<p>With the aid of a diagram, explain how President Trump's push for GM to move operations back to the US will improve its labour market. Approach 1: Improvement in labour market = higher wages and higher quantity</p> <p>Diagram [1]</p>  <p>When GM and other businesses relocate operations back to US, it leads to a rise in derived demand for manufacturing workers. A rise in demand for workers will lead to a rightward shift of the demand curve from DD_0 to DD_1. At the existing wage W_0, there will be a shortage as quantity demanded for labour is greater than quantity supplied for labour, this results in an upward pressure on wages until the new equilibrium E_1 is reached, at higher wages W_1 [1] and higher quantity of labour hired Q_1, improving the labour market.</p> <p>Approach 2: Improvement in labour market = reducing demand deficient unemployment</p> <p>Diagram [1]</p>  <p>When GM and other businesses relocate operations back to US, it leads to a rise in derived demand for manufacturing workers. A rise in demand for workers will lead to a rightward shift of the demand curve from DD_0 to DD_1. This will eliminate the original surplus at W_0, reducing demand deficient</p>	[3]
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	unemployment [1] as more workers are now employed by manufacturing firms, hence improving the labour market.													
(ii)	<p>Suggest one possible reason why it may be difficult for the US government to accurately calculate its unemployment rate.</p> <p>Unemployment rate is calculated by: $\frac{\text{total number of unemployed}}{\text{total labour force}} \times 100\%$ [1]</p> <p>It may not be calculated accurately due to unreported and illegal employment which causes the unemployment number to be miscalculated. [1]</p> <p>Accept any other plausible reason for e.g:</p> <ul style="list-style-type: none"> • Lagging indicator • Discouraged workers that have left the labour force not accounted for • Dynamic pool of participants in labour force • Underemployment • Statistical limitations and errors especially for a large country like the US 	[2]												
(i)	<p>Using AD/AS analysis, discuss whether the exit of global manufacturing firms from China brings about more opportunities than threats to the Chinese economy.</p> <p>Question Analysis</p> <table border="1"> <tr> <td>Command</td> <td>Description</td> </tr> <tr> <td></td> <td>Discuss – 2 Sided + Evaluation</td> </tr> <tr> <td>Content</td> <td>AD/AS</td> </tr> <tr> <td>Context</td> <td>Chinese Economy</td> </tr> <tr> <td>Start Point</td> <td>Global manufacturing firms exiting from China</td> </tr> <tr> <td>End Point</td> <td>Positive and Negative impacts (BUGP) for China</td> </tr> </table> <p>Introduction:</p> <p>The exit of global manufacturing firms can bring about both positive and negative impacts on the macroeconomic objectives, the government must assess the opportunities and threats to determine whether government policies are required.</p> <p>Perspective 1 - Exit of manufacturing from China brings about more threats</p> <p>As more international manufacturing businesses exit China and relocate back to their own home country, this would result in a fall in FDI inflow towards the Chinese economy. China will therefore experience a fall in investment (I), which is a component of aggregate demand (AD). Therefore, China will experience a fall in AD from AD0 to AD1 as seen in the diagram below.</p>	Command	Description		Discuss – 2 Sided + Evaluation	Content	AD/AS	Context	Chinese Economy	Start Point	Global manufacturing firms exiting from China	End Point	Positive and Negative impacts (BUGP) for China	[8]
Command	Description													
	Discuss – 2 Sided + Evaluation													
Content	AD/AS													
Context	Chinese Economy													
Start Point	Global manufacturing firms exiting from China													
End Point	Positive and Negative impacts (BUGP) for China													

General Price Level

This will result in an unplanned accumulation of inventory stocks, which causes firms to cut down on production in the next business cycle, causing them to hire less factors of production such as labour and hence pay households less factor income. This will cause them to decrease induced consumption and further cause a fall in AD. This repeats multiple rounds until real national income (RNY) falls more than proportionately than the AD, from Y0 to Y1. This causes a fall in actual economic growth while leading to a rise in demand deficient unemployment, hence threatening China's ability to achieve its macroeconomic objectives.

**Alternative responses that mention how LRAS may also fall due to foreign countries reducing their FDI resulting in a fall in quantity and quality of capital goods Fall in productive capacity negative potential growth*

Perspective 2 - Exit of manufacturing from China brings about more opportunities

With the exit of manufacturing, China can eliminate dependence on foreign country and focus on developing critical technology and products to improve its global competitiveness. China can undergo a sector shift from a manufacturing based to technology driven economy. This could see China investing in technology to improve production processes, which can lead to an increase in the quality and quantity of capital goods, and hence a rise in the productive capacity of China. This leads to a rise in AD from AD0 to AD1 and LRAS from LRAS0 to LRAS1. If China can produce high tech goods such as electric vehicles, it can also lead to a rise in foreign demand for Chinese goods as its export competitiveness improves, leading to a rise in export revenues, hence (X-M) rises, increasing AD again.

The graph shows the AS-AD model. The vertical axis is 'General Price Level' and the horizontal axis is 'Real National Income'. The initial equilibrium is at the intersection of AD_0 and $LRAS_0$, corresponding to price level P_0 and output Y_0 . A rightward shift in aggregate demand to AD_1 moves the economy to a short-run equilibrium at the intersection of AD_1 and $LRAS_0$, with a higher price level P_1 and higher output Y_1 . A subsequent rightward shift in the long-run aggregate supply curve to $LRAS_1$ moves the economy to a new long-run equilibrium at the intersection of AD_1 and $LRAS_1$, with the same price level P_1 but higher output Y_1 .

China will experience actual and potential economic growth as output rises from Y_0 to Y_1 , while full employment level rises from Y_0 to Y_1 , therefore leading to **sustained economic growth**, hence bringing about more opportunities for China.

Evaluation:
Stand + Reason:
 On balance, this exit of manufacturing would bring about more threats than opportunities as China is still largely dependent on global economies as it is highly integrated in many production chains.

Justification:
 Even if it wants to achieve a sectoral shift, it would not be achievable in the short run if its economic growth is greatly hampered. The exit of foreign businesses within China may also slow down technological transfer which may impact China's quest for higher innovation and technological dominance, preventing the opportunities from coming into fruition.

Level	Descriptors	Marks
L2	Answer provides a detailed and balanced response that considers both the threats and opportunities associated with the exit of global manufacturing from China	4-6
L1	Answer provides some understanding and knowledge of either threats or opportunities associated with the exit of global manufacturing from China	1-3
E	For an evaluative comment that builds on prior analysis.	1-2

(ii) **Singapore is actively signing FTAs with more countries to diversify trade risk.**

Discuss whether the above policy is the most effective option for China to mitigate the costs of slowbalisation. [10]

Command	Description
	Discuss – 2 Sided + Evaluation
Content	Macroeconomic policies – FTA, Supply Side Policy
Context	Chinese economy
Start Point	Slowbalisation – Slowdown in trade and investment flows
End Point	Whether FTA can reverse negative economic growth and demand-deficient unemployment

Question Analysis

Introduction - Context of the negative impact of Slowbalisation on China

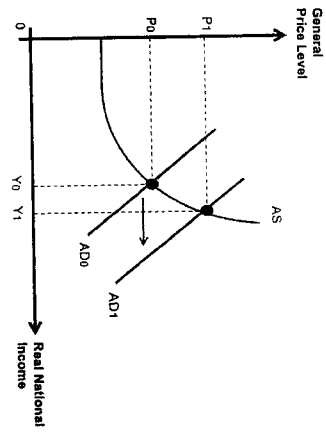
The negative consequences of slowbalisation would result in poor actual economic growth and possible demand deficient unemployment as trade and foreign direct investments (FDI) slow down. Hence China must consider various policies to mitigate the negative impacts, namely free trade agreements and supply side policies.

Perspective 1 - Free Trade Agreement (How)

The Chinese government can seek to sign more free trade agreements with more countries to enhance trade and investment flow via tariff concessions, preferential access to certain sectors, faster entry into markets and Intellectual Property (IP) protection.

- With FTAs, China will be removing tariffs on imports while its trading partners will also be removing tariffs on Chinese exports. This would lead to a fall in the relative prices of Chinese exports, assuming $PED_X > 1$, this will lead to a more than proportionate rise in quantity demanded for Chinese exports, leading to a rise in export revenue.
- At the same time, with more FTAs, this would lead to a rise in Chinese exports to more countries due to a larger foreign consumer base. This can lead to a rise in demand for Chinese exports too. Both impacts would lead to a rise in China's net export revenue.

This would reverse the trend of slowbalisation leading to an increase in AD, from AD_0 to AD_1 . This leads to an unplanned shortfall of inventory stocks, hence firms will step up production in the next business cycle, hiring more factors of production and hence increase factor payment, leading to a rise in induced spending. This will occur multiple rounds as real national income increases more than proportionately to the initial rise in AD achieving actual economic growth from Y_0 to Y_1 . As output rises, there is a greater derived demand for labour, hence this will lead to a fall in demand deficient unemployment at the same time, hence mitigating the costs of slowbalisation.



Perspective 1 - Free Trade Agreement [Limitation]

With free trade agreements, China will be able to import goods and services from abroad at a lower cost. This could cause domestic consumers to switch away from domestically produced goods to cheaper imports from abroad. This could potentially lead to a large fall in domestic consumption (C). Given that China has a large domestic market, the increase in (X-M) may be negated by the decrease in C, reducing the significance of an increase in AD via free trade. At the same time, domestic Chinese firms might face increased competition from foreign firms from developing countries and might be forced to shut down. This would lead to workers being displaced and subsequently facing a mismatch of skills with job vacancies and hence remaining unemployed leading to structural unemployment. Hence the cost of economic slowdown and demand deficient unemployment may not be addressed.

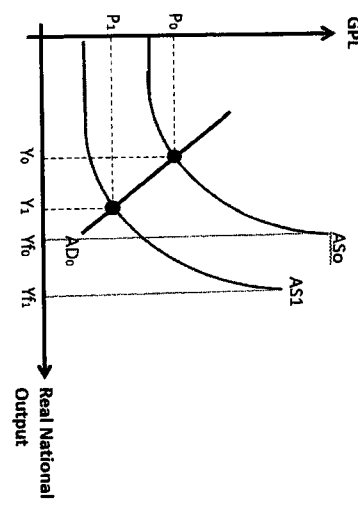
Perspective 2: Supply Side Policy [How]

Extract 6 first para: From the Chinese perspective, however, this is a strategic shift whereby China switches its focus from economic growth to economic control. To that end, it is pursuing three key objectives: (1) eliminating its dependence on foreign countries and corporations for critical technology and products; (2) facilitating the dominance of domestic firms; and (3) leveraging that dominance into global competitiveness.

Extract 6 last para: China has launched a campaign to develop more advanced technologies at home and rely less on US and other Western suppliers... China's quest to bolster its own capacity for innovation and to become a leader in advanced technologies relies on easy access to firms and researchers around the world.

Alternatively, as seen in Extract 6, the Chinese government has resorted to Supply Side policies to develop more advanced technologies to improve the R&D and product innovation of Chinese firms to improve the non-price competitiveness of Chinese exports. For example, the Chinese government can consider subsidizing domestic firms. This would assist businesses to lower their unit cost of production, increasing their short run aggregate supply. The government can also provide infrastructure for the Chinese firms, therefore increasing the quality and quantity of capital, resulting in a rise in the productive capacity of China, leading to a rise in long run aggregate supply. In

the same vein, the government would have increase government expenditure (G) to finance these subsidies and infrastructure costs, therefore this would also lead to a rise in AD as G is a component of AD. As the quality of Chinese exports improves, this would also lead to a higher demand for Chinese exports, leading to a rise in net export revenue (X-M) for China which can lead to a rise in AD as well. The combined rise in AD from AD0 to AD1, and the rise in AS from AS0 to AS1 will lead to a more than proportionate rise in RNY from Y0 to Y1, hence achieving greater actual economic growth and falling derived demand unemployment, mitigating the costs of slowbalisation too.



Perspective 2: Supply Side Policy [Limitation]

A limitation of using supply side policy would be the time lag that hinders its effectiveness. While subsidizing firms could be done swiftly, the nature of R&D is that it would take a long duration before success could be guaranteed. On some occasions, engaging in R&D may lead to uncertain outcomes which cannot guarantee any improvement in export competitiveness or production processes. On top of that, if the Chinese government is planning for large structural changes to the economy, there would be a long gestation period for such changes to be fully implemented. Hence, such policies may not be effective in mitigating the short-term shocks of slowbalisation on the economy, such as reversing slow economic growth in the short run.

Alternative Policy
Expansionary Monetary Policy (Lowering interest rates) should be accepted although lacking scope since it is still a demand-management policy.

Evaluation

1. Contextually unsound in China
Stance + Reason:
 Supply side policies (SSP) will be a more effective option than FTA because FTA is not as suitable for the Chinese economy.

Justification:
 China's context is highly different from that of Singapore, it can rely on its domestic market to boost and spur growth as compared to Singapore which is highly dependent on foreign countries to stimulate growth due to its small size.

Even with the use of FTA, it is difficult to sway the decision of political leaders from the US to allow manufacturing to remain in China. Also, it is difficult for China to protect intellectual property and enforce regulation fairly and equally across the entire country as compared to Singapore, which is one prerequisite of signing FTAs.

Therefore, SSP will be more effective in reshaping and restructuring China towards its goal of bolstering its own capacity for innovation and to become a leader in advanced technologies, making exports that are highly competitive, spurring demand for its higher quality exports back in a world undergoing slowbalisation.

2. China's aim to shift focus away from economic growth to economic control
Stance + Reason:
 Supply side policies (SSP) will be a more effective option because of China's aim to focus on economic control rather than economic growth.

Justification:
 Slowbalisation has exposed China to risks arising from global slowdown in trade and investment due to its reliance on world trade and FDI. Hence it is more vital for China to focus on developing critical technology and high-quality products which allows its domestic firms to grow domestically and internationally and, in the process, improve its global competitiveness. This is done via supply side policies which can lead to structural changes in the long run that disrupt existing global trade pattern and establish itself as the dominant country in producing high tech goods and services, securing sustained economic growth in the long run via effective supply side policies.

Level	Descriptors	Marks
L2	Answers will consider at least two policies. Limitations of either policies are well explained.	5-7
L1	Answers will consider at least FTA or an alternative policy. Limitations of these policies are merely stated.	1-4
E2	Well-reasoned judgments/decisions Synthesises economic arguments to arrive at well-reasoned judgments on whether FTA is appropriate in China's context.	2-3
E1	For an evaluation / judgment that is unsubstantiated	1

1 Health insurance protects consumers against the risk of expensive and unanticipated medical treatment. However, the elderly may not adequately insure themselves as they may downplay the need for medical attention. Moreover, insurance premiums, which reflect the risk that individuals have, can be prohibitively high for the elderly, resulting in a situation of adverse selection.

- (a) Explain how imperfect information can lead to underconsumption of health insurance for the elderly. [10]
- (b) Discuss possible measures that could be adopted to increase consumption of health insurance for the elderly. [15]

(a) Explain how imperfect information can lead to underconsumption of health insurance for the elderly. [10]

Question Analysis	
Framework	Explain how
Approach	Command word
	Question Type
	End point
Content and Context	Content (Scope of coverage)
	Context

Introduction

- Information failure or imperfect information arises when economic agents lack critical information to make rational decisions on choices and resource allocation.
- This essay aims to explain how two forms of imperfect information – namely, underestimation of actual private benefits of consumption, and adverse selection, leads to market failure in the market of health insurance for the elderly.

Body

- **Cause of Market Failure (1): Underestimation of MPB(Actual) - Using five-step analysis**
The elderly may not buy healthcare insurance even though they are beneficial, due to ignorance of the actual private benefits of consuming them. "Elderly downplay the need for medical attention" as they have the misconception that they will never/ seldom need to make insurance claims.
• This makes them underestimate the marginal private benefits (MPB) of buying health insurance, causing MPB(Actual) to be higher than MPB(Perceived), as shown in Figure 1.

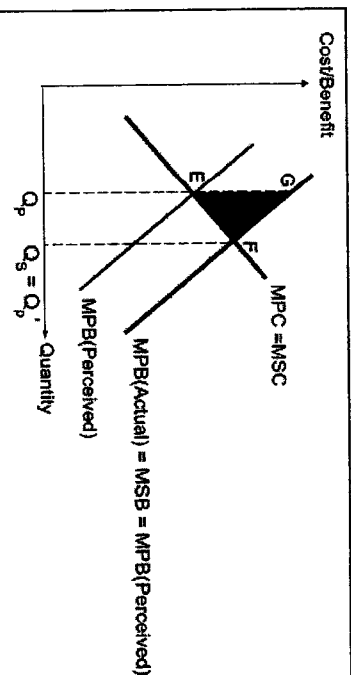


Figure 1. Imperfect information on actual MPB of health insurance for the elderly

- Assuming no positive and negative externalities, MPB(Actual) equals to marginal social benefit (MSB) and marginal private costs equals to marginal social costs [MPC=MSC]. MPC is the premium payable for the health insurance.
 - Due to imperfect information, rational elderly consumers will consume up to Q_p where MPB(Perceived)=MPC. However, the socially-optimal amount is Q_s .
 - Hence, imperfect information causes an under-consumption of amount Q_p-Q_s . Between Q_p and Q_s , Area Q_sGFQ_p which is the total social benefit is greater than area Q_pEFQ_s which is the total social cost. This means that societal welfare could have been gained by increasing quantity consumed up to the socially optimal output of Q_s . This forgone societal welfare is the deadweight loss (area EFG) due to under-consumption of and under-allocation of resources to health insurance for the elderly, leading to allocative inefficiency and hence market failure.
- Cause of Market Failure (2): Adverse Selection**
- Typically, individuals with prevailing health conditions pay higher insurance premiums as the probability of them claiming their health insurance is higher.
 - **Informed buyers: Elderly** – who have more information about their health condition, and are incentivized to conceal their actual health conditions from the insurance companies in order to pay a lower premium.
 - **Uninformed sellers: Health insurance companies** – which are unable to tell apart the healthy and unhealthy elderly.
 - Hence, the health insurance companies tend to offer a higher price for the health insurance for elderly, due to high risk of insuring an unhealthy elderly person.
 - But at the "prohibitively high" price, healthy elderly will not be willing to buy health insurance as they are unlikely to develop health problems that incur medical fees requiring reimbursement.
 - The market, by adversely selecting against low-risk elderly, will be dominated by unhealthy elderly.

<p>• The outcome is a missing market for insurance for healthy elderly leading to deadweight loss.</p>	
<p>Mark Scheme</p>	
<p>Level L3</p>	<p>Knowledge, Application, Understanding and Analysis Max: 8 – 10</p> <ul style="list-style-type: none"> Full display of AO1, AO2 and AO3 skills: For an answer that shows a well-developed explanation for underestimation of actual marginal private benefits (with reference to an accurate diagram), and for adverse selection. Good contextualisation to the market of health insurance for the elderly.
<p>L2</p>	<p>Uneven display of AO1, AO2 and AO3 skills:</p> <ul style="list-style-type: none"> Answer lacks depth of analysis (i.e. limited development on both underestimation of actual marginal private benefits, and adverse selection. OR, answer lacks breadth (i.e. only one type of imperfect information). Limited contextualisation to the market of health insurance for the elderly.
<p>L1</p>	<p>Limited display of AO1 and AO2 skills:</p> <ul style="list-style-type: none"> Answer is irrelevant to the question. <u>OR</u> Answer is descriptive or a mere listing of points, and/or contains major conceptual errors.

(b) Discuss possible measures that could be adopted to increase consumption of health insurance for the elderly. [15]

<p>Question Analysis Framework</p>	
<p>Approach</p>	<p>Command word: Discuss (i.e. need evaluation)</p>
<p>Question Type</p>	<p>Measures – i.e. strategies by firms and government policies (How they work and their limitations)</p>
<p>End point</p>	<p>Increase consumption of health insurance for the elderly</p>
<p>Content and Context (Scope coverage)</p>	<p>Strategies by firms and government policies to address imperfect information</p>
<p>Context</p>	<p>Market of health insurance for the elderly</p>

Introduction

- This essay aims to discuss measures including strategies by firms and government policies to address both types of imperfect information explained in part (a).

<p>Developmental Paragraph (1): Moral Suasion by government to address underestimation of MPB</p> <ul style="list-style-type: none"> [H]: By educating the elderly on the importance of buying health insurance – e.g. to protect themselves against unexpected hefty medical bills, the government can aim to shift MPB(Perceived) to MPB(Actual) in Figure 1 in part (a), such that the new Qp' where MPB(Perceived) = MPC coincides with Cs where MSB=MSC. This way, the elderly no longer underconsumes health insurance, and deadweight loss is eliminated. [L]: However, it is difficult to convince the elderly of something that might but not 100% happen (unexpected healthcare needs and costs). Many are not comfortable with paying for something at present, whose gains might only be realised in the future. (i.e. ineffective)
<p>Developmental Paragraph (2): Direct provision and risk pooling by government to address adverse selection</p> <ul style="list-style-type: none"> [H]: In Singapore's context, the ElderShield' is an automatic nationwide severe disability insurance scheme for eligible elderly (SCs/PRs who had a MediSave Account when they turned 40 years old in 2018 or earlier). It pools the healthy and sick/more prone elderly into one national insurance plan which spreads the risk across many citizens. This makes the insurance less costly – i.e. lower and more affordable health insurance premiums for the elderly. Hence, healthy elderly are no longer adversely selected against. [L]: However, direct provision involves government spending which can incur opportunity cost in the form of more affordable housing foregone, given the government budget constraint and government having to make a choice between spending on health insurance for the elderly and on public housing. The opportunity cost can be significant given Singapore's ageing population and increasing proportion of the population being elderly.
<p>Developmental Paragraph (3): Screening by firms to address adverse selection</p> <ul style="list-style-type: none"> [H]: Health insurance companies can gather information such as medical history to determine the risk of potential customers or require buyers to undergo a checkup at a certified clinic. With a copy of the medical report, the insurance firm can gauge the true costs of insuring the individual. The insurance firm uses such information to better estimate the probability that it will have to pay off on a policy, and if the individual is high-risk, the firm can decide whether to insure (but with certain additional terms and conditions) or charge a higher premium. With different premiums for different individuals based on their risk profiles, both healthy and less healthy elderly are willing and able to buy a health insurance. [L]: However, screening can result in cherry-picking by private insurance companies who take on low-risk healthy individuals and leave the remaining high-risk individuals uninsured.
<p>Evaluative Conclusion:</p> <ul style="list-style-type: none"> Make a stand on the recommended measure(s): Given the nature of the market failure, both the government and health insurance firms have a part to play in addressing the two types of imperfect information.

- **Justify stand:** While underestimation of actual private benefits is best addressed by the government which may deem health insurance for the elderly as a merit good and have the obligation to educate the elderly population, adverse selection is something that can not only be addressed by the government but by health insurance firms because they are ultimately the ones who are selling the insurance policies to the elderly. This is even more so the case if the government were to opt for joint provision rather than direct provision.
- **Additional insights:** The government spending involved in educating the elderly and making direct joint provision of health insurance for the elderly is necessary in the short run, to avoid even more hefty cost on society in future if uninsured elderly avoid seeking medical treatment due to unwillingness and/or inability to pay for it.

Mark Scheme

L3	Full display of AO1, AO2 and AO3 skills: <ul style="list-style-type: none"> • For an answer that shows a well-developed explanation of how government and/or firms address underestimation of actual marginal private benefits and adverse selection, as well as the limitations of the measures. • Good contextualisation to the market of health insurance for the elderly. 	8-10
L2	Uneven display of AO1, AO2 and AO3 skills: <ul style="list-style-type: none"> • Answer lacks depth of analysis (i.e. limited development on how the measures work and their limitations). • OR, answer lacks breadth (i.e. either only how measures work or limitations; OR only one type of imperfect information addressed). • Limited contextualisation to the market of health insurance for the elderly. 	5-7
L1	Limited display of AO1 and AO2 skills: <ul style="list-style-type: none"> • Answer is irrelevant to the question. OR • Answer is descriptive or a mere listing of points, and/or contains major conceptual errors. 	1-4
E3	Evaluation Provides a stand with clear justification using criteria and/or question assumptions.	Marks 4-5
E2	Provides a stand with limited justification.	2-3
E1	An unjustified stand.	1

2 When production exceeds consumption in a free market, a drop in price will normally restore equilibrium. However, in the case of an agricultural product like corn, high price floors are set by governments to protect the income of farmers.

(a) Explain why a surplus of agricultural product like corn might exist and why a fall in price cannot eradicate the surplus. [10]

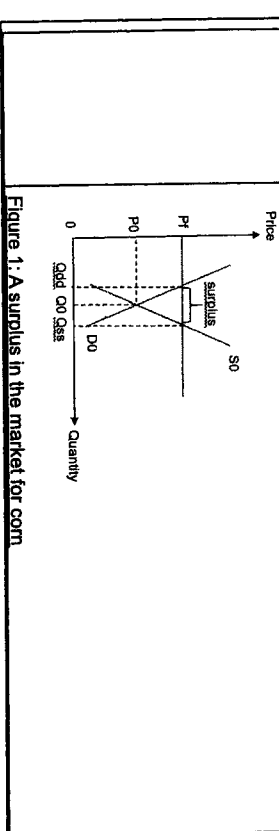
Question Analysis	
Framework	
Approach	Command word: Explain why Question Type: Causes
Content and Context	End point: 1. A surplus might exist 2. A fall in price cannot eradicate the surplus
Content	Surplus
Context (Scope of coverage)	Demand-Supply analysis Agricultural products like corn

Paragraph Writing

Introduction

Demand refers to the quantity of a good/service that consumers are willing and able to buy at a given price, ceteris paribus and is represented by a downward-sloping demand curve. Supply is the quantity of a good or service that a producer is willing and able to sell at a given price, ceteris paribus and the supply curve is upward-sloping. A market is at equilibrium where the demand curve intersects the supply curve so that there is neither shortage or surplus, and there is no tendency for the price or quantity to change over time.

When there is surplus, the market is at disequilibrium. For example, Figure 1 shows an effective price floor that is imposed on an agricultural market like corn. A price floor (Pf) is a minimum price commonly imposed by a government and is usually set above the market equilibrium price (P0). A surplus is created (shown in Figure 1) as the market price cannot fall below Pf and the quantity supplied (Qss) exceeds the quantity demanded (Qdd) at the existing market price (Pf).



<p>Explain why a fall in price cannot eradicate the surplus</p> <p>Reason 1: the drop in the price floor (Pf) is not big enough to reach the market equilibrium price (P0)</p>	<p>A fall in the price cannot eradicate the surplus if the drop in the price floor (Pf) is not big enough to reach the market equilibrium price (P0). A big fall in the price is required given that both the demand and the supply for agriculture like corn are expected to be price inelastic. The demand for corn is price inelastic because the nature of food has high degree of necessity. Hence, the value of price elasticity of demand (PED) is less than one i.e. $PED < 1$. The supply for corn is price inelastic at least in the short run because of producers cannot easily increase production of corn given the gestation and harvesting time periods and thus $PES < -1$. The price inelasticities of the demand and the supply are illustrated by the relatively steep demand curve (D0) and supply curve (S0) in Figure 1.</p> <p>Because of the low PED and/or PES, the extent of fall in price floor has to be very large to clear the surplus. If Pf still exceeds Pe, then the market will still be unable to clear as the surplus persists.</p>
<p>Reason 2: Changes in demand and/or supply create a larger surplus</p>	<p>A fall in the price also cannot eradicate the surplus if there is a simultaneous fall in the demand and/or a simultaneous increase in the supply, leading to a bigger surplus created. This would require a bigger fall in the price floor to clear the surplus. Figure 2 illustrates the scenario where there is a simultaneous increase in the supply for corn, creating a bigger surplus at the price floor (Pf). Meanwhile, the market equilibrium price falls from P0 to P1. A bigger fall in the price floor from Pf to P1 is required to eliminate the surplus. Therefore, a lesser fall in the price will not be able to eliminate the surplus.</p>
<p>Conclusion</p> <p>Alternative approach that was accepted: Part 1: Explaining why there is a surplus - Explain how a fall in demand and/or rise in supply leads to a surplus</p>	<div style="text-align: center;"> </div> <p>Figure 2: A fall in the demand for corn creates a bigger surplus at price floor Pf.</p> <p>When a government intervenes in the market for corn such as price floor, a surplus is created and will not be eradicated.</p>

<p>- Explain how there is no downward pressure on price beyond Pf due to the implementation of a price floor</p> <p>Part 2: Explaining why the fall in price is not enough to clear the surplus</p> <p>- Explain how PED and/or PES is low</p> <p>- Explain that the extent of fall in price floor has to be very large for the surplus to clear</p> <p>- Explain that if the price floor remains above equilibrium price, the surplus will continue to exist</p>	<p>Mark Scheme</p> <p>Level Knowledge, Application, Understanding and Analysis</p> <table border="1"> <tr> <td>L3</td> <td>For an answer that provides a clear and thorough explanations of both endpoints. Examples are used to support the explanation. A clear elaboration on the application or the justification of the price inelasticities of demand and supply in the agricultural markets.</td> <td>8 – 10</td> </tr> <tr> <td>L2</td> <td>For an answer that provides a good explanation of both endpoints. Some attempt of the use of examples and justification of the price elasticities are used to support the explanation.</td> <td>5 – 7</td> </tr> <tr> <td>L1</td> <td>For an answer that only regurgitates theoretical understanding without any application to context. Answer may have also demonstrated weak knowledge and applications, possibly with conceptual errors.</td> <td>1 – 4</td> </tr> </table>	L3	For an answer that provides a clear and thorough explanations of both endpoints. Examples are used to support the explanation. A clear elaboration on the application or the justification of the price inelasticities of demand and supply in the agricultural markets.	8 – 10	L2	For an answer that provides a good explanation of both endpoints. Some attempt of the use of examples and justification of the price elasticities are used to support the explanation.	5 – 7	L1	For an answer that only regurgitates theoretical understanding without any application to context. Answer may have also demonstrated weak knowledge and applications, possibly with conceptual errors.	1 – 4								
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<p>b) Discuss the alternative policies that could be adopted by a government to address future surpluses.</p>	<p>Question Analysis</p> <table border="1"> <tr> <td>Framework</td> <td>Command word</td> <td>Discuss = Bal view + EV</td> </tr> <tr> <td>Approach</td> <td>Question Type</td> <td>Policy assessment</td> </tr> <tr> <td rowspan="3">Content and Context</td> <td>End point</td> <td>Address future surpluses</td> </tr> <tr> <td>Content (Scope of coverage)</td> <td>Policies to address future surpluses (using HAL framework)</td> </tr> <tr> <td>Context</td> <td>Agricultural products like corn</td> </tr> </table> <p>Paragraph Writing</p> <table border="1"> <tr> <td>Introduction</td> <td>The aim of a government is to remove or minimise surpluses because such surpluses illustrate inefficiencies in the markets. Moreover, a government also wants to achieve equity.</td> </tr> <tr> <td>Policy #1 Reducing price</td> <td>The government may consider removing the price floor (P) and allowing the price mechanism to reduce the price of corn to the market equilibrium price (Pe) in order to eliminate the surplus.</td> </tr> </table>	Framework	Command word	Discuss = Bal view + EV	Approach	Question Type	Policy assessment	Content and Context	End point	Address future surpluses	Content (Scope of coverage)	Policies to address future surpluses (using HAL framework)	Context	Agricultural products like corn	Introduction	The aim of a government is to remove or minimise surpluses because such surpluses illustrate inefficiencies in the markets. Moreover, a government also wants to achieve equity.	Policy #1 Reducing price	The government may consider removing the price floor (P) and allowing the price mechanism to reduce the price of corn to the market equilibrium price (Pe) in order to eliminate the surplus.
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<p>(How it works)</p>	<p>With reference to Figure 3 (which replicates Figure 1), a reduction in the price from P_1 to P_0 downward pressure on price signals consumers to increase quantity demanded (Q_{d1}) along the demand curve (D_0) and incentivise producers to decrease quantity supplied (Q_{s1}) along the supply curve. Equilibrium is reached at P_0 and Q_0 where corn surplus is eliminated.</p>	<p>(Limitations)</p>
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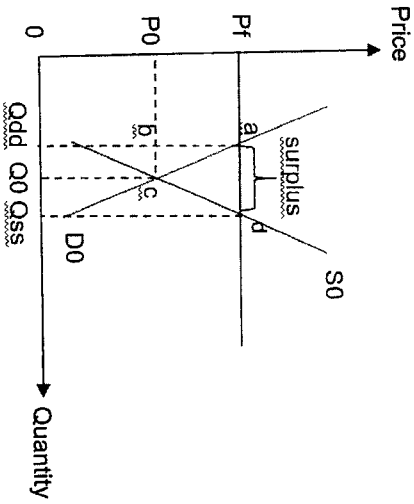


Figure 3: A fall in the price from P_1 to P_0 would remove surplus

However, an inequitable outcome is likely to result. Removing the price floor would remove the protection on farmers' incomes and this would lead to a fall in total revenue from $0P_1d_1Q_{s1}$ to $0P_0d_0Q_{s0}$. While a big fall in the price of corn would translate to lower prices of foods, which improve consumers' welfare and equity, poorer farmers who could not survive would leave the market and the market equilibrium price P_0 is unable to cover at least their variable costs. That is the farmers would leave if the shut-down condition is met i.e. Price < Average Variable Costs i.e. $P < AVC$. In the long run, this would decrease the market supply and the supply curve would shift leftwards, increasing the prices of corn and food, worsening inequity.

<p>Policy #2 - Reducing subsidies so that supply falls (How it works)</p>	<p>Subsidies are a common form of government intervention in the markets for agriculture like corn to ensure that food prices remain affordable and accessible to low-income households for equity reasons. A government might consider reducing or removing subsidies given to producers. Increase the costs of production of corn. Producers less willing and able to produce corn for every price level. Fall in supply as illustrated by a leftward shift of supply curve from S_0 to S_1 such that the market equilibrium price increases to P_1 and equilibrium quantity falls to Q_1 so surplus is eliminated. Alternatively, a government also can encourage farmers to grow something else so that the supply falls from S_0 to S_1 to avoid corn surplus and hence wastage.</p>	<p>(Limitations)</p>
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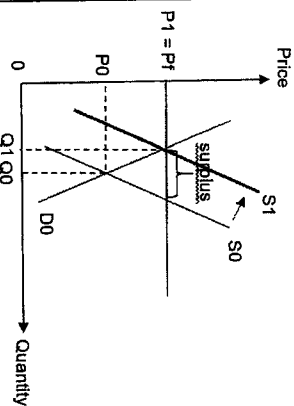
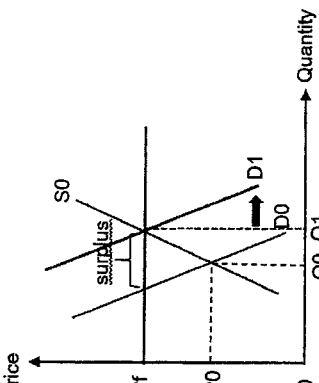


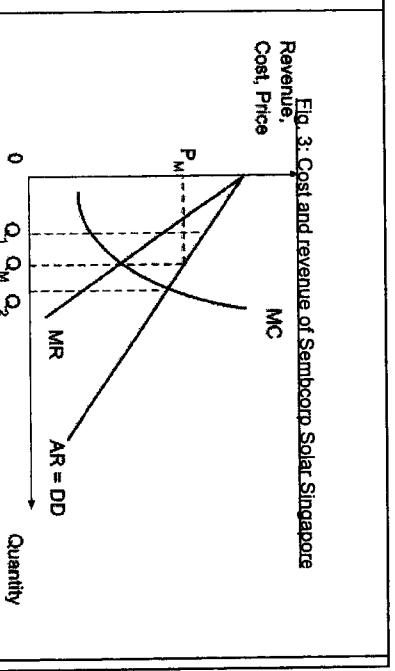
Figure 4: A fall in the supply of corn via reducing subsidies can remove surplus.

However, an inequitable outcome is likely to result. Increasing the price of corn comes at the expense of the poor and lower income households who could now be priced out of the market. Moreover, corn and other agricultural are essential goods and this would worsen equity.

<p>Policy #3 - the biofuel market so that demand rises (How it works)</p>	<p>The government can increase demand for corn that is grown locally by developing the biofuel industry. This would increase the derived demand for corn as corn is a factor of production for biofuel.</p>  <p>Figure 5: A increase in the derived demand for corn.</p> <p>This increase in demand is illustrated by a rightward shift of demand curve from D_0 to D_1 such that the market equilibrium price increases to P_1 and equilibrium quantity rises to Q_1 so surplus is eliminated.</p> <p>However, this measure is unlikely to be able to eliminate surplus in the short run as it takes time for the biofuel industry to develop, especially if the industry is still in its infancy stage. As such, the increase in demand for corn is not immediate and the surplus is likely to persist in the short run.</p>
<p>Limitations</p>	<p>Make a stand The most effective policy to address future surpluses is to remove any forms of government intervention such as price floor and subsidies and to allow price mechanism and price signals to clear the market and resources are allocated efficiently.</p> <p>Justify with criteria / Question assumption However, for agriculture markets like corn and food, if left to the free market and price mechanism, producers will find that their incomes will fluctuate, although in some years they may rise rather than fall. This may affect the profitability of production and at worst end with big losses. Even if still profitable it makes planning future production levels very difficult. The government may also be concerned about the employment level, welfare payments and tax receipts, the supply of food and the international trade position</p>
<p>Evaluation</p>	<p>Insight / Recommendation</p>

<p>The demand for agricultures like corn tend to stable while the supply for agricultures tend to be more volatile subjected to weather conditions and supply disruptions like natural disasters and wars and trade tensions. It is more critical to ensure and target the volatility in supply via research and development (R&D).</p>	<p>Note: only 2 policies required to attain full credit.</p>
<p>Mark Scheme Knowledge, Application, Understanding and Analysis</p>	
<p>L3 A balanced and well-developed answer on the policies used by the government to address future surpluses, with consistent use of examples related to different countries' contexts.</p>	<p>8 – 10</p>
<p>L2 An under-developed, balanced answer on policies to address future surpluses, with inconsistent use of examples and gaps in analyses.</p>	<p>5 – 7</p>
<p>L1 May have many and/or serious conceptual errors. May have relevant points that were made incidentally.</p>	<p>1 – 4</p>
<p>Evaluation</p>	
<p>E3 For an answer that arrives at an analytically well-reasoned judgement about the policies to address future surpluses. Might also question any unstated assumptions to arrive at this well-reasoned judgement.</p>	<p>4 – 5</p>
<p>E2 For an answer that makes some attempt at evaluation, but does not explain adequately their judgement or base it in analysis, about their judgement on the policies to address future surpluses.</p>	<p>2 – 3</p>
<p>E1 For an answer that gives an unexplained, unsupported evaluative statement on the policies to address future surpluses.</p>	<p>1</p>

3	<p>Sembcorp Solar Singapore manufactures solar energy equipment. In 2021, the firm embarked on building solar panel systems across 1,154 rooftops in Singapore. With Singapore's commitment towards sustainability, the firm's emphasis on process innovation has positioned it well to further boost its profits.</p> <p>(a) Explain how Sembcorp Solar Singapore arrived at its output decision to build solar panel systems for 1,154 rooftops. [10]</p>															
<p>Question Analysis</p> <table border="1"> <tr> <td>Framework</td> <td>Command word</td> <td>Explain</td> </tr> <tr> <td>Approach</td> <td>Question Type</td> <td>Decision making</td> </tr> <tr> <td></td> <td>End point</td> <td>Output decision</td> </tr> <tr> <td>Content and Context</td> <td>Content (Scope of coverage)</td> <td>Constraints, Benefits, Costs</td> </tr> <tr> <td></td> <td>Context</td> <td>Marginal analysis for output determination Solar panel firm</td> </tr> </table>		Framework	Command word	Explain	Approach	Question Type	Decision making		End point	Output decision	Content and Context	Content (Scope of coverage)	Constraints, Benefits, Costs		Context	Marginal analysis for output determination Solar panel firm
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Content and Context	Content (Scope of coverage)	Constraints, Benefits, Costs														
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<p>Paragraph Writing</p> <p>Introduction This essay aims to explain how a profit-maximising firm like Sembcorp Solar Singapore considers constraints, costs and benefits to decide on the optimum output to produce at.</p> <p>Explanation of constraints Sembcorp Solar Singapore would consider its resource and budgetary constraints. For instance, it would consider the available labour (technicians, designers) and capital (machines to produce the solar panels) that it has. This would help it to identify if the decision to be considered is feasible or not. It would also consider budgetary constraints, for instance, past profits that are available for use currently.</p> <p>Explanation of marginal benefits Marginal benefits refer to the addition to the firm's benefit when an additional unit of solar panel system is produced. In this case, it is the addition to revenue for an additional unit produced, also known as marginal revenue.</p> <p>Explanation of marginal costs Marginal costs refer to the addition to the firm's cost when an additional unit of solar panel system is produced. This includes the increase in variable costs incurred, such as wages and cost of raw materials.</p> <p>Explanation of profit maximising firm A profit maximising firm like Sembcorp Solar Singapore seeks to maximise profits by setting output at Q_M (1154 units) where $MC=MR$. In imperfect markets (such as the one that Sembcorp Solar Singapore is operating in), the price P_M is determined from the AR corresponding to Q_M.</p>																

<p>Conclusion - overall impact on profits</p>	<p>Fig. 3: Cost and revenue of Sembcorp Solar Singapore</p>  <p>At Q_1, $MR > MC$, meaning that producing an additional unit will add more to revenue than it does to costs. The firm can thus increase profits by increasing production.</p> <p>At Q_2, $MR < MC$, meaning that producing an additional unit will add more to the cost than it does to revenue. The firm should thus decrease production to increase profits.</p> <p>At Q_M ($MC=MR$) which coincides with 1154 units, profit is maximised and any increase or decrease in production would result in a fall in profits. Thus, the firm makes use of marginal analysis in its decision making to decide to produce 1154 units of solar panel systems.</p>									
<p>Mark Scheme</p> <table border="1"> <tr> <td data-bbox="614 1240 694 1400">L3</td> <td data-bbox="614 1400 694 2069"> <ul style="list-style-type: none"> For an answer that shows a well-developed revenue and cost analysis (including the use of diagram(s)) of how the firm arrives at the profit-maximising level of output. Good contextualisation to the solar energy market. </td> <td data-bbox="614 1892 694 2069">8 - 10</td> </tr> <tr> <td data-bbox="375 1240 614 1400">L2</td> <td data-bbox="375 1400 614 2069"> <ul style="list-style-type: none"> Answer lacks depth of analysis (i.e. no or limited use of firm's revenue and cost analysis). OR, answer lacks breadth (i.e. only explains constraints, costs and benefits). Limited contextualisation to the solar energy market. </td> <td data-bbox="375 1892 614 2069">5 - 7</td> </tr> <tr> <td data-bbox="255 1240 375 1400">L1</td> <td data-bbox="255 1400 375 2069"> <ul style="list-style-type: none"> Answer is irrelevant to the question, OR Answer is descriptive or a mere listing of points, and/or contains major conceptual errors. </td> <td data-bbox="255 1892 375 2069">1 - 4</td> </tr> </table>		L3	<ul style="list-style-type: none"> For an answer that shows a well-developed revenue and cost analysis (including the use of diagram(s)) of how the firm arrives at the profit-maximising level of output. Good contextualisation to the solar energy market. 	8 - 10	L2	<ul style="list-style-type: none"> Answer lacks depth of analysis (i.e. no or limited use of firm's revenue and cost analysis). OR, answer lacks breadth (i.e. only explains constraints, costs and benefits). Limited contextualisation to the solar energy market. 	5 - 7	L1	<ul style="list-style-type: none"> Answer is irrelevant to the question, OR Answer is descriptive or a mere listing of points, and/or contains major conceptual errors. 	1 - 4
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(b)		Discuss whether process innovation is the best strategy for Sembcorp Solar Singapore to increase its profits.	
Question Analysis			
Framework			
Approach	Command word	Discuss whether	
	Question Type	Two-sided argument requiring an evaluation	
	End point	Efficient	
Content and Context	Content (Scope of coverage)	Profit maximisation	
	Context	Solar panel firm	
Paragraph Writing			
Introduction	A profit-maximising firm seeks to maximise the difference between total revenue and total cost. To increase its profits, Sembcorp Solar Singapore should seek to reduce AC or increase AR.		
Thesis: Impact of process innovation on profit	With process innovation, the firm can experience a rise in efficiency and this leads to a lowering of the firm's unit cost of production. This could take the form increased ability to extract recyclable materials from parts of used solar panels, such as glass and silicon to lower variable cost. Referring to Figure 2, this causes the firm's MC and AC to fall from MC_1 to MC_2 and AC_1 to AC_2 respectively. Initially, the firm produced at profit-maximising Q_1 where $MR_1=MC_1$, and charged P_1 , thereby earning supernormal profits P_1ABC_1 . Subsequently, it produces at the new profit-maximising Q_2 where $MR_1=MC_2$, and charges a lower P_2 . Supernormal profits will increase to P_2DEC_2 .		
	<p>Figure 2: Fall in short-run average and marginal costs</p> <p>As the industry is an emerging one, process innovation can also help the firm to develop capabilities and help it to maintain barriers to entry, such that potential firms will lack the technical know-how and be less able to enter the industry. This would enable the firm to continue to maintain its supernormal profits in the long run.</p>		

<p>Anti-thesis: of Limitation of process innovation</p>	<p>However, process innovation may not be the best strategy as it requires high spending on research and as such, AC may rise in the short run instead. This is especially if the solar panel system industry is not very developed yet and the country lacks expertise in the area. If this is the case, the firm is likely to experience a fall in profits in the short run.</p>
<p>Anti-thesis: of Explanation of alternative strategy 1 to increase profits</p>	<p>An alternative that the firm can consider would be product innovation. By improving the quality of the solar panels, such as efficiency in harnessing and storing solar energy, the firm can experience an increase in demand, illustrated in Figure 3:</p> <p style="text-align: center;"><u>Figure 3: Increase in demand</u></p> <p>With successful product innovation, the firm can experience an increase in demand as it gives more certainty to consumers regarding the reliability of their product and services. Referring to Figure 3, the firm's AR and MR curve increase from AR₁ to AR₂ and MR₁ to MR₂ respectively. Initially, the firm profit-maximised at Q₁ where MR₁=MC and charged P₁. It employed supernormal profits of P₁ABC. It later profit-maximises at a higher Q₂ where MR₂=MC and charges a higher P₂. Its supernormal profits thus increases to P₂DEC₂.</p>
<p>Anti-thesis: of Limitation of alternative strategy 1 to increase profits</p>	<p>The extent of increase demand for the firm's solar panels may not be significant for the Singapore households. This is because most households live in HDB flats and are unable to purchase solar panels for electricity generation. Thus, the impact on profit may not be very significant. As such, product innovation should seek to address the needs of those living in private properties, or HDB itself that builds public housing, or commercial property owners with the ability to decide on the source of electricity for buildings in Singapore.</p> <p>Or</p> <p>However, with product innovation, the cost of production may increase correspondingly as the firm may need to make use of better quality factors of production. If AC and MC rises due to product innovation, then the extent of increase in profits may be limited for the firm.</p>

<p>Anti-thesis: of Explanation of alternative strategy 2 to increase profits</p>	<p>Another alternative that the firm can consider would be to diversify into overseas market. By selling to consumers beyond Singapore, the firm can experience an increase in demand, illustrated in Figure 3:</p> <p style="text-align: center;"><u>Figure 3: Increase in demand</u></p> <p>By expanding their production to serve foreign markets, the firm can experience an increase in demand as it is serving a larger market. Referring to Figure 3, the firm's AR and MR curve increase from AR₁ to AR₂ and MR₁ to MR₂ respectively. Initially, the firm profit-maximised at Q₁ where MR₁=MC and charged P₁. It employed supernormal profits of P₁ABC. It later profit-maximises at a higher Q₂ where MR₂=MC and charges a higher P₂. Its supernormal profits thus increases to P₂DEC₂.</p>
<p>Anti-thesis: of Limitation of alternative strategy 2 to increase profits</p>	<p>However, there may be impediments to this strategy. For instance, there may be other firms present overseas and they may have established strong barriers to entry that prevent Sembcorp Solar Singapore from entering the market, such as through purchasing the licenses that are required to operate in the country. As such, the extent of increase in AR and MR may be limited.</p> <p>[Other possible reasons for strong barriers to entry: foreign governments may not want to allow an overseas firm like Sembcorp Solar Singapore to produce in their country to prevent over-reliance on foreign entities for power generation.]</p>
<p>Evaluation</p>	<p>[Stand + justification] In conclusion, process innovation is a strategy that the firm should continue to pursue to increase in profits from the Singapore market. With Singapore's commitment towards sustainability, there would be a rise in use of renewable energy sources like solar energy which would help to increase the size of the market and increase the demand for solar energy. With process innovation, the firm would be able to have first-mover advantage and establish barriers to entry against potential entrants, helping it to retain its profits in the long run.</p>

	[Condition] However, as the industry grows and subsequently matures, process innovation may not be sufficient as other firms in the market are able to make breakthroughs in their research and similarly lower their cost of production.	
	[Recommendation] As such, the firm should consider complementing process innovation with other strategies to increase AR and MR such that profits and continue to increase in the long run.	
Mark Scheme		
	Knowledge, Application, Understanding and Analysis	Mark
L3	<ul style="list-style-type: none"> For an answer that shows a well-developed and well-balanced analysis (including use of diagram(s)) of the various strategies that the firm can adopt. Good contextualisation to the solar energy market. 	8 – 10
L2	<ul style="list-style-type: none"> Answer lacks depth of analysis (i.e. no or limited use of concepts such as profits). OR, answer lacks breadth (i.e. only analysed one strategy/benefits of the strategy). Limited contextualisation to the solar energy market. 	5 – 7
L1	<ul style="list-style-type: none"> Answer is irrelevant to the question. OR Answer is descriptive or a mere listing of points, and/or contains major conceptual errors. 	1 – 4
	Evaluation	Marks
E3	Provides a stand with clear justification using criteria and/or question assumptions.	4-5
E2	Provides a stand with limited justification.	2-3
E1	An unjustified stand.	1

- 4 The US Federal Reserve cut interest rates to essentially zero to shelter the economy from the effects of COVID-19, such as falling prices and rising unemployment. This policy will be maintained until the economy is on track to achieve its economic goals.
- (a) Explain why the cut in interest rates is instrumental in achieving low unemployment in the US. [10]
- (b) Assess whether maintaining low interest rates, on balance, will allow the US to attain price stability. [15]

Question Analysis	
Framework	Explain why examine reasons
Approach	Command word: Explain why Question Type: Factors affecting AD
Content and Context	End point: Instrumental in achieving low unemployment Content: Factors affecting effectiveness of interest rate policy (Scope of coverage) Context: US cutting i/r to 0%
Paragraph Writing	
Introduction	This essay aims to explain how a lowering of interest rates can achieve low unemployment and the factors leading to interest policy being a dominant policy in the US.
How did a cut in interest rates affect unemployment?	A lowering of US interest rates to 0% will reduce the costs of borrowing to households and firms. This enables households and firms to consider big-ticket expenditure through borrowing. The consumption and investment components of AD will increase causing AD to increase. Figure 1: Increase in AD As such, the economy experienced an increase in aggregate demand and real national output increases. The firms will experience a fall in inventories and therefore a signal to step up production. This leads to an increase in derived demand for labour and more workers will be employed. This will lead to more induced consumption as household income levels increase, causing further increases to AD2 and therefore

Why is interest rate policy instrumental?	real national income increase to a larger extent from Y1 to Y2. This aids to lower demand-deficient unemployment. Interest rate policy is a preferred intervention tool for the US due to the nature of its economy. The US is a large and less open economy that possess good factor endowment. With a high average income per capita, the consumption component of the economy is significantly larger than other components of the AD. As such, a lowering of costs of borrowing will significantly enhanced households' abilities to borrow and consume. Furthermore, the US is a developed economy that prized innovations. The lowered costs of borrowing will allow more firms to borrow and conduct investment, since profitability of investment is improved. Hence, a cut in interest rate stimulates 2 different and significant components of AD for the US and will be instrumental in lowering demand-deficient unemployment.	
Conclusion - overall impact on unemployment.	In addition, the cut in interest rate erodes the incentive to save. The lowered interest rates offer a lower return on savings. At 0%, assuming inflation is positive, the real interest rate will be negative, implying that the purchasing power of savings will be eroded over time, the same amount of savings can only exchange for less amount of goods and services over time. This will disincantivise savings and cause a fall in the marginal propensity to save (MPS). The multiplier size is determined by $1/(MPS+MP+MPT+MPM)$, so a fall in MPS will cause the multiplier, k , to be larger. This will reinforce the effectiveness of interest rate policy as AD will increase further leading to further fall in demand-deficient unemployment. Both developments have thus reinforced each other to allow the US economy to experience a fall in unemployment and hence will be of significance to the government.	
Mark Scheme		
L3	Full display of AO1, AO2 and AO3 skills: <ul style="list-style-type: none"> For an answer that shows a well-developed explanation for expansionary interest rate policy (including the use of diagram) and the factors leading to the enhanced effectiveness of interest rate policy for the US. Good contextualisation to the US economy. 	8 - 10
L2	Uneven display of AO1, AO2 and AO3 skills: <ul style="list-style-type: none"> Answer lacks depth of analysis (i.e. limited development on the significance of interest rate policy to US). OR, answer lacks breadth Limited contextualisation to the US economy. 	5 - 7
L1	Limited display of AO1 and AO2 skills: <ul style="list-style-type: none"> Answer is irrelevant to the question. OR 	1 - 4

	<ul style="list-style-type: none"> • Answer is descriptive or a mere listing of points, and/or contains major conceptual errors.
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- (b) Assess whether maintaining low interest rates, on balance, will allow the US to attain price stability. [15]

Question Analysis	
Framework Approach	<p>Command word: Assess whether T vs AT vs EV</p> <p>Question Type: Two-sided argument requiring an evaluation</p> <p>End point: Price stability changes to GPL</p> <p>Content and Context (Scope of coverage): Outcome of low costs of borrowing on inflation</p> <p>Context: US interest rates</p>
Paragraph Writing Introduction	<p>The US is a developed economy and likely to suffer from inflationary pressures. The government aim would be price stability which is a small change to general price level of about 2-5%. This essay will continue to examine how an environment of low interest rates will affect the general price level in the US.</p>
Thesis: low /r attains price stability	<p>The US is currently experiencing falling prices in other words, deflationary pressure. This is undesirable as it deters the households' consumption and firms' investment to the next time period when prices are deemed to be lower, and more advantageous to households and firms. The low interest rates will allow households and firms to have access to cheap credit and reinforce their abilities to consume and invest, without the need to wait for further fall in prices.</p> <p>A sufficiently low cost of borrowing will incentivise firms and households to borrow and spend especially if the overall sum with interests accrued is made lower. As such, consumption and investment components will increase, leading to an increase in AD and real national income. Assuming the US is operating near the intermediate range, there will be a partial multiplier effect and productive capacity is reduced and there is greater competition for the increasingly scarce factors of production. This leads to higher costs of production and hence causes general price level to increase from P1 to P2. This will be effective in overcoming falling prices and achieving price stability.</p>

<p>Fig. 2: increases in AD</p> <p>Assuming investment made by firms was on capital goods, this will increase productive capacity and lead to an increase in LRAS. The increase in LRAS will contribute to price stability in the long run as general price levels fall from P2 to P1. This allows US to achieve price stability.</p>	<p>Fig. 3: increases in AS</p> <p>However, maintaining low interest rates may lead to overheating of the US economy in the long run. As analysed in a), the US economy has a significantly large consumption component, and so, low costs of borrowing over an extended duration of time may cause households to borrow excessively and consume on credit. This will cause a persistent increase in consumption and an increase in AD to AD3. The economy will be overheating as general price level increases to P3 as shown in Fig 2.</p> <p>This is especially true if investment made by firms led to little or no increase in LRAS. As a developed economy, the US cannot rely on trade</p>
<p>Anti-thesis: low interest rates may not attain price stability in long run</p>	<p>However, maintaining low interest rates may lead to overheating of the US economy in the long run. As analysed in a), the US economy has a significantly large consumption component, and so, low costs of borrowing over an extended duration of time may cause households to borrow excessively and consume on credit. This will cause a persistent increase in consumption and an increase in AD to AD3. The economy will be overheating as general price level increases to P3 as shown in Fig 2.</p> <p>This is especially true if investment made by firms led to little or no increase in LRAS. As a developed economy, the US cannot rely on trade</p>

	<p>partners for exchange of technology. The US firms have to conduct research and development to achieve breakthroughs, which incurs a high risk of failure. Despite low interest rates, the return on investment for R&D may not be sufficiently lucrative for firms to take on high risks, especially in an era of global pandemic with many uncertainties. This complicates the US ability to achieve price stability.</p>
Evaluation	<p>Stand While the low interest rates will be effective in stimulating employment, maintaining it low over an extended time period is more likely to lead to inflation, in particular demand-pull inflation.</p> <p>Justifications As discussed, the US is a developed economy with limited spare capacity, and excessive increases in consumption will be detrimental. An environment of low borrowing costs will result in undesirable consumption habits. Profit driven firms are more likely to file for patents to safeguard their R&D instead of sharing these new technologies, which limits the expansion of productive capacity. It is more likely that the US economy will experience inflation if interest rates are kept low.</p> <p>Further insights This is further complicated by the worsening US-China trade ties, which could lead to supply constraints, resulting in costs-push inflation, should China withhold essential exports to US. The silver-lining, perhaps, is that inflation will erode the value of debt.</p>

Mark Scheme		MARKS
L3	<ul style="list-style-type: none"> Full display of AO1, AO2 and AO3 skills: For an answer that shows a well-developed and well-balanced analysis (including use of diagram(s)) of the costs and benefits to the US economy if interest rates are kept low. Good contextualisation to the US economy. 	8 – 10
L2	<ul style="list-style-type: none"> Uneven display of AO1, AO2 and AO3 skills: Answer lacks depth of analysis (i.e. no or limited use of concepts). OR answer lacks breadth (i.e. only analysed positive or negative impact of low interest). Limited contextualisation to the US economy. 	5 – 7
L1	<ul style="list-style-type: none"> Limited display of AO1 and AO2 skills: Answer is irrelevant to the question. OR Answer is descriptive or a mere listing of points, and/or contains major conceptual errors. 	1 – 4

E3	Provides a stand with clear justification using criteria and/or question assumptions.	4-5
E2	Provides a stand with limited justification.	2-3
E1	An unjustified stand.	1

- 5 The COVID-19 pandemic has resulted in Singapore introducing circuit breaker measures, which include a stay-at-home order coupled with international border closures. The government introduced a Job Support Scheme to offset labour costs for affected industries such as the aviation and tourism sectors.
- (a) Explain how circuit breaker measures might have consequences on Singapore's aggregate demand and aggregate supply. [10]
- (b) Singapore has a high Gini coefficient.
Discuss whether inclusive growth remains a macroeconomic priority during an economic downturn. [15]

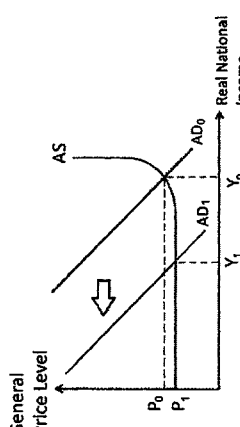
Question Analysis		
Framework	Command word	Explain how process
Approach	Question Type	AD-AS analysis
Content and Context	End point	Outcome to Singapore's AD and AS (SRAS or LRAS)
	Content (Scope coverage)	AD-AS analysis
	Context	SG circuit breaker

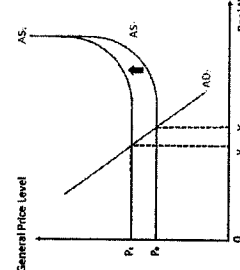
Paragraph Writing

Introduction

An economy's aggregate demand (AD) refers to the total demand of or total planned spending on the economy's domestically produced final goods and services, at a given general price level (GPL) in a given time period. The equation for AD is $AD = C + I + G + (X-M)$, so AD comprises of consumption (C) by households, investment (I) by firms, government spending (G) by government, and the value of net exports (X-M) by the foreigners.

An economy's aggregate supply (AS) refers to the total value of goods and services that firms in an economy are willing and able to produce at a given general price level in a given time period. The short-run AS is affected by the unit costs of production of firms in the economy, while the long-run AS is affected by the quantity and quality of factors of production.

Outcome on AD	<p>This essay aims to explain the effects of the circuit breaker on the economy of Singapore.</p> <p>The circuit breaker with the stay-at-home order reduces the consumption, investment components of the AD. The restriction brought business to a halt. The unprecedented measure brought about uncertainty across many sectors including the food and beverages, entertainment and construction sectors. The uncertainty made households pessimistic (expected future incomes to fall) and therefore set aside more savings and reduced their consumption. As businesses were unable to foresee the reopening of the economy (expected profits to fall) and along with high costs of rentals, many small businesses cut down on their investment (as the expected rate of returns to investment would fall).</p> <p>(Also accepted is with the international border closures, there is a fall in the demand of exports such as tourism and hospitality services, leading to a fall in exports revenue. Assuming import expenditure is constant, a net fall in exports revenue (X-M) is expected.)</p> <p>As the consumption, investment and net exports revenues are components fell, AD fell from AD₁.</p> <p style="text-align: center;">Figure 1: Decrease in AD</p> 
Outcome on AS	<p>The circuit breaker consists of border closure and a halt to mobility of raw materials and labour across borders. Singapore has no natural resources and with its small domestic population relies on importing raw materials and foreign labour for its resources. The immobility of labour brought about labour shortages across many sectors including the food and beverage and construction industries. The shortage led to higher wage costs for businesses. This brought about higher unit costs of production throughout the economy in the short run. As unit costs of production increases in the short run, firms will reduce their production of output at every</p>

	<p>general price level and the SRAS fell and SRAS curve shifted upwards from SRAS₁ to SRAS₂ as shown in Figure 2.</p> <p style="text-align: center;">Figure 2: Decrease in SRAS</p> 	<p>In conclusion, circuit breaker measures have resulted in both AD and SRAS to fall.</p> <p>(Also accepted is the analysis of a fall in LRAS of the Singapore's economy).</p>
<p>Mark Scheme</p>		
<p>Level</p> <p>L3</p>	<p>Full display of AO1, AO2 and AO3 skills:</p> <ul style="list-style-type: none"> For an answer that shows a well-developed explanation for likely consequences to SG economy (including the use of diagram(s)). Good contextualisation to the SG economy. 	<p>8 – 10</p>
<p>L2</p>	<p>Uneven display of AO1, AO2 and AO3 skills:</p> <ul style="list-style-type: none"> Answer lacks depth of analysis (i.e. limited development on the significance of fiscal stimulus). OR, answer lacks breadth Limited contextualisation to the SG economy. 	<p>5 – 7</p>
<p>L1</p>	<p>Limited display of AO1 and AO2 skills:</p> <ul style="list-style-type: none"> Answer is irrelevant to the question. OR Answer is descriptive or a mere listing of points, and/or contains major conceptual errors. 	<p>1 – 4</p>

(b) Singapore has a high Gini coefficient.

Discuss whether inclusive growth remains a macroeconomic priority during an economic downturn. [15]

Question Analysis	
Framework	
Approach	Command word: Discuss whether T vs AT vs EV Question Type: Two-sided argument requiring an evaluation End point:
Content and Context	Content: Outcomes on inclusive growth, potential growth and narrowing of income disparity (Scope of coverage): Singapore and pandemic contractions Context:

Paragraph Writing	
Introduction	Gini coefficient examines the spread of income for a population. Singapore has a high Gini coefficient which suggests that the spread of income in the country may be distorted. This essay will continue to examine whether inclusive growth remains a priority when lifting the economy out of recession.
Thesis: Inclusive growth remains a priority	To achieve inclusive growth, Singapore needs to achieve actual growth, potential growth and a closing of income disparity. One of the measures introduced along the circuit breaker was the job support scheme. The job support scheme was introduced by the government to offset wage costs for severely affected industries so that these industries can continue to retain their labour despite the closure of the economy. This allowed the affected workers to continue to draw their salaries and protect their employment, such that the fall in consumption component will be cushioned. Offsetting the labour costs for affected industries also provided an opportunity for investment to promote automation. As such the C and I components of the AD may actually increase and bring about actual growth as the increase in AD bring about multiple increases in real national income.

	<p>The investment made to automate processes can enhance productive capacity of the economy which brings about an increase in LRAS and increase in Y11 to Y12. This generates potential growth and remedy demand-pull inflation as it moderates general price level to P2.</p> <p>Lastly, the government continued the effort for Skillstructure which allowed workers to attend courses to update their skill sets and remain relevant in the changing landscape for employment. This will be particularly impactful to close income gaps as low-income workers can now earn higher income with the increased productivity brought about by their new skills.</p> <p>Thus, it appears that inclusive growth can remain as a priority to Singapore government.</p>
Anti-thesis: Inclusive growth may not be priority	<p>During an economic downturn or a recession, the key concern of Singapore government has been to stimulate an increase in real national income and to reduce unemployment. The job support scheme aims to offset labour costs and hence reduce unemployment. This suggests that a key priority during the economic downturn was to minimise unemployment. Singapore will suffer from cyclical unemployment given the recession as the fall in C, I and (X-M) leads to a fall in AD and through reverse multiplier, multiple falls in real national income. The fall in AD will lead to accumulation of stocks and hence a signal to firms to step down production and lay off workers. The fall in derived demand for workers will give rise to cyclical unemployment. Given the openness to trade, the closure of the borders may lead to shut down of many small firms particularly as DD=AR falls as foreign markets are closed off and AC and MC rises due to supply chain disruptions leading to small firms making subnormal profits. The resulting laying off of workers may be to a large extent.</p> <p>A massive lay off will cause a widening of income gap as households with retrenched workers will suffer a loss of income for unforeseen duration of time. The stay-at-home orders also complicated efforts to secure new employment. Job support scheme offset wage costs to allow firms to retain their workers and avoid a massive retrenchment. Thus it appears the priority would be to minimise unemployment.</p>
Evaluation	<p>Stand</p> <p>While inclusive growth can remain as an overarching objective of the government, different economic circumstances will highlight alternative priority. In combating the downturn brought about by the pandemic, the key objective would be safeguard employment, particularly skilled labour of key sectors.</p> <p>Justifications</p> <p>The job support scheme which offset labour costs for severely affected industries aimed to retain existing labour. Affected industries such as</p>

	<p>aviation and tourism sectors employ a significant amount of skilled labour. Thus the scheme does not contribute as much to closing of income disparity.</p> <p>Further insights Undeniably, the aviation and tourism industries are key sectors to the Singapore economy and retaining the skilled labour in these industries allows the economy to be better positioned for economic recovery. Once the measures for border closures can be lifted, these industries are vital for Singapore economy to foster faster uptake for (X-M) component of the AD.</p>
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Mark Scheme		Max
Level	Knowledge, Application/Understanding and Analysis	Max
L3	Full display of AO1, AO2 and AO3 skills: <ul style="list-style-type: none"> For an answer that shows a well-developed and well-balanced analysis (including use of diagram(s)) to inclusive growth remaining as a key priority during a recession 	8 – 10
L2	Uneven display of AO1, AO2 and AO3 skills: <ul style="list-style-type: none"> Answer lacks depth of analysis (i.e. no or limited use of concepts). OR, answer lacks breadth (i.e. only analysed thesis or anti-thesis for inclusive growth remaining as a key priority). Limited contextualisation to the SGeconomy. 	5 – 7
L1	Limited display of AO1 and AO2 skills: <ul style="list-style-type: none"> Answer is irrelevant to the question. OR Answer is descriptive or a mere listing of points, and/or contains major conceptual errors. 	1 – 4
E3	Provides a stand with clear justification using criteria and/or question assumptions.	4-5
E2	Provides a stand with limited justification.	2-3
E1	An unjustified stand.	1

6 Australia achieved a record high trade surplus of over A\$75 billion in 2020. This is commendable despite China, its biggest trade partner, imposing trade restrictions on Australia like a quota on cotton. One reason for the trade surplus was strong prices for Australia's main exports like agricultural products and iron ores.

- (a) Explain how Chinese import quotas will affect Chinese cotton producers and consumers and its effect on Australia's balance of trade. [10]
- (b) Discuss whether net exporters like Australia should pursue free trade at all costs. [15]

Suggested answers

(a)

Command Word	Explain how
Question Type	Effects
Start Point	Chinese impose quotas on Australia cotton
End Point	1. Chinese cotton producers and consumers 2. Australia's balance of trade
Content	Quota analysis
Context	China and Australia

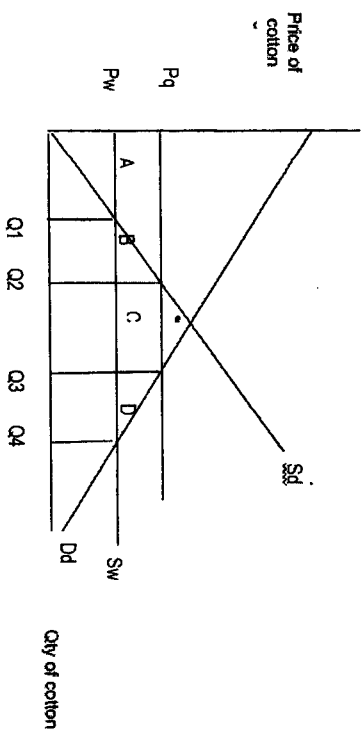
Quotas are quantitative restrictions on imports. A quota may relate to the maximum total quantity or maximum value of a commodity that can be imported in a given period. Their effect is to reduce the quantity supplied of imports in the domestic market. This will lead to a higher equilibrium price than that under free trade.

In this context, self-interested China imposes protectionistic measure on Australia, likely to protect its domestic cotton industry. For information, China is the consistently one of

the largest cotton producer in the world and with it, much of its economy (in terms of income and employment) is dependent on this industry.

Impact on Chinese cotton producers and consumers (Analysis is on China's cotton industry)

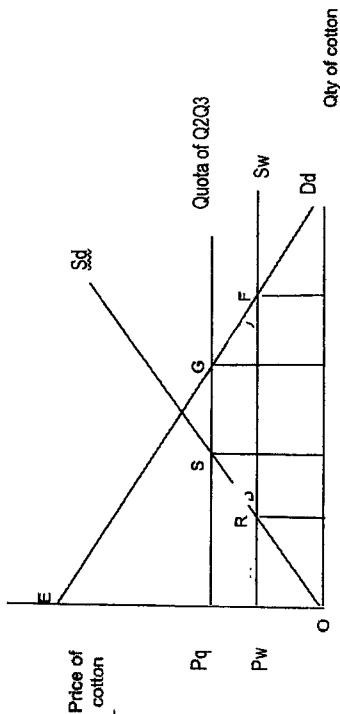
Effects of a quota on price and output



With reference to Figure that analyses the **Impact on China:**

- Initially, at the world price P_w before imposition of quota, Q_1Q_2 is the amount of the good imported.
- Assume that China decides to impose a quota of Q_2Q_3 , restricting the amount of Australian imports.
- The imposition of the quota creates shortages of $Q_1Q_2 + Q_3Q_4$ at current price level P_w , leading to upward pressures on price:
 - Domestic Chinese producers increase quantity supplied from Q_1 to Q_2 . The increase in the domestic production of output leads to domestic firms to increase the derived demand for labour, increasing employment and hence income.
 - Chinese consumers decrease quantity demanded from Q_4 to Q_3
 - There is a reduction in the amount imported from Q_1Q_2 to Q_2Q_3
- Chinese consumers buy fewer units (Q_3 instead of Q_4) and pay a higher price (P_q instead of P_w)

Analysis of change in consumer and producer surpluses



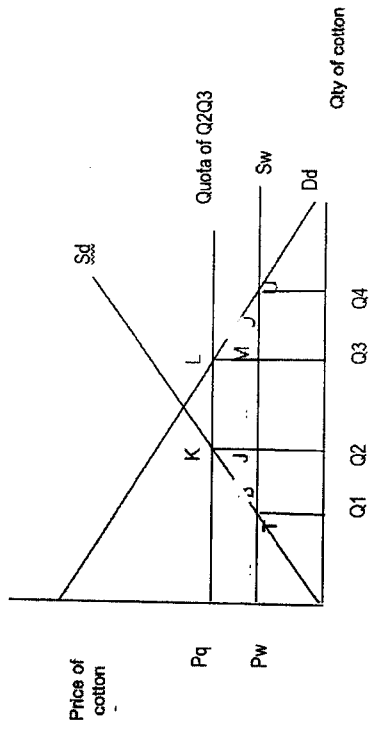
Original consumer surplus: EFPw
 Final consumer surplus: EGFq
 Change in consumer surplus as a result of import quota: - PqGFPw ie Chinese consumers are worse off

Original producer surplus: ORPw
 Final producer surplus: OSPq
 Change in producer surplus as a result of import quota: + PwRSPq ie Chinese producers are better off

*Additional info for your information, that is not required by question:
 • Deadweight loss is represented by Areas (B + C + D). Area C can be recovered if the Chinese government legislates import licenses that Australian cotton producers have to pay.

Impact on Australia Balance of Trade

To analyse the impact on Australia (X-M), assuming M remains constant.
 The change in import expenditure spent by China on Australian goods is the equivalent change in Australia's export revenue.



Before quota
 Australia receives Q1Q4 X Pw as export revenue ie area TQ₁Q₄U

After quota

Scenario 1:
 Australia receives area Q₂KLQ₃ as export revenue (if no quota licence payment involved)
 Compared to initial area TQ₁Q₄U, Q₂KLQ₃ might be bigger or smaller, depending on the extent of change in Qd and Qs in response to the change in quota amount

if area Q₂KLQ₃ is less than TQ₁Q₄U, China spends less on Australian imports. This is also the fall in export revenue that Australia earns.

OR

Scenario 2:
 Australia receives area Q₂JMQ₃ (if quota licence payment involved).
 Area Q₂JMQ₃ is less compared to initial area of TQ₁Q₄U

Australia now earns less export revenue and hence (X-M) falls since M is assumed to be constant.

Mark Scheme

Level	Knowledge, Understanding, Application, Analysis	Marks
L3	<ul style="list-style-type: none"> For an answer that shows a well-developed diagrammatic analysis of how the imposition of Chinese quota on Australian cotton impacts <ul style="list-style-type: none"> Chinese consumers, Chinese producers, and on Australian balance of trade 	8-10
L2	<ul style="list-style-type: none"> For an answer that shows uneven display of the 3 required end points in terms of breadth and/or depth 	5-7
L1	<ul style="list-style-type: none"> Answer is irrelevant to the question (eg impact on Australian consumers and producers; tariff analysis, AD-AS analysis) Answer is descriptive or a mere listing of points without display of analytical tools Contains major conceptual errors 	1-4

(b) Discuss whether net exporters like Australia should pursue free trade at all costs. [15]

Command Word	Discuss whether
Question Type	Impacts
Start Point	Free trade
End Point	BUGPS
Content	International trade, protectionism
Context	AD-AS analysis Net exporters like Australia

Thesis: Net exporters like Australia should pursue free trade

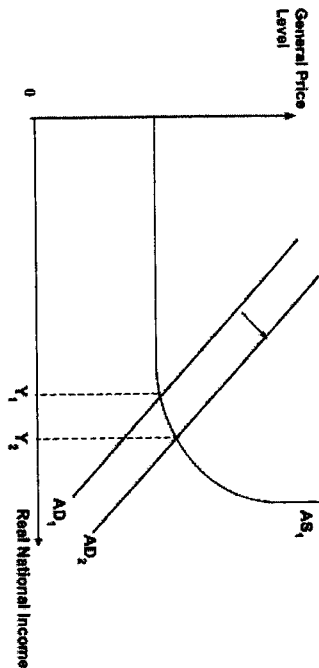
1. To maximise the gains from free trade, in line with the Theory of Comparative Advantage

The benefits of free trade is based on the Theory of Comparative Advantage states that trade between nations is beneficial to all if each specialises and trades according to its comparative advantage.

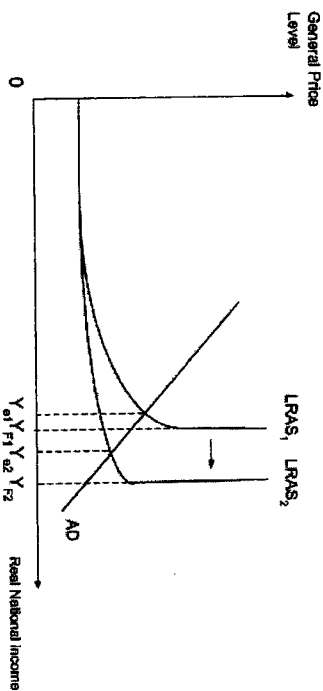
A country has a comparative advantage over another in the production of a good if it can produce it at a lower opportunity cost. Differences in opportunity costs is due to difference in factor endowments. Australia is a large nation that is endowed with abundant land and natural resources like iron as well as suitable climatic conditions to grow agricultural crops like cotton.

- When Australia specialises in its area of CA such as in agriculture, there is a more efficient allocation of its scarce resources. At the same time, Australia can choose to purchase imports in areas which it does not have a CA in (rather than to produce inefficiently). The differences in factor endowments mean that specialisation and trade

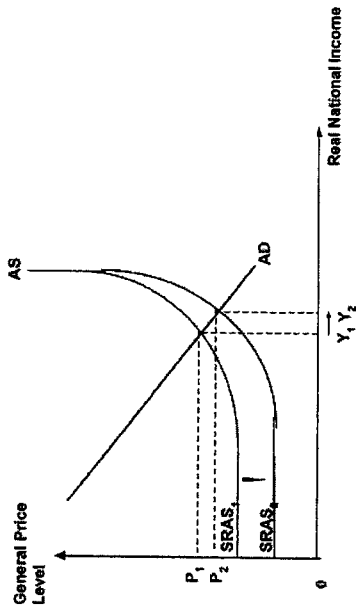
- will make it possible for a country to consume outside its production-possibility curve (PPC) which it was previously unable to attain. As a result, Australia is now able to enjoy greater quantity and variety of goods and services and with it, higher material standard of living.
- With specialisation and trade, Australia will now have a larger export market, bringing about higher export volume and hence AD increases. This increases real national income via the multiplier effect (since one man's spending is another's income), leading to actual growth, as well as lower demand-deficient unemployment as demand for labour increases. This also improves the BOT position.



- Trade also allows Australia to obtain higher quality factors of production by importing (eg AI technology). The subsequent rise in factor productivity enables the economy to produce more output per man hour. As a result, the maximum amount of output that can be produced if all FOPs are fully employed, increases. This rise in productive capacity is potential growth.



Trade allows the sourcing of factors of production from lower-cost economies, leading to an increase in SRAS. Lower costs translates into lower price of final goods and services produced, therefore lowering cost-push inflationary pressures.



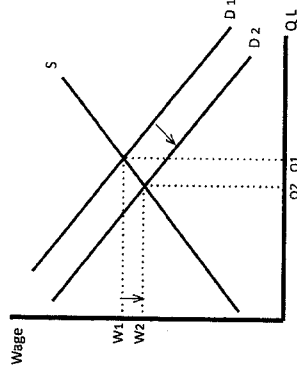
- Despite the theory of CA that promotes specialisation, countries rarely totally specialise in the production of a single good. Consumers value a variety of goods and services to better meet their unique tastes and preferences, providing the basis of intra-industry trade. This allows Australia to still benefit from trade. For example, if Australia had a CA in the production of honey, Australians will also like to consume New Zealand honey. Hence, free trade is beneficial over and above the gains as predicted by the theory of CA.
- Australia will likely have favourable Terms of Trade "strong prices for Australia's main exports". In other words, Australia is able to earn more from each unit of export compared to the expenditure on each unit of import. In Australia's case, a favourable TOT happens to also enable it to become a net exporter, with positive impact on economic growth and reducing demand-deficient unemployment via the multiplier effect. Hence, free trade is beneficial for a net exporter like Australia that also has a favourable TOT.

Anti-thesis: Net exporters like Australia should not pursue free trade at all costs ie reasons for protectionism.

- Protection of infant industries. In the real world, countries continually face dynamic internal and external changes. Areas of CA are seldom permanent. Hence, countries are continually looking at new areas of CA in anticipation of how current areas of CA may become irrelevant or lost to other more cost-efficient countries. With inability to sufficiently develop infant industries that can potentially produce at the lowest opportunity cost globally, the industry will not be given a fair chance to sufficiently develop and mature (for example if Australia is developing its watch industry to pit itself against Switzerland). Free trade without protection will thus compromise its future ability to become an area of CA, compromising its ability to achieve actual growth and to achieve higher material standard of living.

- Risk of structural unemployment for sectors which it does not possess comparative advantage in. Free trade means that these sectors will be exposed to the respective countries with CA. Due to higher opportunity cost incurred in production, the non-CA sectors of Australia will lack export price competitiveness. International consumers will instead choose to import from the countries with CA (eg New Zealand honey). Similarly, producers may also choose to import from countries with cheaper factors of production (eg China gold) so as to produce their exports more cheaply (maintain export price competitiveness).

Since labour is a derived demand of the goods produced, the demand for labour will fall if there is no protection, leading to fall in wage for existing labour and a rise in unemployment.



- On the grounds of economic diversification and self-sufficiency in light of growing global tensions and supply shocks. With free trade, Australia can be vulnerable to rising factor costs due to weather shocks, Russia-Ukraine crisis, protectionistic measures like quotas (from China for example). Therefore, Australia had to also have its domestic sources of production, and not entirely rely on the world for its needs. [Theory of CA stipulates that a country totally imports goods and services that are non-CA.]
- This is also important for Australian producers that rely on imported factors of production. Heavy reliance of such will expose producers to higher costs of production (AC and MC rise) within short notice, leading to declining export price competitiveness and hence profits.

Similarly, if Australia exports are largely necessity goods like natural resources ($0 < YED < 1$), a prolonged global recession will lead to a less than proportionate fall in demand and hence a fall in export revenue, alongside increased demand-deficient unemployment (laying off of factors of production via reverse k effect). This abovementioned effect will be more pronounced as Australia also exports luxury goods ($YED > 1$) like wine and lobsters.

Evaluation

Weighted stand with justification

- Disagree to a large extent that free trade is to be pursued at all costs. In the real world, a country's position on free trade vis-à-vis protectionism lies on a spectrum and not as a binary decision (fully free trade or full autarky). This means that a country can choose to adopt a pro-trade position but maintains selective protectionism for certain sectors over

differing periods of time for various reasons. Similarly, a net exporter like Australia has largely benefited from trade and will continue to calibrate its approach so as to reap the benefits of free trade while also protecting its domestic interests against the possible costs.

- While there are going to be anticipated (economic recessions, booms, rising slowbalisation sentiments) and unanticipated events (supply-side shocks like resource crunch) happening, Australia's **enduring policy** is to continually participate in international trade while putting in place measures to protect itself from external developments.

Recommendation as final insight

- Whether it is to react against the above events or to proactively safeguard its interests, Australia should continually focus on supply-side policies to continually reinvent itself to protect its current areas of CA and to nurture new areas of CA, as well as to produce goods of strategic interests for self-sufficiency.
- Doing so will also enhance its productive capacity, mitigating demand-pull inflationary pressures if it continues to earn rising trade surpluses.

Mark Scheme

Level	Knowledge, Understanding, Application, Analysis	Marks
L3	<ul style="list-style-type: none"> • For an answer that holistically analyses whether a net exporter like Australia ought to pursue free trade at all costs, using suitable tools of analysis. • A balanced analysis comprising 3 points is expected, with clear links to specific economic impacts. 	8-10
L2	<ul style="list-style-type: none"> • For an answer that lacks depth (claims and statements without sufficient development using suitable tools of analysis) and/or breadth of analysis. • Limited contextualisation to a net exporter. 	5-7
L1	<ul style="list-style-type: none"> • Answer is irrelevant to the question and for a response that incidentally contains points relevant to the question. • Contains major conceptual errors. 	1-4

Level	Knowledge, Understanding, Application, Analysis	Marks
E3	Provides a stand with clear justification using criteria and/or question assumptions.	4-5
E2	Provides a stand with limited justification.	2-3
E1	An unjustified stand.	1