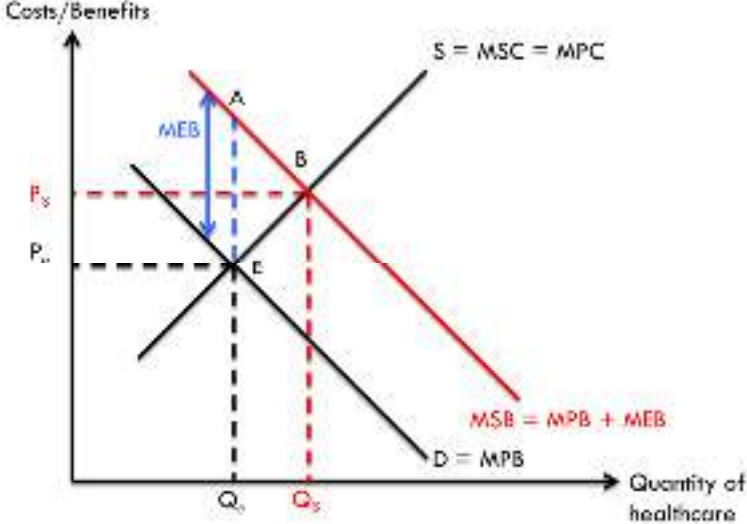


Answer Scheme for Q1

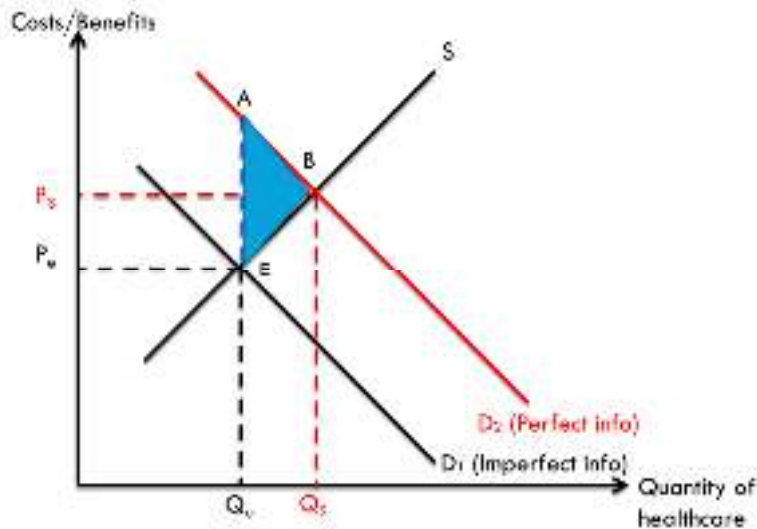
(a)	(i)	With reference to Figure 1, compare the trend of government expenditure on healthcare with that on national defence from 2011 to 2017.	[2]
		Government expenditure for both healthcare and defence have been increasing. [1] Amount spent on defence is always higher than that of healthcare OR Expenditure on healthcare increased faster than expenditure on defence [1] <i>1m – general trend</i> <i>1m – refinement</i>	
	(ii)	Explain how the trend shown will affect the government's budget position.	[2]
		Government's budget is revenue – expd of the government. [1] ceteris paribus, since $G \uparrow$, government's budget would move towards deficit unless there are lowering of expenditure elsewhere or a rise in government's revenue. [1]	
(b)		Explain the need for the Singapore government to provide national defence in Singapore.	[4]
		National defence is a public good which is non-excludable and non-rival. Non-excludability means that it is impossible to exclude non-payers from enjoying the protection from national defence. This creates a possibility of free-riding. As such, there will be no willingness to pay for national defence. This causes a lack of effective demand for national defence. Without an effective demand, producers would not produce national defence. [2] Non-rivalry in consumption means that the protection from national defence enjoyed by one consumer does not diminish the protection enjoyed by other consumers. This means that the marginal cost of providing the protection from national defence to another is zero. The government would hence provide the good free so that allocative efficiency is reached at $P = MC = 0$. [2] <i>2m – Explanation of how non-excludability of national defence causes non-provision by market</i> <i>2m – Explanation of how non-rivalry in consumption of national defence causes governments to have to provide the good for free</i>	
(c)		Using the concept of opportunity cost, explain one effect on the government arising from the increase in defence expenditure.	[2]
		Opportunity cost is the next best alternative forgone. [1] Increase in healthcare costs will result in an increase in government spending on healthcare and more resources will be channeled there. The opportunity cost of increased spending on healthcare is the benefit to society that could have been generated if the government had spent on the next best alternative developmental area such as education or infrastructure or national defence (either 1) [1] <i>1m – definition of opportunity cost</i> <i>1m – explaining opportunity cost incurred from increasing healthcare expenditure</i>	

(d)	Using Extract 2, explain why the price of healthcare is expected to rise sharply in the free market.	[4]
	<ul style="list-style-type: none"> • Rise in DD for healthcare due to aging population/greater awareness [1] • Fall in SS due to shortage of manpower driving up COP [1] • Above two factors causing a shortage and increase in price [1] • Increase in price is sharp due to low PED of healthcare as healthcare is a necessity / low PES due to low factor mobility (healthcare professionals need specific skills that not everyone possesses; need to be trained) [1] <p>1m – Explanation of factor that increases demand 1m – Explanation of factor that decreases supply 1m – Explanation of shortage driving up the price 1m – Addressing the price of healthcare rising <u>sharply</u></p>	
(e)	Assess whether market inefficiency is the main reason for government intervention in the healthcare industry in Singapore.	[8]
	<p><u>Introduction</u> Healthcare is an example of a merit good, a good which the government believes that the people will under-consume due to information failure and positive externalities.</p> <p><u>Thesis: Market inefficiency is the main reason</u> Healthcare services such as flu vaccinations also benefit friends/ family members in terms of lower expected medical costs in future as they are less likely to fall ill due to the reduced chances of catching the flu from the vaccinated person. This happens w/o compensation. As such $MSB > MPB$.</p>  <p>The market equilibrium output is at OQ_e ($MPB = MPC$). Meanwhile, the socially optimal level of output is at OQ_s where $MSB = MSC$. At the market output OQ_e, MSB is more than MSC, meaning that the society values one more unit of healthcare more than it costs to consume. There can be an improvement in society's welfare by increasing production and consumption of healthcare services. There is, thus an underconsumption of $Q_e Q_s$ units of healthcare services leading a welfare loss of area AEC.</p>	

Hence there is allocative inefficiency in the market where the right amount of the right type good is not produced.

OR

Individuals underestimate the private benefits of healthcare services such as health screening such as the reduction in medical expenditure due to prevention of chronic illness (Ext 3) as it often comes about only in the distance future. Thus individuals tend to under-demand health screening at D_1 , instead of D_2 (where the true MPB is).



The market equilibrium output is at OQ_e ($D_1(\text{imperfect info}) = S$). Meanwhile, the socially optimal level of output is at OQ_s where $D_2(\text{perfect info}) = S$). As $OQ_e < OQ_s$, there is an underconsumption of Q_eQ_s units of healthcare services leading a welfare loss of area ABE. Hence there is allocative inefficiency in the market where the right amount of the right type good is not produced.

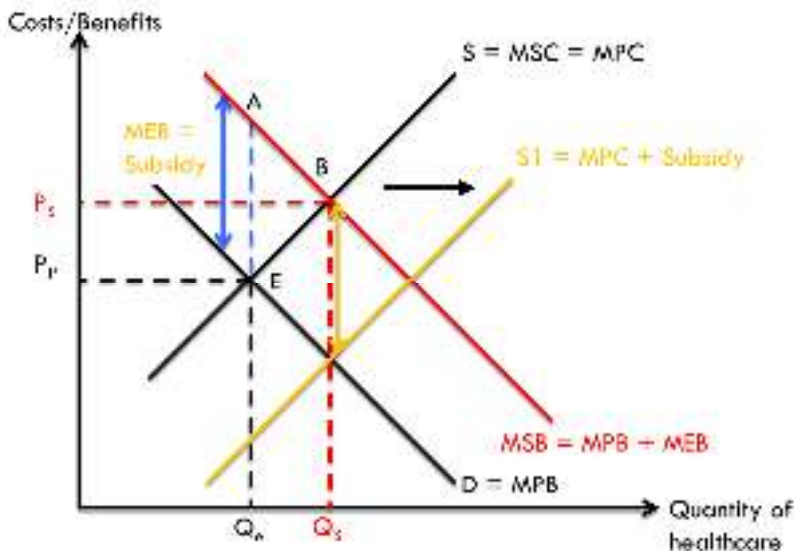
Anti-thesis: Market inefficiency is not the main reason (inequity is the main reason)

However, inequity could be the reason instead. Given that healthcare is a necessity, everyone, including the low-income should have access to healthcare. However, the market would only allocate healthcare to people who are willing and able to pay the market price. This means that low income households who are not able to pay the market price would not receive healthcare. This inequity is made worse by the rising healthcare price. Thus, inequity could be the main reason for the government to intervene in the healthcare market.

Conclusion

In conclusion, whether market inefficiency is the main reason for the government intervention in the healthcare market depends on which sub market is being considered. For health screening, since the government subsidies are not varied according to income, it is likely that the reason for the intervention is not inequity. For primary healthcare (i.e., healthcare services provided by a general practitioner (GP)), since the subsidies under CHAS are only for lower and middle income families, it is likely that inequity is the main reason.

Level	Knowledge, skills and application	Marks
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		<table><tr><td>L2</td><td>Well-explained market failure analysis; explanation of both inefficiency (positive externality/imperfect info) and inequity Thorough explanation of one source of inefficiency, max 5m</td><td>4 - 6</td></tr><tr><td>L1</td><td>Underdeveloped explanation of both inefficiency and inequity Only explained inequity</td><td>1 - 3</td></tr><tr><td colspan="2">Evaluative Comment</td><td></td></tr><tr><td>E</td><td>Explained judgement regarding whether market inefficiency is the main reason for government intervention</td><td>1 - 2</td></tr></table>	L2	Well-explained market failure analysis; explanation of both inefficiency (positive externality/imperfect info) and inequity Thorough explanation of one source of inefficiency, max 5m	4 - 6	L1	Underdeveloped explanation of both inefficiency and inequity Only explained inequity	1 - 3	Evaluative Comment			E	Explained judgement regarding whether market inefficiency is the main reason for government intervention	1 - 2	
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E	Explained judgement regarding whether market inefficiency is the main reason for government intervention	1 - 2													
(f)		Discuss whether the use of a highly subsidized national health screening programme is the best policy that the Singapore government should adopt to address healthcare issues.	[8]												
		<p><u>Thesis: A highly subsidized national health screening programme is the best policy to address healthcare issues</u></p> <p>A highly subsidized national health screening programme is preventive healthcare. It is “part of the larger narrative to raise health levels of Singaporeans through early intervention and healthier lifestyle choices - while keeping costs in check.” It is useful to tackle the market failure issues of imperfect knowledge, positive externality and equity.</p> <p>A subsidy which is equal to MEB can reduce health check cost. This subsidy given to producers will result in an increase in S to S1 due to the fall in unit cost of production. Market output now coincides with the socially optimal output, 0Qs, and deadweight loss is eliminated. Thus, allocative efficiency is achieved.</p>  <p>Evaluation:</p> <p>The health screening programme is able to get citizens to do preventive health checks and with the subsidy which makes price lower, people may be encouraged to do health checks more regularly. The poor would also be able to afford the checks.</p> <p>Although subsidies easy to implement but accuracy of the measurement of the level of positive externalities is difficult to achieve. The government may</p>													

overestimate the amount of subsidy per unit thus there is now overconsumption of healthcare services.

Antithesis: Other policies eg education & campaigns to address healthcare issues

Education and campaigns aim to provide more information to consumers about true costs and benefits of a good and allow them to make informed choices. Some examples include education fairs, education on preventive healthcare in schools. This will tackle the market failure issue of imperfect knowledge re healthcare issues.

An example in Extract 3 is the launch of the second season of the National Steps Challenge Campaign. It is an initiative by the Health Promotion Board (HPB), it aims to get 250,000 Singaporeans to be more physically active by rewarding participants with points based on the number of steps they take.

Evaluation:

Campaigns are not enforceable by law; they serve mainly to encourage people and firms to increase/decrease consumption or production of the good to the socially efficient level. However, people may not heed the advice due to stubbornness and ingrained habits that are hard to change.

It takes time for campaigns to take effect, so this method does not offer immediate solutions to more pressing, urgent problems.

Another measure to tackle healthcare issues is the building of 3 more hospitals. It will provide healthcare services closer to where people live. This is particularly important given the context of ageing population and the need for more hospital facilities.

Evaluation: Government provision requires more government spending and this implies more funds to be collected. Opportunity cost of spending is also involved.

Evaluative conclusion:

The ageing population provides a great challenge for future healthcare provision and health screening is a good preventive measure for people to be aware of early detection of health problems. This will place less burden on the healthcare of the individual as well as on the nation. Subsidies on health screening will be an incentive for people to be more willing to do such checks. So it is a good first step to address healthcare issues in Sg.

However, as awareness is not enough, the other policies to complement a subsidized health screening programme are also necessary in the provision of healthcare assistance in Sg.

Level	Knowledge, Skills and Application	Marks
L2	Answers in this level will provide balanced and sound analysis on the given policy and at least one other policy. One-sided answer (max 4 marks)	4-6
L1	Answers in this level will be descriptive or will contain errors in explaining the policy	1-3

		E	For an evaluative judgement on which is the best policy with reference to context	1-2

Answer Scheme for Q2

(a)		With reference to Table 2, describe the trend of US trade balance with China from 2011 to 2015.	[2]
		US trade balance with China is in a deficit [1]. Trade deficit is increasing [1].	
(b)		Explain the changes in the trends of US's imports and exports.	[2]
		US's economic growth is improving, hence there is an increase in purchasing power of US citizens which increases the value of imports from China [1]. On the other hand, China's economy is slowing down, and hence the value of exports to China did not increase as much [1]. Thus, US trade balance with China is in a deficit.	
(c)		With reference to Extract 5, explain the impact of Brexit on (i) the US's exchange rate (ii) the Singapore economy.	[2] [2]
		(i) With Brexit, there is instability in the UK. Thus, there may be an outflow of capital from the UK and an inflow of capital to more stable countries such as the US [1]. This increases the demand for USD which leads to an appreciation of USD [1].	
		(ii) One impact is that SGD has weakened against USD and this may lead to greater exports to US because of the cheaper exports seen in USD.[1] This will present better opportunity for Sg's exports leading to better economic growth for Sg. [1] OR Uncertainties in UK & EU will reduce future trade and investments in EU [1] and this may mean a fall in X or investment opportunities in EU for Sg. Thus a reduction in AD & thus NY & EG for Sg.[1] [Accept any other explanation based on case information.]	
(d)	(i)	Explain what is meant by the term "protectionism".	[2]
		Protectionism is a policy of sheltering the domestic industries from foreign competition [1] through the imposition of trade barriers on foreign goods and services or unfairly supporting the domestic firms [1].	
	(ii)	With demand and supply analysis, explain how tariffs on cheap Chinese imports will stop "killing US manufacturers".	[4]
		Tariffs will increase the price of Chinese goods into US market. This is because the tariffs increase cost of importing Chinese products into US, thus shifting the SS curve of Chinese products sold in the US. This will lead to a fall in equilibrium qty of such goods into US. [2] US consumers will be encouraged to substitute with the relatively cheaper local products and thus increase demand for local US manufacturers. Equilibrium P & Q will increase and thus allowing the local manufacturers	

		to produce more.[2]	
	(iii)	Discuss whether countries should impose protectionist measures in circumstances such as those described in Extract 6.	[8]
		<p><u>Thesis: Countries should impose protectionist measures on imported goods and services because (explain arguments for protectionism)</u></p> <p>In order to improve their BOP position, countries may impose protectionist measures. As seen in table 2, US has a persistent BOT deficit with China. Hence, US may impose protectionist measures in order to reduce the trade deficit. By imposing protectionist measures such as tariffs and quotas, import expenditure will fall. By imposing protectionist measures such as subsidising US domestic producers, their cost of production falls, hence they will be more willing and able to supply. This results in a fall in price of domestic goods. Since domestic goods and imported goods are substitutes, US consumers reduce their demand for imported goods from China, hence reducing import expenditure. Thus, US trade deficit with China may improve, hence improving BOP position, assuming that capital account has no change.</p> <p>Countries may want to use protectionist measures to reduce structural unemployment. Due to trade, there may be structural unemployment because industries with comparative disadvantage close down. Thus, these workers who may not be equipped with the skills to work in the new industries will be structurally unemployed. By imposing protectionist measures, demand for domestically produced goods and services in the industries which have comparative disadvantage in will increase. This results in the industries surviving, even though they may have the comparative disadvantage in producing the goods as compared to their foreign counterparts. Hence, workers in these industries will continue to stay employed.</p> <p>Countries also impose protectionist measures to retaliate against unfair trade practices. For example, as seen in extract 6, US wants to impose protectionist measures on China because they think that China is unfairly protecting their domestic industries by subsidising them. This results in Chinese goods being sold at a very low cost in US. Hence, US consumers increase their quantity demanded for Chinese goods and services, resulting in an increase in import expenditure. Thus, in order to retaliate against unfair trade practices, US may want to impose protectionist measures on China.</p> <p><u>Anti- thesis: Countries should not impose protectionist measures on imported goods and services because (explain arguments against protectionism)</u></p> <p>However, if countries impose protectionist measures, there will be a lack of efficiency in domestic firms. Firms may become dependent on the protection by the government. Since the firms are being protected from foreign competition, they will also lack the incentive to be more efficient by innovating. Hence, goods produced will be of low-quality, high prices and will be in limited variety. This will mean a waste of valuable resources</p>	

	<p>invested.</p> <p>In addition, there may be retaliation from trading partners. Suppose if US impose protectionist measures on China, China can retaliate by imposing similar protectionist measures on US imports. This results in a fall in export revenue for US. Hence, causing a contraction in world trade.</p> <p><u>Evaluative Conclusion:</u></p> <p>In the short-run, to overcome problems of structural unemployment and trade deficit, should impose. This is because time is needed to train workers from the sunset industries to have the right skills and knowledge for the sunrise industries. However, industries should not be over-reliant on protectionist measures. The government also needs to be aware of when to remove the protectionist measures so as to reduce dependency on protectionist measures. Ultimately, protectionist measures do not target the root cause of the issue of a trade deficit or structural unemployment. Hence, there is a need for structural reform to train workers to work for the sunrise industries in the long run so as to improve export competitiveness and reduce structural unemployment.</p> <table border="1"> <thead> <tr> <th>Level</th><th>Knowledge, Skills and Application</th><th>Marks</th></tr> </thead> <tbody> <tr> <td>L2</td><td>Answers in this Level will provide balanced and sound analysis on the reasons for and against protectionism. One-sided answer (max 4 marks)</td><td>4-6</td></tr> <tr> <td>L1</td><td>Answers in this Level will be descriptive or will contain errors in explaining the reasons for and against protectionism.</td><td>1-3</td></tr> <tr> <td>E</td><td>For an evaluative judgement on whether countries should engage in protectionism and the effectiveness of using protectionist measures in the short-run and long-run.</td><td>1-2</td></tr> </tbody> </table>	Level	Knowledge, Skills and Application	Marks	L2	Answers in this Level will provide balanced and sound analysis on the reasons for and against protectionism. One-sided answer (max 4 marks)	4-6	L1	Answers in this Level will be descriptive or will contain errors in explaining the reasons for and against protectionism.	1-3	E	For an evaluative judgement on whether countries should engage in protectionism and the effectiveness of using protectionist measures in the short-run and long-run.	1-2	
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E	For an evaluative judgement on whether countries should engage in protectionism and the effectiveness of using protectionist measures in the short-run and long-run.	1-2												
(e)	<p>Using the case material and your own relevant knowledge, assess the likely impact of globalization on the Singapore's economy.</p>	[8]												
	<p><u>Introduction: Define & explain globalisation</u></p> <p>Globalisation refers to the free movement of goods & services, capital and labour in the international market. It is possible because of technological improvements in transportation and communication processes.</p> <p><u>Thesis: Globalisation has positive impacts on Singapore's economy</u></p> <p><i>Explain the positive impact of free flow capital on Singapore's four macroeconomic goals, keeping in mind Singapore's characteristics.</i></p> <p>As Singapore is an open economy, international trade - export sales, the inflow of FDI will benefit Singapore by directly increasing the X & I component of AD. The OBOR is an example. This means that AD will increase from AD₀ to AD₁ (draw diagram to show), hence increasing actual economic growth and employment. With an inflow of FDI, there will</p>													

be an exchange of knowledge and technological transfer with the other countries. Thus, this increases productivity, hence LRAS curve shifts outwards from AS0 to AS1 (include on diagram). This increases potential economic growth. Hence, with the increase in actual and potential economic growth, sustained economic growth is achieved. With sustained economic growth, inflationary pressures will be lessened.

An increase in X & inflow of FDI results in an improvement in the BOP. X increase improves the current account and FDI inflow the capital account. Thus there will be an improvement in the BOP position of Singapore, which is favourable.

In Extract 7, globalisation is also as “a job creator and wage booster for Singapore” by the PM. This is because it allows Sporean workers to work overseas and increase earnings from overseas markets. It also provides business opportunities for Sg firms overseas, thus allowing the country to benefit from greater economic growth.

An outflow of FDI benefits Singapore in the long-term because domestic firms will be able to increase their profits abroad, which will eventually flow back to Singapore in the form of factor income from abroad. This improves the income balance in the current account and hence the BOP position. At the same time, income from the investments in the OBOR initiative increases Singapore's GNI and improves our SOL.

In addition, foreign labour inflow allows Sg to lower its COP and thus allows for lower prices domestically. This will also spur export growth.

Anti-thesis: Globalisation has negative impacts on Singapore's economy

Explain the negative impact of free flow of trade, capital and labour on Singapore's four macroeconomic goals, keeping in mind Singapore's characteristics.

Globalisation means that Sg is more open to external shocks. In Extract 5, it says that Sg is susceptible to the headwind of Brexit and a subdued global economic outlook. A more protectionist America will also mean lower ability to trade in the US. This would lower (X-M) and thus AD for Sg.

There are also certain costs to Singapore's involvement in the OBOR initiative. Firstly, after the project has ended, when China withdraws its planning office from Singapore, there will be an increase in unemployment. There will be a need for Singaporeans to find new jobs.

Secondly, investing in the infrastructure building projects in other parts of Asia, Africa and Europe may be at the expense of domestic investment. Thus, the I component of AD may have fallen, resulting in a decrease in AD. This results in a fall in employment and actual economic growth.

Thirdly, suppose the outflow of FDI is larger than the inflow of FDI from China, there will be a worsening of the capital account. Assuming that current account has no change, this will worsen the BOP position of Singapore.

	<p><u>Evaluative Conclusion</u></p> <p>Singapore is a very open economy and it needs to trade and invest beyond its borders. Given that there are both positive and negative impact of globalisation, whether or not Singapore benefits from globalisation is dependent on how the Singapore government mitigates the costs from the negative impact and how Singapore is able to maximise the benefits from the positive impacts.</p> <table border="1" data-bbox="347 465 1326 898"> <thead> <tr> <th>Level</th><th>Knowledge, Skills and Application</th><th>Marks</th></tr> </thead> <tbody> <tr> <td>L2</td><td>Answers in this level will provide balanced and sound analysis on the positive and negative impact of globalisation on Singapore. One-sided answer (max 4 marks)</td><td>4-6</td></tr> <tr> <td>L1</td><td>Answers in this Level will be descriptive or will contain errors in explaining the impact of globalisation on Singapore.</td><td>1-3</td></tr> <tr> <td>E</td><td>For an evaluative judgement which takes into account Singapore's characteristics and the case information</td><td>1-2</td></tr> </tbody> </table>	Level	Knowledge, Skills and Application	Marks	L2	Answers in this level will provide balanced and sound analysis on the positive and negative impact of globalisation on Singapore. One-sided answer (max 4 marks)	4-6	L1	Answers in this Level will be descriptive or will contain errors in explaining the impact of globalisation on Singapore.	1-3	E	For an evaluative judgement which takes into account Singapore's characteristics and the case information	1-2	
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E	For an evaluative judgement which takes into account Singapore's characteristics and the case information	1-2												
	[Total: 30]													

Answer scheme for Q3

3(a) Using examples, explain the concepts of price elasticity of demand and price elasticity of supply. [10]

	PED	PES
Definition	Measures the degree of responsiveness of quantity demanded of a good to a change in its price, <i>ceteris paribus</i>	Measures the degree of responsiveness of quantity supplied of a good to a change in its price, <i>ceteris paribus</i>
Formula	$\frac{\% \text{ change in qty demanded of gd}}{\% \text{ change in the price of gd}}$	$\frac{\% \text{ change in qty supplied of gd}}{\% \text{ change in the price of gd}}$
Sign (Use specific examples to highlight the sign)	<p>Always negative because of the <i>law of demand</i></p> <p>e.g. when the price of watches rises, the quantity demanded will fall, resulting in changes in price and quantity demanded being inversely related, so PED is always –ve</p> <p>By convention we will ignore the minus sign in discussing PED.</p>	<p>Always positive because of the <i>law of supply</i></p> <p>e.g. when the price of barley increases, barley production becomes more profitable and more resources will be channelled into barley production, increasing the quantity supplied. Hence, PES is always +ve</p>
Values (Use specific examples to highlight the values. Briefly explain the factors affecting the value)	<p>PED > 1 (Price elastic DD) When the price of HL milk increases, there will be a <i>more than proportionate</i> decrease in the Qd of HL milk as consumers can switch to the relatively cheaper and available close substitutes such as Marigold and Daisy milk.</p> <p>PED < 1 (Price inelastic DD) When the price of petrol increases, there will be a <i>less than proportionate</i> decrease in the Qd of petrol as consumers do not have many close viable substitutes to petrol to turn to.</p> <p>Hence, the closer and greater will be the number of substitutes available, the more price elastic is the demand for the good.</p> <p>Other factors affecting PED are the proportion of income spent on good and the degree of necessity of good. The higher the proportion of income spent on a good (e.g. cars vs. salt), the more consumers will be forced to reduce consumption when its price rises, that is the demand will be more price elastic. The higher the degree of necessity for the good, the more price inelastic the demand for the good will be, eg. rice and electricity.</p>	<p>PES > 1 (Price elastic SS) When the price of textbooks increases, there tend to be a <i>more than proportionate</i> increase in the quantity supplied of textbook as producers can easily respond to the price increase as they may have stocks of textbooks available in their warehouses or they can make fuller use of their spare capacity and print more copies of textbooks. Hence, supply of textbooks tends to be price elastic.</p> <p>PES < 1 (Price inelastic SS) When the price of houses increases, there will be a <i>less than proportionate</i> increase in the quantity supplied of houses. Supply of houses tend to be highly price inelastic (in SR) as planning, acquisition of land for building of property will take a relatively long period of time. In the LR, the value of PES is higher due to more firms entering the industry and greater competition.</p> <p>Hence, PES for a good will be higher the higher the spare capacity, the greater the availability and durability of the stocks of a good, the greater the factor mobility and the longer the time period.</p>
Measure	The extent of movement along the demand curve as the price of the good itself changes.	The extent of movement along the supply curve as the price of the good itself changes.

Level	Analysis	Mark
L3	Well-developed explanation of both PED and PES, with the use of real-world examples.	8 – 10
L2	Under-developed explanation of PED and PES, with limited use of examples. OR Well-developed explanation of either PED or PES, with limited use of examples.	5 – 7
L1	Answer is mostly irrelevant. Only a few valid points. Lacks economic reasoning.	1– 4

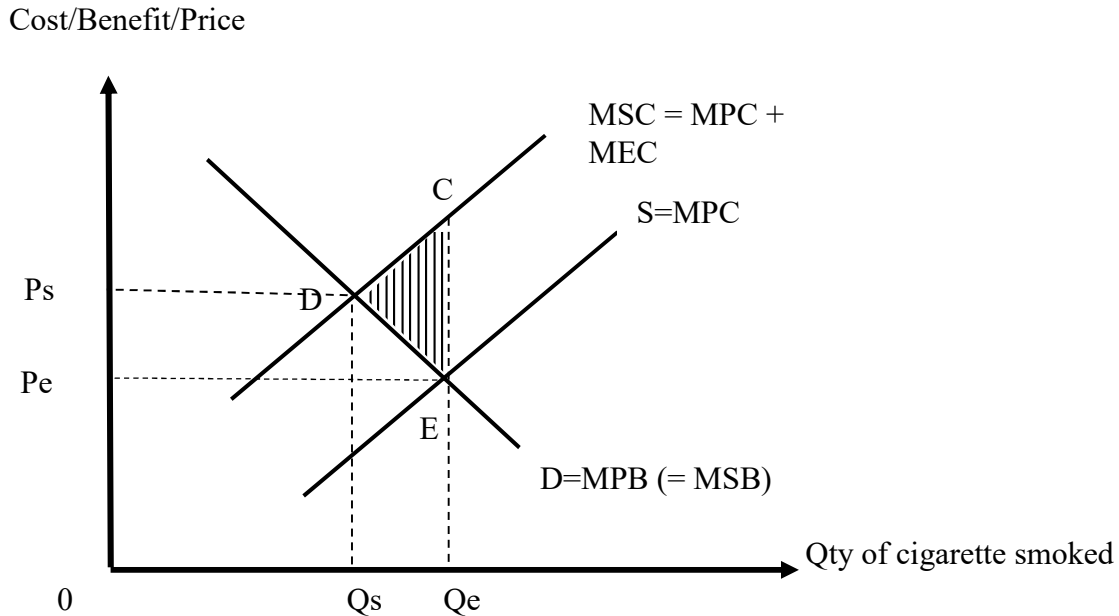
3(b) Discuss the extent to which the price elasticity of demand determine the effectiveness of an indirect tax imposed in the market for demerit goods. [15]

Introduction Define demerit goods and explain the need for government intervention in the market.	
Thesis: PED determine the effectiveness of an indirect tax imposed in the market for demerit goods.	Anti-thesis: PED does not determine the effectiveness of an indirect tax imposed in the market for demerit goods.
<ul style="list-style-type: none"> Correcting market failure in the presence of negative externalities through indirect taxes If $PED > 1$, indirect tax will be more effective than the case where $PED < 1$ 	<ul style="list-style-type: none"> Assess the limitations of PED <ul style="list-style-type: none"> - ceteris paribus assumption is not realistic - difficult to estimate the values of PED Explain how there are other factors that may be as significant or more significant than PED in determining the outcome <ul style="list-style-type: none"> - Wrong estimation of monetary value of MEC
Conclusion <ul style="list-style-type: none"> In light of these limitations, how significant is PED in determining the effectiveness of indirect tax When governments formulate and implement policies to achieve efficient allocation of resources, what other factors may be more useful to consider? 	

Introduction: Define demerit goods and explain the need for government intervention in the market

Demerit goods are goods deemed to be socially undesirable by the government. Some examples of demerit goods include cigarettes, heroin, alcoholic drinks and gambling. The consumption of these goods are likely to cause negative externalities to the society – for eg break-up of families, increased crime rates, loss in productivity. These negative externalities are **external costs** that third parties, for eg. the community, who are not directly involved in the consumption or production of the good will have to bear without compensation. These ‘negative externalities’ make the marginal social cost of demerit goods greater than the marginal private cost. If demerit goods are provided through the free market, there would be over-consumption and hence over-production of these goods leading to inefficient allocation of resources. Let’s use the market for cigarette smoking to illustrate this.

Fig.1



Referring to Fig. 1, the individual consumers and producers will only consider their own private costs and benefits, ignoring the negative externalities and will consume and produce up to the point where $MPB = MPC$ (private efficiency). As such, Q_e is being produced. The existence of negative externalities creates a divergence between MSC and MPC , ie, MSC is higher than MPC . Assuming there is no external benefit incurred, $MSB = MPB = D$. As such, at market equilibrium output, Q_e , MSC is greater than MSB , meaning that the society values an extra unit of good less than what it would cost the society to produce it. The socially efficient level of output should be where $MSC = MSB$, ie. at output Q_s . Therefore, the price mechanism over-allocates resources to the consumption of cigarettes since $Q_e > Q_s$. Area ECD represents the welfare/deadweight loss to society as a result of this over-allocation of resources.

Thesis: PED determine the effectiveness of an indirect tax imposed in the market for demerit goods.

An indirect tax refers to a tax on a good which increases the cost of production of the good.

If the government imposes a tax equal to the external cost, then it will effectively lead to those involved in the transaction internalising the externality. Cost of production will increase and producers will be induced to produce less; the supply curve will shift to the left to (MPC raised to the same level as the MSC). Assuming that the original demand curve is unchanged, the equilibrium price of cigarettes rises and quantity demanded of cigarettes falls to the socially efficient level Q_s . The over-allocation of resources is corrected as there will not be over-production. This eliminates the deadweight loss and allocative efficiency is achieved.

The extent by which a tax can reduce the externality produced is uncertain, depending on the price elasticity of demand for the good. If demand for the good (e.g. cigarettes by young smokers) is price elastic, an indirect tax that raises the price of the demerit good will reduce the quantity demanded of the demerit good by a more than proportionate amount. Therefore, the reduction in the externalities (pollution, health problems to non-smokers) will be very significant.

However, demerit goods, eg liquor, cigarettes, are likely to be consumed out of habit due to the addictive nature of the goods (e.g. cigarettes by chain smokers). This results in limited number of close substitutes available for such goods and consumers become less sensitive to price changes. Hence demand for demerit goods is likely to be price inelastic. As such, the new market price increases sharply whilst there is a less than proportionate fall in quantity demanded to. Most of the indirect tax is passed on to the consumers from the producers in the form of higher prices. The quantity traded has only fallen by a small amount. Therefore, the reduction in the externalities (pollution, health problems to non-smokers) will not be very effective.

Hence, the effectiveness of an indirect tax in the market to curb the consumption of the demerit good is determined by the price elasticity of the demand for the demerit goods.

Anti-thesis 1: PED does not determine the effectiveness of an indirect tax imposed in the market for demerit goods - Limitations of PED

The above analysis is only correct if certain assumptions hold true. Firstly, all other things affecting demand and supply are assumed to be constant. However, the ceteris paribus assumption may not hold in the real world. When using the elasticity concepts, we assume that only the price of the good has changed. For example, when using PED, we ignore the fact that demand for the demerit good might have changed due to a change in tastes and preferences and attribute the insignificant fall in quantity demanded to the price inelastic demand for demerit good.

Secondly, the PED values are just estimates. There could be difficulties in data collection or the sample size taken may be too small to reflect the actual elasticity values. Hence, it is difficult to conclude with certainty the impact of PED on the quantity demanded of demerit good.

Antithesis 2: PED does not determine the effectiveness of an indirect tax imposed in the market for demerit goods - Other factors also affect the effectiveness

Besides PED, government's ability to estimate the monetary value of the MEC also determines the effectiveness of the indirect tax. The government may not know the optimal amount of tax to levy thus creating over- or underproduction/consumption. The difficulty in establishing a monetary value to the external cost of consumption would limit the effectiveness of taxation. Should the government impose a tax amount greater than the external cost, there would be under-allocation of resources to the market, creating another set of problem to the market instead.

In addition, the government may not know the exact full costs and benefits of its policies and this limits the effectiveness of indirect taxation. There is no complete knowledge of the policy outcome until they are implemented. Administrative costs are incurred in the collection of taxes. Also, such indirect taxes are often regressive in nature. As such the poor may be affected more by this tax than the rich. Moreover, with the economy growing and people getting richer, the tax may not be effective in reducing quantity of demerit goods bought as consumers will be able to pay the tax with the additional income earned. The exorbitant indirect taxes may also encourage illegal activities like the smuggling of contraband cigarettes into Singapore.

Evaluative Conclusion

In conclusion, the effectiveness of an indirect tax imposed in the market for demerit goods to curb the consumption of the demerit good is limited because of the inelastic price elasticity of the demand for demerit goods. Increases in indirect tax in this market would only lead to higher price and hence bigger government tax revenue but without much fall in quantity consumed of the demerit goods. This implies that indirect taxes on the market for demerit goods provides good tax revenue which can be used to pay for the medical bills

that are incurred by passive smokers as well as to run programmes to help smokers quit. In addition, the funds can be used to educate the young on the dangers of smoking. To effectively address the problem of allocative inefficiency, the government only needs to slap a hefty tax on such goods. However, the government should note that this would cause a much heavier tax burden on the poor than on the rich, resulting in inequity. Therefore, whether government efforts to interfere in the working of the free market through indirect taxation would create more problems than they solve depends not so much on the PED but on the amount of information that the government possess and the ability of the government to anticipate the consequences of an indirect tax and supplement it with other policies. If the government has perfect knowledge of the external cost that would arise from the consumption or production of demerit goods, then indirect taxation is likely to solve market failure problems rather than creating more problems.

Level	Analysis	Mark
L3	Well-developed explanation of why and how governments intervene by imposing indirect taxes in the market for demerit goods and the role of PED and other factors. Use of diagrams and examples.	8 – 11
L2	Under-developed explanation of why and how governments intervene by imposing indirect taxes in the market for demerit goods and the role of PED and other factors. OR Well-developed explanation of why and how governments intervene by imposing indirect taxes in the market for demerit goods and the role of PED.	5 – 7
L1	Answer is mostly irrelevant. Only a few valid points. Lacks economic reasoning. Answer shows some knowledge of PED and demerit goods although the relationship between the two terms is not well explained. Answer explains why OR how governments intervene in demerit goods market. There are errors in the diagram. No explanation of diagram.	1 – 4
Level	Evaluation	Mark
E2	Well-reasoned judgement that assess the extent that PED determines the effectiveness of an indirect tax.	3 – 4
E1	Judgement with weak justification on whether PED determines the effectiveness of indirect tax. OR Judgement that states the limitations of using PED.	1 – 2

Answer Scheme for Q4

4(a) Explain the main consequences of a persistent and large balance of payments deficit on an economy. [10]

Introduction

Define balance of payments

Balance of Payments (BOP) refers to a record of all economic transactions between a country and the rest of the world during a given period of time, usually one year. Every economic transaction between a country and another either results in an inflow of money into the country (e.g. when a foreign households buys exports from the domestic firms), or an outflow of money from the country (e.g. when domestic firms build factories overseas). The main accounts in the BOP are the current and capital/financial accounts.

Explain the meaning of a persistent and large BOP deficit

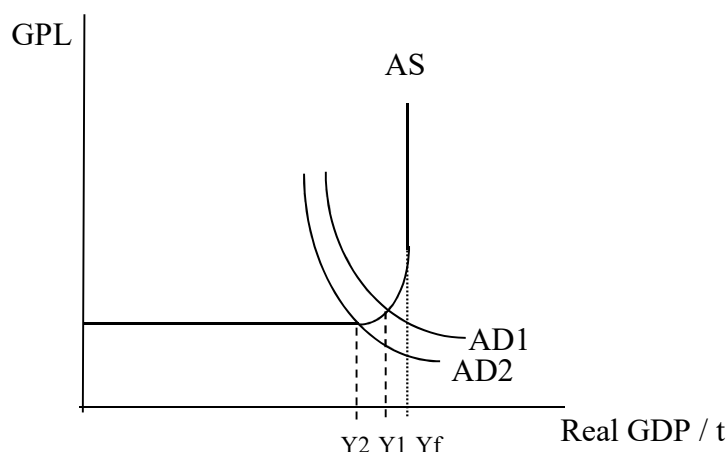
The BOP is said to be in deficit when the total currency flow shows a negative value and it could be due to a deficit in current account and/or capital account. If the country adopts a floating exchange rate system, any BOP deficit would be short term in nature. However, a persistent and large BOP deficit would mean a large change in the exchange rate which could have knock-on effects on investments and eventually growth.

Body

Explain consequences of BOP deficit on exchange rate and the the economy

The most immediate impact of a persistent and large BOP on the economy is through effect on the economy's exchange rate. With a BOP deficit, money outflow is more than money inflow which means that there is a surplus of currency in the forex market and the currency would depreciate. If the country chooses to continuously support the weakening exchange rate, the country's reserves could be depleted. The currency will then sharply depreciate to its equilibrium market value.

The depreciation of the currency will cause exports to become cheaper in terms of foreign currency while imports become more expensive in terms of domestic currency. As long as Marshall-Lerner condition holds, that is, $|PED_x + PED_m| > 1$, a depreciation of the currency would lead to a fall in net export (X-M). The fall in (X-M) would reduce AD (since $AD = C + I + G + (X - M)$), ceteris paribus. AD curve will shift to the left from AD1 to AD2 as seen in the diagram below. This leftward shift of AD will have an adverse effect on the economy if it is operating at or near full employment. With the fall in AD, inventory builds up and firms will cut back on production. There will be a **fall in real national income** from Y1 to Y2. The level of employment of resources will also fall as demand for resources is derived from demand for the final output. The economy moves further away from the full employment level and is experiencing **demand deficient/cyclical unemployment**.



The extent of the contraction of the economy will depend on the relative size of the (X-M) in the economy's AD. In an economy which is highly dependent on trade to generate output and employment such as Singapore, a given fall in trade value will result in greater fall in national income and employment as compared to an economy where (X-M) is relatively small in relation to the other components of AD.

If the economy does not own natural resources and is dependent on imported raw materials for its production processes or the economy is dependent on imported consumption goods as in the case of Singapore, a sharp depreciation would cause a large increase in the prices of imports, causing high **imported inflation**. Cost of production will increase especially if the economy is highly dependent on inputs for production which will affect their export price competitiveness if it is a very large proportion of unit cost of production. This will further worsen BOP deficit via the current account and negatively affect growth and employment.

Over time, a persistent and large BOP deficit will reduce the attractiveness of the economy to foreign investors as the rate of return on investment projects will be reduced and often uncertain. The **lower level of foreign investment** will adversely affect growth and employment. The inflow of foreign direct investment contributes to investment expenditure, a component of AD. With the fall in investment, AD falls and output and employment will fall. In the longer term, there will be slower expansion of productive capacity leading to slower shift of the aggregate supply curve and thus slower potential growth.

Finally, a persistent BOP deficit may lead to other problems such as depletion of foreign exchange reserves if the economy adopts a managed or fixed exchange rate system. This may eventually lead to the **need to borrow** in order to finance the deficit. Borrowing will result in greater burden on the economy as it has to service the debt. This will mean fewer resources will be available for future investment and spending on training leading to a slower shift of the AS curve to the right. Potential economic growth will be impeded with a potential rise in structural unemployment.

Conclusion

A persistent and large deficit in BOP could bring about adverse impact on the economy. In the long run, the economy could face severe contraction in their economic potential and high unemployment.

Level	Knowledge, Analysis and Application	Mark
L3	Well-developed explanation of the consequences of a large and persistent BOP deficit using AD/AS framework.	8 – 10
L2	Under-developed explanation of the consequences of BOP deficit, without highlighting its persistence and magnitude. Limited reference to the AD/AS framework.	5 – 7
L1	Answer is mostly irrelevant. Only a few valid points. Lacks economic reasoning.	1 – 4

4(b) Discuss the view that supply-side policies are the most effective means of dealing with a balance of payments deficit. [15]

Introduction Explain and give examples of supply-side policies.	
Thesis: SS-side policies are the most effective in dealing with a BOP deficit	Anti-thesis: SS-side policies are not the most effective in dealing with a BOP deficit.

<ul style="list-style-type: none"> Explain how SS-side policies correct a BOP deficit 	<ul style="list-style-type: none"> Assess the limitations of SS-side policies <ul style="list-style-type: none"> high opportunity cost long term measure Explain how other policies are more effective and their limitations <ul style="list-style-type: none"> Expenditure-reducing policies – FP/MP Expenditure-switching policies – protectionist policies
Conclusion <ul style="list-style-type: none"> Well-reasoned judgement of whether SS-side policies are the most effective in correcting a BOP deficit 	

Introduction

Explain and give examples of supply-side policies

Supply-side policies refer to instruments which affect the aggregate supply. Such policies can help to achieve both actual and potential economic growth as well as lower unemployment and minimise the impacts of cost-push inflation. There are various types of supply-side policies and they are divided into two broad groups: interventionist policies and market oriented policies. Interventionist policies refer to those where the government takes a more active role (e.g., provide subsidies, introduce rules and regulations, etc) while market-oriented policies refer to those where the government reduces its intervention to let the free market work instead.

Thesis: SS-side policies are the most effective in dealing with a BOP deficit - Explain how SS-side policies correct a BOP deficit

The aim of the policy is to increase the quantity and quality of the resources in the economy so that costs of production can be reduced in the long run, which will then enhance export competitiveness. For example, governments can roll out training subsidies and research incentives which can help offload the producers financially when they send their employees for training and incentivise automation. Upon completion of training and a successful research and development, the employees and the production line become more productive. This will allow the prices of exports to be more competitive and if demand for exports is price elastic, quantity demanded of exports will increase more than proportionately, increasing export revenue and reduces the BOT deficit and hence BOP deficit at the same time. With a more productive workforce and consistent attempts by the government to improve the infrastructure for investments, foreign investors would be attracted to the country to invest and the influx of FDI would improve the financial account, helping to reduce the overall BOP deficit. For example, in Singapore, corporate income tax rates have remained competitive and favourable tax exemptions and incentives are given to pioneering investors, so that FDI can continue to stream into Singapore to boost our financial account.

Anti-Thesis 1: SS-side policies are not the most effective in dealing with a BOP deficit - Limitations of SS-side policies

However, supply-side policy are costly and the results can be uncertain. For instance, the training courses which are heavily subsidised by the government would take up a significant portion of government's fiscal budget and they would then have less to spend on other areas like healthcare and defence. Workers might also be reluctant to go for training as they might be resistant to more work and studies and the success rate of training amongst the workers also vary. Ultimately, given these limitations in reality, the effectiveness of supply-side policy would depend on the mindsets and receptiveness of the employees when they go for training. If they are willing and open-minded about going for training, then they can pick up the essence of the courses and apply them at work to enhance productivity. Also, if the government does not have a budget surplus all these

years to finance the subsidies and incentives to enhance research and development, then the extent of the effectiveness of the programs would also be limited.

Anti-Thesis 2: SS-side policies are not the most effective in dealing with a BOP deficit - Expenditure-reducing policies (DD-management policies)

If the country was facing a BOP deficit due to excessive spending on imports by the citizens, then a more effective policy might be contractionary demand management policies like fiscal and monetary policies. Besides cutting down government expenditures, they can also increase income and corporate taxes to reduce disposable income and after tax profits so that consumption and investment expenditure would be reduced. As a result, aggregate demand will decrease and national income will fall via the multiplier process, bringing about lower import expenditure, which will reduce the BOP deficit.

Limitations

The effectiveness of contractionary FP and MP to reduce AD might be limited too if the market sentiments about the future is optimistic. When there had been high economic growth recorded by the country in recent years, the level of expectations towards the future would be relatively positive, so the consumers and investors might want to continue to consume and invest despite the higher direct taxes since they might believe they would be able to finance the higher taxes without adjusting their spending patterns too much. Also, these policies are immensely unpopular as it is generally difficult to raise taxes on the people as it will reduce economic growth and lower the standard of living quantitatively. In addition, the effectiveness also hinges on whether the demand for the imports is income elastic. If the demand for imports is income elastic, demand for imports will then drop more than proportionately when income falls. It also depends on how strong the government is and the degree of the macroeconomic goals like unemployment rates and inflation, as mentioned in part a. If the government is strong and popular enough most of the time among the electorate, it would not need to implement populist policies to gain votes and would thus be more willing to increase taxes to correct a BOP deficit if necessary.

Anti-Thesis 2: SS-side policies are not the most effective in dealing with a BOP deficit - Expenditure-switching policies – Protectionist policies

Lastly, the government can also adopt protectionist measures to restrict imports into the country. For example, they might impose import tariffs which would then cause the prices of imports to rise and assuming the demand for imports to be price elastic, quantity demanded for imports would fall more than proportionately and import expenditure would decrease, reducing the BOP deficit.

Limitations

However, protectionist measures might invite retaliation from other countries and they would also do tit-for tat and this can result in a fall in export revenue, which would limit the improvement of BOP position. In addition, there would be deadweight loss to the society when import tariffs are imposed as the consumers are forced to pay higher prices for goods and services when they could have been able to pay less. Ultimately, protectionist measures should only be for the short term if the deficit is huge and requires fixing immediately. In the long term, countries should embrace free trade as the benefits of trade are immense and more withstanding while the benefits of protectionism can only be temporary.

Conclusion

In conclusion, it is important to examine the root cause of the BOP deficit so that the appropriate policy can be implemented. If there had been a trade deficit due to the fundamental loss of comparative advantage, then supply-side policy would be more useful to build up a new area of specialisation and to regain export competitiveness. Yet it is also

crucial to consider the magnitude of the deficit and if it is huge, then it would be imperative to reduce it immediately, then short term measures like protectionism would have been useful.

Level	Knowledge, Analysis and Application	Mark
L3	Well-developed discussion of how supply-side and 2 other policies can maintain a satisfactory BOP and a thorough consideration of the limitations of each policy.	8 – 11
L2	Under-developed discussion of how supply-side policy and expenditure reducing policies can maintain healthy BOP. OR Well-developed discussion of how supply-side policy OR expenditure reducing policies can maintain a satisfactory BOP	5 – 7
L1	Answer is mostly irrelevant. Only a few valid points. Lacks economic reasoning.	1 – 4
Level	Evaluation	Mark
E2	For an evaluative assessment based on economic analysis. Thorough discussion about the suitability of supply-side policy for countries in various contexts. Deep consideration of the relevance of other proposed policies.	3 – 4
E1	For an unexplained assessment, or one that is not supported by economic analysis.	1 – 2