Class Adm No

Candidate Name: _____

millennia institute

2022 Preliminary Exams
Pre-university 3

ECONOMICS **9757/01**

Paper 1 **14 September 2022**
2 hours 15 minutes

Additional Materials: Answer Booklet

READ THESE INSTRUCTIONS FIRST

Write your name and class on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, highlighters, glue or correction fluid.

Answer **all** questions.

You are reminded of the need for clear presentation in your answers.

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 paper, ask the invigilator for a continuation booklet.

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

Answer **all** questions.

This question paper consists of **X** printed pages and **X** blank page.

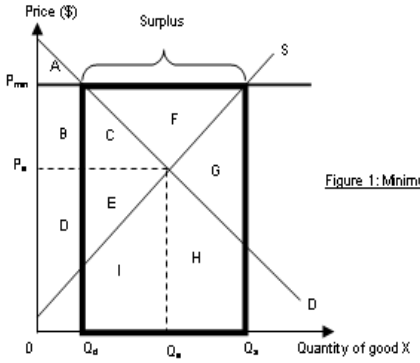
[Turn over

CSQ1- Suggested answers:

(a)	(i)	Using Figure 1 and 2, compare the trend for the worldwide chocolate market sales revenue with that of India for the period 2016-2021.	[2]
		Similarity: Rising trend for both India and Worldwide chocolate market sales revenue. [1] **Difference:** However, there is a **sharp** fall in market sales revenue from 2019 to 2020 for worldwide chocolate market while India continues to increase during the same period. [1] 1m for similarity 1m for difference	
	(ii)	Using demand and supply analysis and Extract 1, account for the changes in sales revenue from 2019 to 2020 for the worldwide chocolate market.	[4]
		There was a **SHARP** fall in sales from 2019 to 2020 for the worldwide chocolate market. The reasons are : **Demand factor :** (Any one DD factor) **[1m]** The impact of coronavirus lockdowns curbed impulse buying of chocolate, as people focused instead on stocking up on essentials leading to a fall in demand. Or Economic slowdown due to COVID19 brings about less economic activities and loss of jobs and hence a fall in income As a result, there is a fall in demand for chocolate which is a normal (luxury) good DD shifts left. **[1m]** **Since chocolate is a luxury good,** YED is positive and greater than 1. A fall in income leads to a **more than proportionate** fall in demand/consumption of "luxury" items such as chocolate. **[1m]** DD shifts by a **larger extent** compared with a YED that is positive but less than 1 for a good that is a necessity. **[1m]** Hence the **sharp** fall in sales revenue for the worldwide chocolate market is caused by a **large fall** in demand for chocolates. Note: There is no change in SS as mentioned in Extract 1. 1m for DD factor 1m for explanation of DD shifting left 1m for explanation of YED sign and magnitude 1m for explaining the larger extent of shift in DD	
(b)		Define Price Elasticity of Demand (PED) and explain the difference in values of the PED for cocoa butter presented in Table 1.	[4]
		Price Elasticity of Demand measures the degree of responsiveness of quantity demanded to a change of the price of the good itself, ceteris paribus. **[1m]** **Price elasticity of demand** **Short term** -0.06 **Long term** -0.34 The sign of PED is **negative** due to the inverse law of demand. As price increases, quantity demanded decreases and vice versa **[1m]** Both SR and LR PED of -0.06 and -0.34 respectively has |PED| < 1 as there is a high degree of necessity for cocoa butter as an ingredient for chocolate OR as there are	

		no close substitutes for cocoa butter. From Extract 2, palm and cotton oil are poor substitutes and there are no alternatives of cocoa butter so far that could meet the exact demand of cocoa butter. **[1m]** The LR |PED| is more than the SR |PED| because in the long run, firms that purchase cocoa butter might be able to find closer alternatives for cocoa butter or discover closer substitutes for cocoa butter in response to change in prices of cocoa butter, while in the short run, firms may not have sufficient time to do so. **[1m]** 1m for definition 1m for explanation of sign 1m for explanation of magnitude using a PED factor 1m for explaining why long run |PED| is larger than short run |PED|	
(c)		With reference to Extract 2, explain the relationship between cocoa butter and chocolate.	[2]
		Cocoa butter is a factor of production in the production of chocolate. **[1m]** This is because according to Extract 2, 50% of cocoa butter made from crushing and grinding cocoa beans is used in **<u>making</u>** chocolate. **[1m]** 1m for correct identification of relationship between the two goods 1m for correct explanation using the Extract	
(d)		Establishing "a price floor would give cocoa farmers a living income – and to ensure farmers get a fair share of the wealth as well as to protect farmers from dire poverty and fluctuations in the cocoa market." With the aid of a diagram, discuss the factors to consider whether the minimum price should be implemented for cocoa farmers.	[8]
		Question Analysis **Command word**: "Discuss the factors" explain factors and evaluate which is most important **Content**: "factors to consider whether the minimum price should be implemented for cocoa farmers." ● Factors affecting decision making: Benefits, costs and constraints **Context**: Cocoa farmers	

Requirement	Suggested Answer
Introduction: Definition and overview	A price floor is defined as a legally established minimum price that buyers are required to pay for a good or service. Farmers are prohibited from selling below the stipulated price, but prices can rise above it. For price floor to be effective, it must be set at a price above the market equilibrium price. Government may want to use a price floor to protect the income of the farmers from falling, especially in periods of very low prices like when the price of cocoa abruptly fell by 30 percent three years ago, leaving many farmers struggling desperately mentioned in Extract 3.
Factor 1: Benefits of minimum price.	Factor to consider in deciding whether minimum price should be implemented include: **Benefits of minimum price in alleviating poverty for cocoa farmers in Africa and** Decision to implement minimum price would depend on whether price floor would benefit and help to alleviate poverty for the cocoa farmers in Africa. Africa is the largest global producers of cocoa supplying 70% of the world's cocoa beans. Many cocoa farmers and workers having to get by on less than 1.25 US dollars a day and a study also showed that 58 percent of cocoa farming households had incomes below the extreme poverty line in **Extract 3**. According to **Extract 3 and 4**, despite forecasts that the demand for cocoa will rise by nearly 20 % in the coming years and the increasing revenues for chocolate companies but **many farmers are not able to cover their living costs.** Income of cocoa farmers is low compared to the profit made by the chocolate industry and a study in April 2018 also showed that 58 percent of cocoa farming households had incomes below the extreme poverty line. Many cocoa farmers and workers have to get with less than 1.25 US dollars a day. Farmer's income insecurity is affected by volatile cocoa prices stems from changing supply volumes and are forced to sell their beans at low prices immediately due to poor living conditions, the immediate need for money and a lack of storage facilities. A price floor would give cocoa farmers a living income – and to ensure farmers get a fair share of the wealth as well as to protect farmers from dire poverty and fluctuations in the cocoa market, and better standard of living. **Benefits of minimum price for farmers:** Minimum price hence helps to stabilising price of cocoa/minimise fluctuations in prices of cocoa

			With the government guaranteeing the price paid to the farmers, and buying up the surplus stocks, this results in by increasing the total revenue (Pmin x Qs) for farmers as shown in Figure 1 This can help to reverse the situation where farmers stop investing in their farms, cutting salaries, not providing workers with proper working conditions, and in the worst cases are prone to use child labour.  Figure 1: Minimum price for farmers		
		Factor 2: Costs of minimum price.	Factor to consider in deciding whether the minimum price should be implemented include: **Worsening of resource misallocation of cocoa farming.** Decision to implement minimum price would depend on whether price floor would worsen resource misallocation of cocoa farming in Africa. Minimum price creates a surplus (excess supply) equal to QsQd, since the quantity demanded by consumers is given by 0Qd, while the quantity supplied by farmers is given by 0Qs. The surplus of cocoa results in resource misallocation. This is because too many resources may be allocated to the production of cocoa. This results in larger than social optimum quantity produced. The social optimum quantity is 0Qe but 0Qs is actually produced as a result of the minimum price scheme, resulting in allocative inefficiency given by DWL area (C+E) caused by over-allocation of scarce resources to the production of the good. (Refer to Fig 1) From **Extract 4**, minimum price will attract more farmers such as Kwame Boadu to return to his fields. In addition, due to the guaranteed higher price, new farmers may also be attracted, creating even greater surpluses as the minimum price encourages new and existing farmers to produce much more of cocoa than they would have otherwise causing serious social and environmental problems at expense of sustainable, ecological and diversified farming. Being protected by a guaranteed high price, producers will become complacent and have less incentive to find efficient methods of production or engage in product innovation. In addition, too many resources are being employed in this		

	industry due to the high price guaranteed. This may lead to wastage and inefficiency while other industries face shortages in these resources.
Factor 3: Constraints faced by the government.	Factor to consider in deciding whether the minimum price should be implemented include: **Availability of government reserves.** Decision to implement minimum price would depend on whether the government has budget to carry out this policy. **Straining the government budget and the opportunity cost.** Guaranteed minimum prices for cocoa would lead to a hefty bill for the government as it spends billions to mop up cocoa stockpile. To deal with the surpluses, the government will have to buy up the surplus and store it or destroy it or sell it abroad in other markets. If the government maintains the minimum price by purchasing all the surplus stock, over time, there will be a storage mountain especially in Africa which is the largest global producers of cocoa, supplying 70% of the world's cocoa beans. This would mean extra costs of transportation, storage and security for the products. Hence, the purchase of the surplus cocoa beans produced will run down government budget and it will also incur high opportunity cost as less funds available for other important programs such as education and health care services as mentioned in **Extract 4**. As government spending is financed out of taxes with alternative uses, opportunity costs are incurred and government spending to maintain price floor thus involve losses for society such as a fall in the standard of living. In addition, the maintenance of a price floor may have to be financed out of higher taxes which reduces disposable income and worsens equity. It was mentioned in **Extract 4** that some of the stockpile may just rot in government warehouses especially if there are no proper storage facilities. This means that government will not be able to export the stockpiles abroad to foreign markets to recoup the money from implementing the minimum price for cocoa farmers. Exporting the surplus often requires government granting a subsidy to lower the price of the good and make it competitive in world markets. By dumping the excess goods produced abroad, the benefits of increased export revenue and output enjoyed by the country are achieved at the expense of its trading partners and in turn worsen trade relations between countries. Trade partners who experience a decline in export sales and consequently a lower output and employment level will trigger off retaliatory measures. This could in turn reduce the export revenues and output of the country

		Evaluative Conclusion: Which is the most significant factor?	Conclusion / Evaluation In deciding whether the minimum price support scheme is to be implemented, governments should either: ● seek to adopt a detailed cost-benefit analysis on the factors above and implement if the scheme results in a overall net benefit to society or ● consider the urgency of the factors / the most important factor and substantiate or ● consider the time frame in the implementation of the policy

Level	Description	Marks
L2	Answer covers at least 2 groups of well-explained factors (e.g. benefits and costs) with thorough economic analysis and use of appropriate economic framework. Reference to case material were made in the answer. Max 4m – No reference to case material	4–6
L1	Answer lacks balance or scope or reference to case material or details.	1-3
E	Makes a substantiated judgement that answers the question.	1-2

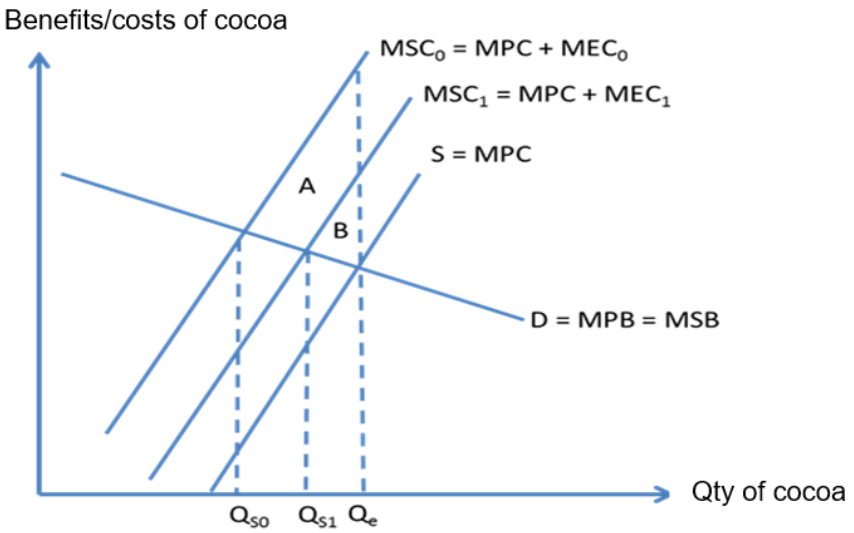
(e)		With reference to Extract 6, to what extent do you agree that research and development is likely to be a better measure than imposing taxes in addressing the market failure arising from farming cocoa.	[10]

Question Analysis

Command word: "what extent do you agree" 2 sides needed
Content: Criteria to determine "better measure" compare the 2 policies
- **Thesis:** R&D is a better measure (benefits of R&D vs limitations of imposing taxes in addressing the market failure)
- **Anti-thesis**: Imposing taxes is a better measure (benefits of imposing taxes vs limitations of R&D) in addressing the market failure)

Context: cocoa beans production

Requirement	Suggested Answer
Introduction: Definition	Negative externalities that arises from farming cocoa: Deforestation that release carbon emissions which causes greenhouse effect (global warming) from overproduction of cocoa beans. Negative externalities may arise as farmers are not aware of the third-party external costs of producing cocoa beans. Clearing more land to grow more cocoa beans is a growing concern as **deforestation** leads to higher carbon emissions that contribute to the **greenhouse effect** and accelerate **climate change**. Climatic changes not only harm cocoa crop yields but it affects others in the community who are neither the consumers nor producers of cocoa beans. Third parties such as rice and corn farmers are affected by

	extreme weathers from flooding to drought which reduces food crops essential for the community.
Body 1: Explain how R&D and tax work to address the market failure	**<u>How R&D works to address the market</u>** To reduce negative externalities, the government can provide subsidies to encourage investment in R&D for farmers to develop better practices designed to improve productivity to increase cocoa crop yield per acre. Higher crop yield per acre means more cocoa beans without the need to clear more land and less deforestation which means lesser carbon emissions and a smaller contribution to global warming. When this happens, the marginal external cost of farming cocoa is decreased. As such, there would be a smaller divergence between MSC and MPC (the MSC shifts towards the MPC). In such cases, the degree of market failure would also decrease. This is illustrated in the diagram below.  Figure 2: R&D that reduces the negative externality Referring to the diagram above, the original market equilibrium is at Qe where MPB = MPC. The original social optimum is at QS0 where MSB = MSC0. The original deadweight loss is area A + B. With better methods developed to increase crop yield and less deforestation, external cost will decrease, the MSC will decrease from MSC0 (MPC + MEC0) to MSC1 (MPC + MEC1). This causes the social optimum to shift from QS0 to QS1 where MSB = MSC1. The deadweight loss is thus decreased to the area B. If the R&D is successful in developing good farming methods to the point where there is zero deforestation (zero external costs), it would be the ideal solution as there would be no need to reduce production of cocoa beans. **<u>How tax works to address the market</u>** Negative externalities may also arise due to blatant disregard of third-party costs arising from self-interest. To correct negative externalities, the government can impose a tax on the farmers that is equal to the external cost which is the monetary valuation of the harm imposed on society due to the negative externality.

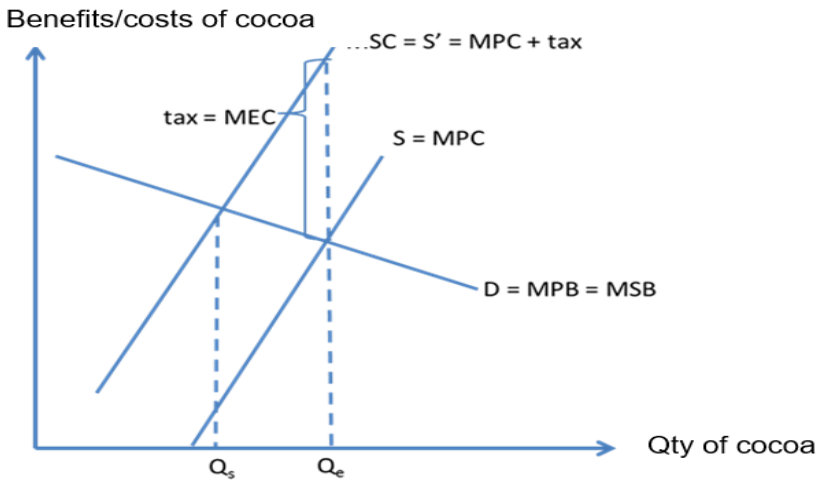


Figure 3: Using tax to correct negative externalities

The tax internalizes the external cost as farmers now have to pay this tax whereas previously they just ignored the external cost. This raises the farmers's marginal private cost (i.e. cost of farming cocoa will increase) and the supply curve will shift to the left to S' (MPC raised to MPC + tax, which is equal to the MSC). Hence, the new market equilibrium output will be at Qs. At this equilibrium, MSB=MSC. The overproduction is corrected. This eliminates the deadweight loss, achieving allocative efficiency.

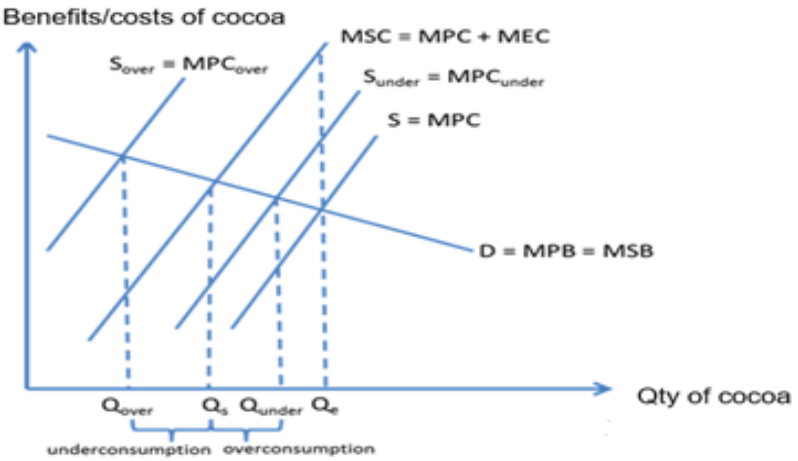
Body 2
R&D is a better measure (benefits of R&D vs limitations of taxes)

<u>R&D is a better measure (benefits of R&D vs limitations of taxes)</u>

- R&D may provide a more sustainable solution to stop the clearing of land as the success of increasing crop yield per acre can help to 'reduce the pressure on using more of its natural forests" in **Extract 6** and at the same time ensuring that cocoa is a viable option for the next generation of growers with better farming methods.
- R&D reduces DWL through targeting the root of the problem and removing the negative externality with no reduction in cocoa production. If the R&D is successful there is possibility of increasing cocoa production without harming the environment.
- Improve crop yield per acre means that there is an increase in productivity which lowers costs of production. "This improves livelihoods of farmers with higher profits" mentioned in **Extract 6**. This can help to safeguard household incomes and uplift the extreme poverty for farmers.

On the other hand,

- External costs incurred is intangible and it is difficult to place monetary values on the harmful effects. Under-taxation will not completely eliminate the DWL while over-taxation will lead to DWL from under-production as it is difficult to assess the monetary value of the MEC. If the government assesses the amount wrongly due to imperfect information, the tax imposed may be too high or too low. For example, if the MEC of cocoa production is overestimated, the government would levy taxes

			that are too high. This would result in underproduction of cocoa. Conversely, if the MEC of cocoa is underestimated, the government would levy taxes that are too low. This would result in cocoa still being overproduced.  Figure 4: Over- and Underestimating the MEC In the diagram, we can see that the socially optimal output is Qs where MSB = MSC. The current market equilibrium without taxes is Qe where MPB = MPC. If the government overestimates the MEC and taxes too much, MPC would fall to MPCover and output would fall to Qover. Since Qover is less than Qs, there has been an overcorrection and now there is underproduction instead. If the government underestimates the MEC and taxes too little, MPC would fall to MPCunder and output would fall to Qunder. Since Qunder is still more than Qs, there is still overprodcution. ● In addition, the extent to which a tax can reduce the quantity of a good depends on the PED of the good. Inferring from **Extract 2**, PED for cocoa is likely to be inelastic, a tax that raises the price of cocoa will reduce the quantity demanded of cocoa by a less than proportionate amount. Therefore, fall in quantity will be to a small extent and hence may not be effective in reducing production. In addition, to achieve the desired reduction in output for a highly price inelastic good would mean a much higher tax is needed which may not be viable as “cocoa cultivation has been synonymous with extreme poverty” in **Extract 6**.
		Body 3 Tax is a better measure (benefits of taxes vs limitations of R&D)	<u>Tax is a better measure (benefits of taxes vs limitations of R&D)</u> ● By placing a price on the external cost of production, the taxe forces producers to internalise the external costs imposed on third parties, reducing their MPC. ● An advantage of taxes is that the revenue from the tax could be used by the government to mitigate the negative externalities. For example, the government can use the taxes to fund reforestation programmes ● Imposing taxes has flexibility as the tax can be adjusted according to the size of the MEC. Conversely,

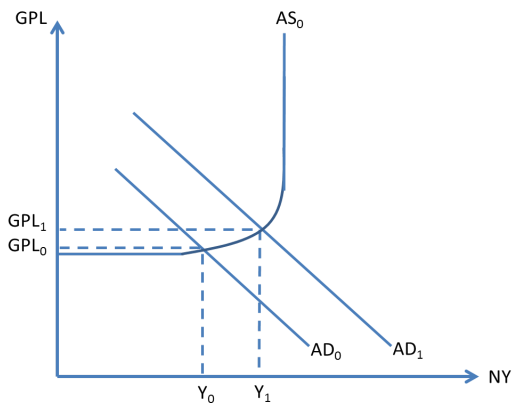
	● R&D only works in the **long run** as it takes time to be developed. Besides there is no guarantee of success. The success of R&D also depends on the funds available to support this program as providing subsidies for such R&D can be costly and yet yield no returns. Hence this may strain the government budget. (**Extract 6)** ● From **Extract 6**, "R&D would require government subsidies to encourage productivity and this extra billions being spent on subsidies would inflate the country's budget deficit and draining the pool of funds available for other important programs for farmers, including road, power and irrigation networks as well as education and health-care infrastructure for the country."
Evaluative Conclusion:	● R&D is likely to be a better measure than imposing taxes only to a small extent in the short-run. This is because the overproduction of cocoa is more likely to arise from self-interest and it might take a long time to change old ways of farming cocoa even if R&D is successful. In additional, it is expensive to fund ane yet does not guarantee success. Hence the costs of R&D may outweigh the benefits. ● In the short-run, imposing taxes may be a more effective measure to trigger immediate action in reducing land expansion to grow more cocoa. The revenue collected can also be used for public education to promote greater awareness on the harm of deforestation and climate changes as well as to use it to support reforestation program. This will help cocoa bean production to reach the socially desirable output level at Qs. ● Which is a better measure will depend on the urgency to address the problem of deforestation from cocoa farming. While R&D may take time to work, it may provide a more sustainable solution to stop deforestation as increasing crop yield per acre can help to reduce the pressure on using more of its natural forests as well as alleviating poverty for cocoa farmers in the longer term.

L2	● Answer is **relevant to question requirements** and covers sufficient **breadth**: o explains how R&D and imposing tax can address the overproduction problem o explain the relative benefits and limitations of each of these measures ● Answer has sufficient **depth**: o rigorous and detailed economic analysis that demonstrate strong understanding of how R&D and imposing tax can address the overproduction problem o **relevant** and **precise** use of economic concepts (i.e. **market failure framework**) o **relevant** and **clearly**-labelled diagrams (i.e. **cost-benefit graphs**) to support economic analysis ● Answer is **relevant to the context** of the question and applies **contextual evidences** to support the analysis.	5-7

		L1	● Answer is mostly relevant to question requirements but lacks comparison of the relative benefits and limitations of the measures. ● Economic concepts are relevant but may contain inaccuracies. ● Economic analysis is incomplete or lacks precision. ● Attempts to address the context of the question but **lacks contextual evidences**. ● No diagrams or relevant diagrams are used but might not be accurately explained or applied to support economic analysis.	1–4		
		E2	Evaluative comments on the relative benefits and limitations of the measures in addressing the issue. Makes an overall stand: Extent to which R&D is likely to be a better measure than imposing taxes. Judgement provided with substantiation.	2-3		
		E1	Judgement provided but no substantiation	1		

CSQ 2- Suggested answers:

(a)		With reference to Table 2:	
	(i)	It is said that unemployment and inflation have an inverse relationship. Explain this relationship and describe if the data reflects this.	[4]
		An increase in AD in an economy will lead to an increase in the output of goods and services (assuming AS is constant), which leads to a fall in unemployment **[1]**. As the economy reaches near full employment levels, the shortage of goods and services due to the increase in AD will result in a rise in general price levels i.e. inflation rates. **[1]** This explains the inverse relationship between inflation and unemployment. Table 2 reflects this relationship for UK in 2019-2020 because it is experiencing falling inflation rates along with rising unemployment rates. And in 2021- 2022; there is rising inflation rates along with falling unemployment rates Table 2. **[1]** However, the relationship does not seem to hold for 2020-2021, where both unemployment and inflation rates rose. **[1]** ***Mark Scheme:*** *Explain theoretical fall in unemployment – 1m* *Explain associated fall in GPL – 1m* *Describe whether UK adheres to this relationship– 2m*	
	(ii)	What does the change in Gini Coefficient from 2019 and 2021 suggest about the UK economy?	[2]
		The Gini coefficient has decreased [1], which means that incomes in UK have become more evenly distributed. [1] 1m for recognising the change in the Gini coefficient 1m for the interpretation in terms of the change in income distribution	
(b)		Using AD/AS analysis, explain how current global events have resulted in a rise in consumer prices.	[3]
		Global Supply chain disruption due to the Russian-Ukraine conflict and zero-COVID lockdowns in China **[1]** Supply Shock due to reduced availability of goods and services at every price level or COP rising due to rise in price of factor inputs Fall in SRAS from SRAS1 to SRAS2 **[1]** Rise in GPL from GPL1 to GPL2 **[1]**. Thus, causing rising consumer prices.	
(c)		Extract 8 expresses that “Some are worried that a wage-price spiral could be in the making.” Using AD/AS analysis, explain how inflation might cause a wage-price spiral.	[3]
		When inflation is high, workers may demand for higher wages to compensate for the loss of purchasing power **[1]**	

		When this happens, the cost of production would increase. This shifts the SRAS **[1]** upwards and causes another increase in the GPL. In response, workers may demand higher wages again **[1]**, causing a spiral of increasing prices ie SRAS will shift further upwards and wages would increase again.	
(d)		With reference to Extract 9, discuss whether the UK government should choose tax cuts to create economic growth which will indirectly reduce its budget deficit, instead of directly resolving the deficit via tax raises.	[8]
		According to Extract 9, the UK "government's budget deficit (is) on course to reach more than £100bn this year, almost double its pre-pandemic level." Government fiscal budget deficit refers to government expenditure being higher than tax revenue. <u>Thesis: The UK government should prioritise economic growth via tax cuts to indirectly reduce the fiscal deficit</u> The UK government should implement tax cuts will help achieve high economic growth. The reduction in income taxes and corporate taxes increases AD indirectly. A decrease in income taxes would increase the disposable income of households. Thus, with the higher purchasing power, households will consume more, leading to a rise in consumption expenditure (C). A decrease in corporate taxes would increase the after-tax profit of investments. Hence, with higher profitability of investments, investments (I) increase. Together, the increase in C and I would increase AD from AD0 to AD1. This will via the multiplier effect lead to a more than proportionate increase in NY from Y0 to Y1.  "Philip Shaw, chief UK economist at Investec suggested for the tax cuts to proceed, explaining that the possibility of an economic upturn could reduce government welfare spending and increase tax receipts, helping to correct the fiscal deficit." The Economic growth would improve the UK government budget deficit as more tax revenue can be collected from individuals whose rising incomes fall into higher income tax brackets. The UK producers who tend to earn higher profits will have to pay more corporate taxes as well. In addition, less welfare payments would also need to be made. Thus, reducing the budget deficit indirectly through NY increase. Evaluation: The NY increase may lead to demand-pull inflation as stated in Extract 9 when the former chancellor said that the tax cuts will "risk fuelling inflation" as shown	

in diagram above when GPL0 goes up to GPL1. The UK debt that is directly linked to inflation will end up increasing too.

Anti-thesis: The UK government should directly resolve the fiscal deficit via tax raises.

Instead, the UK government should implement tax raises as this will more directly lead to an increase in government revenue and correct the deficit. Additionally, tax raises would reduce C & I, resulting in a fall in AD and reduce inflationary pressures which would reduce inflation-linked debt further.

A persistent fiscal deficit will have an adverse effect on the UK economy due to the debt repayments in future years, which would pose a burden for future generations.

However, there would also be a fall in National income and employment, which may then require increase in government welfare spending.

Synthesis: The UK government should prioritise tax cuts to reduce the fiscal deficit

Tax cuts to promote economic growth is beneficial to a larger extent as it will improve the UK government budget deficit as explained earlier as it allows for more tax revenue to be collected and reduced welfare payments.

Furthermore, there are supply side effects from the Tax cuts which result in an increase in investment. This increase in investment can help increase long-run productive capacity and enable a higher rate of potential growth. This will temper inflationary pressures and help bring down public sector debt.

Additionally, if growth does improve, then the borrowing can pay for itself, hence a government should prioritise tax cuts to achieve higher economic growth rather than a tax raise to solve its budget deficit.

But it must be noted that there is no guarantee that EG will result with the tax cuts if people are pessimistic about the future and simply ended up saving the extra income from tax cuts. The UK government also needs to have measures to ensure that inflation is managed despite the tax cuts if investments do not increase.

Mark Scheme		
L2	For a well-developed answer that explains the costs and benefits of tax raises vs cuts and the potential implications.	4 – 6
L1	For an under-developed answer that explains the costs and benefits of tax raises vs cuts and the potential implications.	1 – 3
E	Makes a substantiated judgement that answers the question.	1 – 2

(e) With reference to the case material, discuss whether supply side policies alone are sufficient in achieving inclusive growth [10]

Inclusive growth is growth that is broad-based across economic sectors, and creates employment opportunities for the majority of the country's population. In the case of Singapore, inclusive growth implies growth without worsening of income inequality. It first requires sustained growth i.e. actual and potential growth.

Thesis: Supply-side policies alone are sufficient in achieving inclusive growth.

In Singapore, the govt has adopted structural solutions to increase productivity. This includes labour market adjustments policies that will help to ensure wage improvements and increase in potential EG.

Labour Market adjustment policy Inclusive and Potential EG
Labour market adjustment measures of reducing dependence on low-skilled foreign worker works by "calibrate the inflow of foreign workers" via "raising the minimum salary requirements for Employment and S-Pass holders." This will make low-skilled foreign workers becoming more expensive to hire and cause an increase in the demand for local low-skilled workers, resulting in higher wages helping to manage the growth of low wage workers, allowing growth to be more inclusive.

It also forces firms to reduce dependence on foreign workers and increasing innovation and training so as improve worker productivity so as to justify paying them a higher wage. This will lead to an increase in LRAS due to improvement in factors of production i.e. labour, and technology, contributing to potential growth.

Similarly, the "Progressive Wage Model, which aims to raise the pay of lower-wage workers across various sectors and occupations, in tandem with skills upgrading and increased productivity," would also lead to an increase in LRAS due to improvement in factors of production and technology, contributing to potential growth.

In the UK, the government has also implemented 'KickStart' to tackle long term youth unemployment which will likely support wage growth and also the adoption of skills which they will pick up in their respective industries. Not to mention, the employment opportunities that would be created for a significant portion of the country's population Additionally, UK has also implemented a plan 'to provide fast and reliable internet connection across the UK by 2025', this will ensure that households will have access to technology and this will enable equity in access to online learning resources so that no one gets left behind and lead to an improvement in productive capacity.

Antithesis: Supply Side policies alone are insufficient in achieving inclusive growth.

For inclusive growth to occur, we also need actual economic growth:

Exchange rate policy Actual EG
"The appreciation in the Singapore dollar against most major trading partners has helped to stem imported inflation". "Further, a stronger exchange rate helps reduce the import costs faced by our export industries." The appreciation of the Singapore currency price of imported inputs in terms of SGD decreases, this leads to a fall in cost of production and could increase price competitiveness of SG's exports. Assuming imports remain constant, this leads to an increase in (X-M) and AD. NY increases more than proportionately via the multiplier effect i.e. there is actual economic growth.

Exchange rate policy inclusive EG
"So for many households, this will help absorb some of the rising prices." The appreciation of the SG dollar also helps prevent imported inflation by allowing households to buy final products at a competitive price and provide broad-based support, in particular lower income households.

Fiscal policy Actual EG, Potential EG & Inclusive EG
Governments will also need to conduct spending i.e. fiscal policy towards "building longer term capacity and goods for the public which can include infrastructure such as

healthcare and education." The increased spending will serve to further boost AD, while infrastructure development will boost LRAS ensuring that economic growth is sustained. The spending on relief packages, healthcare and education will add on to ensure that growth is inclusive for all as these expenditures benefits the poor more. The cooperation between public and private sectors "beyond specific projects, in areas such as research and development (R&D) and lifelong learning" will ensure that employment and growth will benefit a large proportion of the population.

Traditional Monetary Policy Achieve price stability
With reference to Table 2, we can see that the UK government has increased their interest rate from 0.1% to 1% between 2021 and 2022, in a bid to fight the increase in cost in living (inflation rate- 7.4% in 2022), which is likely to hurt households and drastically reduce the purchasing power of all especially the poor. This also helps to prevent UK's inflation-linked debt from increasing too much and limit their ability to support UK households in the future.

Conclusion/Evaluation
In the end, supply policies alone are definitely useful, but they alone are inadequate in "steer(ing) the economy through the inflationary storm", while achieving inclusive growth. There needs to be a correct 'policy mix' of demand-management and supply side policies to cover policy gaps, manage conflicts so as attain actual and potential growth, while ensuring all households have an equitable wage.

L2	● Answer presents well-balanced arguments of whether supply side policies alone are sufficient to achieve inclusive growth. ● Economic analysis is well-developed throughout, argument is coherent. ● Answer makes good use of relevant case evidence- with reference to both UK and SG.	5-7
L1	● Answer is mostly relevant to question requirements but does not directly address the question. ● Economic concepts are relevant but may contain inaccuracies. ● Economic analysis is incomplete or lacks precision. ● Attempts to address the context of the question but lacks evidence. ● No diagrams or relevant diagrams are used but might not be accurately explained or applied to support economic analysis.	1–4
E2	Evaluative comments that are based on arguments. Judgement provided with substantiation.	2-3
E1	Judgement provided but no substantiation	1

[Total: 30]