H2 CSQ1 Suggested Answers
Question 1: Tiny Plastic, Big Problem?

(a) (i) Explain whether the change in Europe's share of global plastic production meant that Europe's plastic production fell from 2006 to 2015. [2]

- Even though Europe's share of global plastic production fell [1], Europe produced more plastic in 2006 than in 2015 as the global production increased in the same period. [1]

- *Mathematically, the amount of plastic produced by Europe can be calculated using the data in Figure 1 and Figure 2:*
    - *2006: 22% of 245 million metric tons = 53.9 million metric tons*
    - *2015: 18% of 322 million metric tons = 57.96 million metric tons*

Marker's Comments:

- Many students recognised Europe's share is determined by:
    - Absolute amount of plastic produced in Europe
    - Total global plastic production
- Some students failed to recognise that the data presented in Figures 1 and 2 could be used to determine the absolute amount of plastic produced in Europe.
    - Some students presented all possible scenarios (i.e. it could have remained constant, it could have increased).
    - A few students erroneously presented a demand and supply analysis of the situation in Europe to determine the possible change in Europe's production during this period.

(a) (ii) Has the market for plastic production become more or less competitive from 2006 to 2015? Explain your answer. [2]

- Using three-country/region concentration ratio: The market for plastic production has become more competitive [1m] as the top three countries/regions' share of plastic production fell from 67% in 2006 to 65% in 2015. [1m]
  OR
- Using four-country/region concentration ratio: The market for plastic production has become less competitive [1m] as the top four countries/regions' share of plastic production increased from 81% in 2006 to 82% in 2015. [1m]

Marker's Comments:

- Many students failed to recognise the concept of "concentration ratio" is relevant when determining the degree of competition in an oligopolistic market.
    - This question allowed for two different answers, depending on whether the three- or four-country/region concentration ratio is used. As such, it is important to indicate clearly which one is being used to determine the answer. Failing to do so would make the answer incomplete/inaccurate.
- Some students inaccurately identified the market to be monopolistic because of the dominance of one country/region (NAFTA in 2006 and China in 2015).
    - These students failed to show clear understanding of the concept of monopoly, which requires one firm to dominate the market as the single large firm (i.e. have more than 50% market share).

- A handful of students considered the change from 67% to 65% (for the three-country/region concentration ratio) or 81% to 82% (for the four-country/region concentration ratio) as negligible, and indicated that there was “no change” in the degree of competition in the market.
    - Such a response failed to address the requirements of the question, which clearly expected students to choose between “more” or “less” competitive.

(b) Using an example from Extract 2, explain the concepts of scarcity and opportunity cost to farmers.

[1m for precise definition of scarcity]

- Scarcity is defined as the situation where there is **limited resources** and **unlimited wants**.

[1m for explaining the choice to be made given the limited resource and competing uses of the resource]

- As farmers have **limited “land” space**, they have to **make a choice** between the use of land to produce crops for food or to produce crops for making bioplastics.

OR

- The plants grown by famers such as **corn and sugarcane are limited** and farmers have to **make a choice** between using the plants to produce food or for the production of bioplastics.

[1m for the correct application of opportunity cost to farmers]

- When farmers chose to produce more crops to make bioplastics, they have to incur an opportunity cost and forgo the value of the next best option, which is the potential **revenue/profit** earned from producing more crops for food.

<u>Marker’s comments:</u>

- Quite a number of scripts had a misconception between the concepts of scarcity and shortage. The following table shows the differences between the two concepts:

Scarcity	Shortage
• Arises because of limited resources (factors of production) relative to unlimited human wants	• Arises because quantity demanded is greater than quantity supplied at the equilibrium price
• Cannot be resolved by the price mechanism, may be **alleviated** by technology advancement and/or an increase in the quality and/or quality of resources	• Can be eliminated through the price mechanism
• Necessitates choice and incurs an opportunity cost when a choice is made.	• In the free market, a shortage will lead to a higher price which will reduce quantity demanded and increase quantity supplied until a new equilibrium is reached

- Some students confused the concepts of competitive demand and competitive supply. When two goods are in competitive demand, they are substitutes. Bioplastics and food production are in **competitive supply** as they use the same factor inputs (land, chemicals, fertilisers, plants).
- Definitions of scarcity and opportunity costs were imprecise. The importance of precise definitions has been emphasised thoroughly and students are unwise to not heed such advice in their preparation for examinations.
- The application of the concept of opportunity cost to farmers was relatively weak. The majority of students either did not identify the "value" of the forgone next best alternative, or did not explain the opportunity cost to "farmers", choosing to talk about food prices hikes and a food crisis which did not address the question.
- There were students who wasted time by drawing and explaining a PPC when it was not required at all.

(c) Explain how recycling bottles could benefit the Coca-Cola Company. [5]

- Recycling bottles could lead to "cost savings" for Coca-Cola Company, hence allowing it to benefit from lower cost of production. [1]
- Recycling bottles could also help the company "woo customers by improving its image" and this could increase the demand for Coca-Cola's products due to the favourable change in taste and preferences towards Coca-Cola's products. This would increase the price and quantity of the those products and hence increase its total revenue. [3]
- With cost savings and increased total revenue, Coca-Cola company could benefit from an increase in profits. [1]

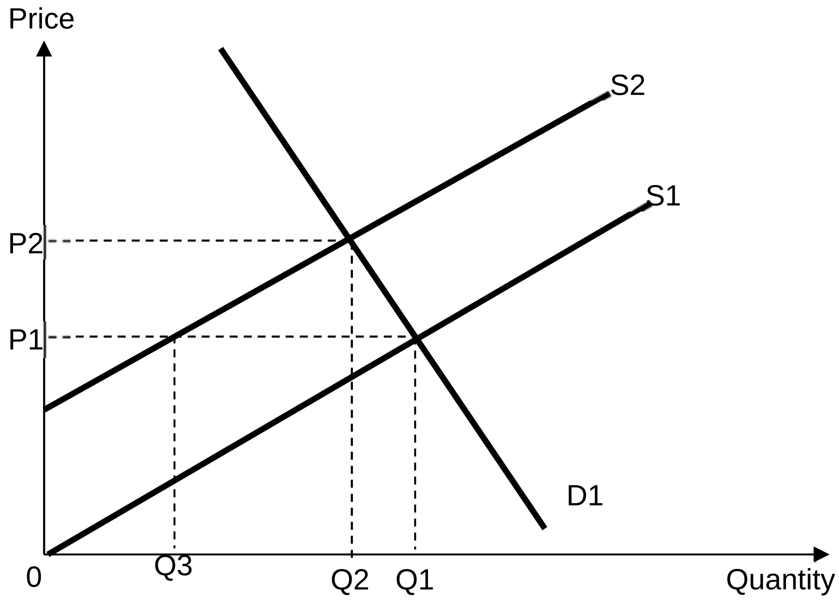
<u>**Marker's comments:**</u>

- Many students did not get full marks for this question as their explanations are incomplete.
    - Many students did not explain the increase in total revenue for the firm but jump straight into stating the increase in profits
    - For students who did explain the increase in total revenue, many of them did not explain that the increase in revenue was due to the increase in price <u>**and**</u> quantity due to the increase in demand. Many students wrongly state that increase in price or quantity alone would increase total revenue.
    - Some students wrongly stated that revenue is equals to profit which is a conceptual error.
    - A diagram is not required for this question. However, if a diagram was to be used for explanation, students should draw a firm diagram since question ask about benefit for a firm. Many students draw a market diagram, which is inappropriate for this question.

(d) Discuss whether the use of agricultural commodities, such as corn, to produce bioplastics could lead to a "food crisis" (Extract 2). [8]

- ***Introduction***
  - Agricultural commodities such as corn could be used to produce bioplastics and this could then lead to a "food crisis" where there could be a price hike for food. However, the price of food could be affected by other factors and the price of food may not increase that significantly.
- ***Thesis: The use of agricultural commodities, such as corn, to produce bioplastics could lead to a "food crisis".***
  - *Explain a rise in price of agricultural commodities*
    - Rise in demand for agricultural commodities to produce bioplastics would lead to an increase in price of those commodities.
  - *Link to a rise in price for food*
    - Increase price of the commodities, which could be used to produce food products could increase the cost of production of food which leads to a fall in supply of food. Hence there is a shortage of Q3Q1 units of food at the initial price level, which exerts an upward pressure on price of food.

Figure 1: Market for food



  - As there is a high degree of necessity for food, demand for food is price inelastic. Hence the fall in supply of food with a steep demand curve results in sharp increase in price of food from P1 to P2, as shown in figure 1, thus leading to a "food crisis".

- ***Anti-thesis: The use of agricultural commodities, such as corn, to produce bioplastics may not lead to a "food crisis".***
  - There could be increase in supply of food over time due to technological advancements in food production such as the "development of automated vertical farms" mentioned in extract 3, which could help lower food prices.
  - There could be new innovations to produce bioplastic such that agricultural commodities are not needed as inputs and there would be reduction in

competition for agricultural commodities between food and bioplastics, thus less likely for food price hike.

- ***Evaluative Conclusion***
  - **[Stand + Time frame]** The use of agricultural commodities, such as corn, to produce bioplastics could lead to a "food crisis" in the short run. This is especially when it is more unlikely to find alternative inputs for the production of bio-plastics within a shorter period of time. Moreover, the development of vertical farms takes time and is a costly project, hence it is unlikely to increase food production immediately.
    - However, in the long run, there could be advancements in technology that lowers the cost of building vertical farms, which could then increase food production and lower food prices.
    - In addition, with more research and development projects that focus on bio-plastics production, alternative inputs for production of bio-plastics could be developed and there would be less competition for agricultural commodities and hence a food price hike is less likely to occur.

Mark Scheme

Level	Knowledge, Application/Understanding, and Analysis	Marks
L2	For a well-developed and balanced answer that • discusses how the use of agricultural commodities to produce bioplastics may and may not lead to a "food crisis". • is well-supported by case materials	4 – 6
L1	For an underdeveloped answer that • only discusses how the use of agricultural commodities to produce bioplastics may OR may not lead to a "food crisis". i.e one-sided answer OR • discusses how the use of agricultural commodities to produce bioplastics may AND may not lead to a "food crisis" without o rigorous use of economics concepts and/or o reference to case context	1 – 3
E	Provides a clear evaluative conclusion/judgement on whether the use of agricultural commodities to produce bioplastics could lead to a "food crisis", taking into account the case material and context.	1 – 2

Marker's comments:

- Many students did not realise that the market for agricultural commodities and the market for food were different markets, and wrongly focused on the market for agricultural market only. In the context of this case study, the agricultural commodities are used as an input for the production of food.
- Some students took an alternative approach to explain that the increase in price of agricultural commodities could be significant as the supply of agricultural commodities is

price inelastic. This would result in a large increase in cost of production of food and hence a large fall in its supply, causing a price hike. This approach was accepted as well.

- Similar to part (b), many students were confused between the concepts of competitive demand and competitive supply. Bioplastics and food are in **competitive supply** as they **use the same factor inputs** (land, chemicals, fertilisers, plants).
- For evaluative conclusion, students should note that it is important to justify their stand well. Most student used time frame as a criterion for their evaluation. The better evaluative conclusion explained why the food price hike was less likely to occur in the long run as compared to the short run.
    - The weaker evaluations usually provided 2-3 points of evaluative angles but were not all well-justified. Students should note that the quality of justification matters, and it is not about the number of points that they provide.

(e) Using the information provided, evaluate the view that the Indian government should develop the biodegradable plastic industry like the UK. [10]

<u>Question Interpretation</u>

Command word/phrase	*Evaluate*	To analyse the costs and benefits on India's economy should the Indian government develop the biodegradable plastic industry like the UK and make a judgement on whether the development should be made
Content	*View that…should develop the biodegradable industry like the UK*	To consider the factors (e.g. benefits, costs, unintended consequences, constraints) that will influence the Indian government's decision
Context	*Indian government*	Specific to India's economy

Students are required to consider the factors (e.g. benefits, costs, unintended consequences) that will influence the desirability of the Indian government's decision to develop the biodegradable plastic industry like the UK, before forming a well-substantiated judgement on whether the development should go ahead.

Introduction

- At present, the Indian economy has a developed conventional plastics industry but the negative externalities generated poses health problems for its citizens.
- Should the Indian government develop the biodegradable plastic industry like the UK, it may enjoy increased output and sustainable growth, but could incur costs like structural unemployment as well.

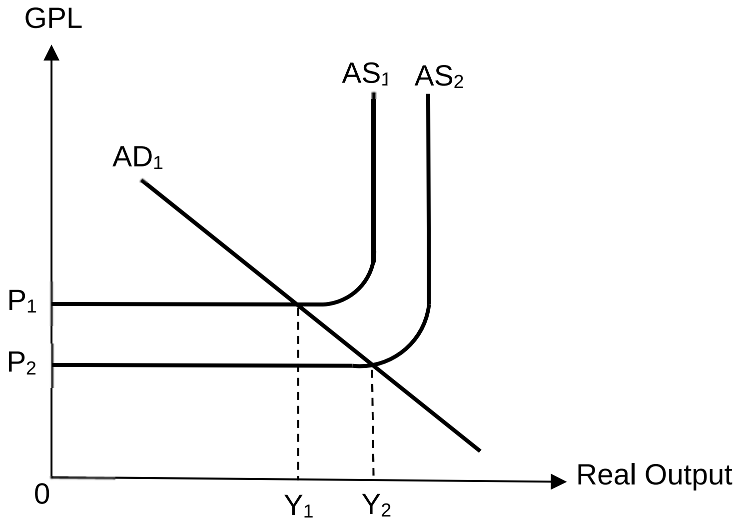
Body

Thesis – explain how the development of biodegradable plastic industry could bring benefits to India's economy.

- The Indian government may want to develop the biodegradable plastic industry to achieve sustainable growth, a rate of growth that can be maintained without causing excessive environmental damage.

- Since conventional and biodegradable plastics are in competitive demand (substitutes), developing biodegradable plastics could result in a reduction in the consumption of conventional plastics. This will reduce the amount of "plastic waste" and the negative externalities, the negative spillover effects on third parties, such as health problems from drinking water or eating seafood contaminated with "microplastics." When consumption of conventional plastics can be reduced to the socially optimal level, the deadweight loss is eliminated and there will be greater allocative "resource efficiency."
- The development of biodegradable plastic would foster research and development (R&D), which has the potential to increase the quality of capital. Furthermore, firms who use bio-plastics in their production can avoid "the additional costs of Landfill tax" and enjoy lower cost of production. The increase in quality of capital and lower unit cost of production will increase the aggregate supply, shifting the AS curve from AS_1 to AS_2. Real output increases from Y_1 to Y_2, and there is sustained growth. Hence, India could potentially enjoy the increased output and employment opportunities – the "1,000 jobs and £43.4 million of direct output" (Extract 6) that the UK economy has enjoyed.

Figure 1: Sustained growth



- In addition, the development of biodegradable plastic would encourage more environmentally sustainable practices and reduce the extent of damage to the environment, helping India to achieve sustainable growth. The increase in material and non-material living standards of Indian residents from sustainable growth could hence be reasons for why the Indian government should develop the biodegradable plastic industry.

Antithesis – explain how the development of biodegradable plastic industry could also incur costs to the India economy.

- However, the Indian government may not want to develop the biodegradable plastic industry because of the negative consequences to the India economy.
- Conventional plastics production currently dominates the plastic industry in India, "employs about 4 million people" and "host more than 2,000 exporters." This means that the conventional plastic industry is a large driver of growth because it generates export revenue and employment.
- Should the government develop the biodegradable plastic industry, this could result in a decline of the conventional plastic industry. When the derived demand for labour in the

production of conventional plastics fall due to reduced production, there could be significant structural unemployment. Workers working in the conventional plastic industry tend to be occupationally immobile and are likely to lack the relevant skills to transit to the biodegradable plastic industry.

- Given the "availability of raw materials in the country," India is likely to enjoy a comparative advantage in the production of conventional plastics because of its factor endowments and lower costs of production. If the raw materials to produce biodegradable plastics have to be imported, this may drive up the cost of production, causing producers to enjoy less profits. If this higher production costs are passed to consumers in the form of higher prices, the price competitiveness of biodegradable plastics may be lost, resulting in a fall in net exports, a decrease in aggregate demand and negative growth in India.

Evaluative conclusion

- Whether the Indian government should develop the biodegradable plastic industry like the UK depends on the magnitude of the benefits relative to the costs on the economy.
- **[Time frame + Magnitude]** In the short run, it seems undesirable to develop the biodegradable plastic industry given that the employment opportunities of an increase in "roughly 1,000 jobs" is much less than the "4 million people" currently employed in the conventional plastic industry. However, in the long run, consumers are likely to become more environmentally conscious. The demand for biodegradable plastics will tend to rise, while demand for its substitute, conventional plastics, will fall.
- **[Stand]** Hence, the Indian government should be forward looking in its decision-making, and try to develop a comparative advantage in the development of biodegradable plastics to remain competitive globally.
- **[Alternatives]** To mitigate the negative impacts of restructuring the plastics industry, initiatives such as providing training and education to help workers transit to the biodegradable plastic industry to alleviate structural unemployment could be implemented.

Mark Scheme

Level	Knowledge, Application/Understanding, and Analysis	Marks
L2	For a well-developed and balanced answer that • discusses the benefits and cost of the India government developing the biodegradable plastic industry. • Provides sufficient scope to include the microeconomic and macroeconomic impact on the India economy. • Is well-supported with case material	5 – 7

L1	For an underdeveloped answer that
	• provides one-sided explanation of the benefits OR cost of the India government developing the biodegradable plastic industry.
	OR
	• explains both the benefits AND costs of the India government developing the biodegradable plastic industry without
	    o rigorous use of economics concepts and/or
	    o reference to case context
		1 – 4

E2	Provides a clear evaluative conclusion/judgement on whether on whether the India government should follow the UK to develop the biodegradable plastic industry, taking into account case material and the context of the India economy	2 – 3
E1	An unsubstantiated judgement on whether the India government should follow the UK to develop the biodegradable plastic industry	1

Marker's comments:

- For the thesis argument, students who tried to argue how the development of biodegradable plastic industry can help reduce negative externalities overly emphasised on the market failure from the consumption of conventional plastics. As a result, they did not show rigour in analysing how the development can help achieve allocative efficiency, which should have been the focus of their answers.
- Some students erroneously explained bioplastics to be a merit good, and/or conventional plastics to be a demerit good. A common error was also the misinterpretation that "the availability of raw materials" referred to the production of biodegradable plastics instead of conventional plastics.
- It was quite disappointing to note that many students did not use the AD/AS framework in their answers. These students who form the majority of the cohort, ended up with descriptive answers that lacked economic analyses.
- A general weakness of the cohort is in the development of arguments due to a lack of elaboration. Often, claims and assertions are made without adequate support, resulting in descriptive answers. For example, many students only stated the benefits of developing the biodegradable plastic industry, and lifted accompanying quotes from the case.
    - These students should have analysed how the benefits could have come about using relevant economic concepts to demonstrate rigour. As a general guide, try to address all the "how" and "why" behind statements made. To demonstrate rigour, students should use tools of analysis like the AD/AS framework, and include diagrammatic analysis to improve the quality of their answers.
- For evaluation, while the criteria such as the budget position of the government and level of development of a country were stated as factors that would influence the desirability of the Indian government's decision to develop the biodegradable plastic industry, not many went on to justify why these factors were important. For instance, students stated that India is a developing country and should hence focus on sustained growth instead of sustainable growth without justifying this claim.
- On a positive note, the majority of candidates were able to structure their answers to demonstrate a balanced discussion, and allocated time to attempt evaluation, hence addressing the requirements of the command word "evaluate".

Question 2 Donald Trump and the US economy
Suggested Answers

<table>
<tr><td>(a)</td><td>(i)</td><td>Summarise the trend in the US Current Account Balance from 2013 to 2017.</td><td>[2]</td></tr>
<tr><td colspan="4">

- There was an overall worsening of current account deficit by 28.8% [1]
- The greatest worsening of the deficit was from 2014 to 2015 by 11.7% [1]

<u>Marker's comments:</u>

- Most students did not indicate a significant refinement from the trend.
- Students are expected to calculate % changes instead of absolute changes.

</td></tr>
<tr><td>(a)</td><td>(ii)</td><td>Using a diagram, explain how the above trend affects the external value of the USD.</td><td>[4]</td></tr>
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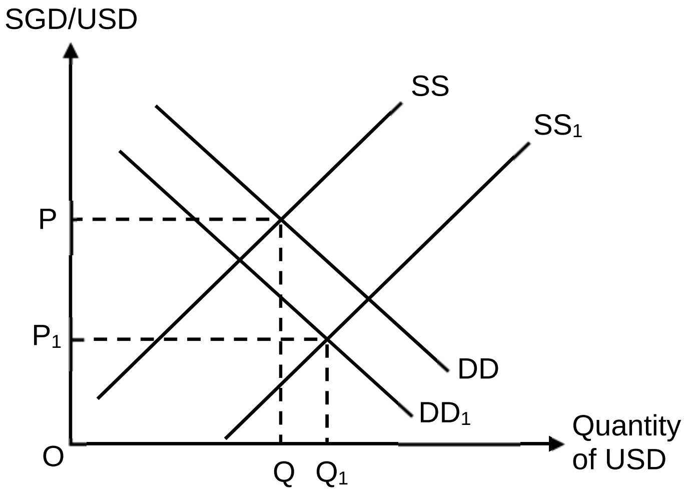
- The worsening of current account deficit would indicate that there was more outflow of USD than inflow of USD. Since there was less demand for USD by foreigners, DD curve shifted from DD to DD_1 in Figure 1. [1]
- There was an increase in supply of USD as US residents increased their demand for foreign currency. The supply curve shifted from SS to SS_1.[1]
- From Figure 1, the external value of USD fell (or USD has depreciated) as a result of a decrease in demand for USD and an increase in supply of USD. [1]
- Correctly labelled diagram that matches analysis. [1]

<u>Figure 1: Demand & Supply of the USD</u>



<u>Marker's comments:</u>

- Some students failed to determine the focus of this question.
- Most students did not consider how demand for USD **and** supply of USD change as a result of a current account deficit.
- Axes were labelled incorrectly or incompletely. Acceptable Y axis are:
  1. SGD/USD
  2. Price of USD in terms of SGD

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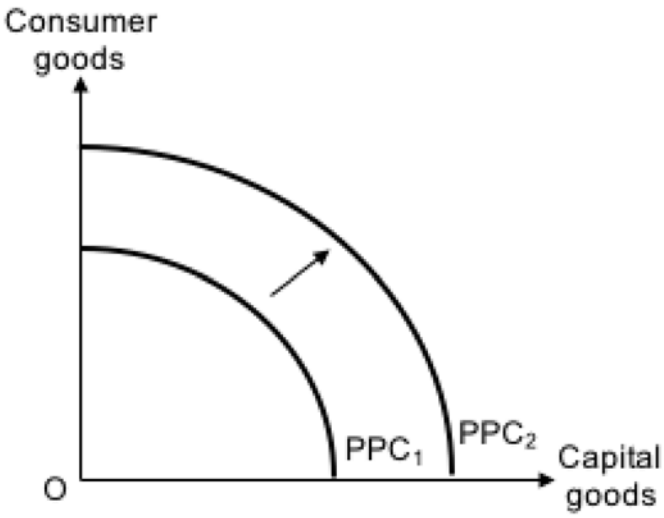
3. Value of USD to SGD
4. Value of SGD per USD.

(b)		**Using a Production Possibilities Curve, explain how the proposed immigration law will impact the US economy.**	**[3]**

- The proposed immigration law will slow down the rate of increase of immigrants into the US. Assuming these immigrants take on jobs in the US, this translates to an increase in quantity of labour into the US, increasing her productive capacity, albeit at a slower rate than before. [1]
- As seen in Figure 2, the Production Possibilities Curve thus shifts outwards, from PPC_1 to PPC_2. [1]
- National output and income of the US economy increases as a result.
- Correctly labelled diagram that matches analysis. [1]

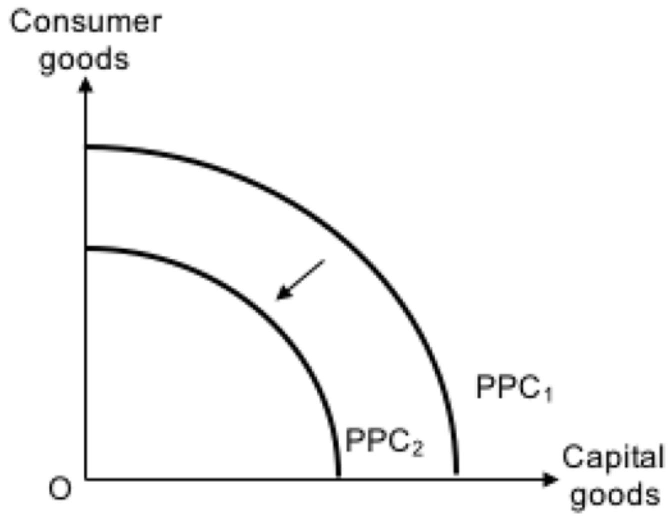
Figure 2: PPC of US economy



Alternative answer

- Assuming that the rate of inflow and outflow of labour into and out of the US workforce were constant before the law was enacted, the proposed immigration law will decrease the inflow of labour into the US workforce, ceteris paribus. This results in the reduction of the quantity of labour in the workforce, thus reducing her productive capacity.
- As seen in Figure 3, the Production Possibilities Curve thus shifts inwards, from PPC_1 to PPC_2. [1]
- National output and income of the US economy decreases as a result.
- Correctly labelled diagram that matches analysis. [1]

Figure 3: PPC of US economy



Note: both answers were accepted and were given full credit if the economic reasoning that accompanied the shift of the PPC was accurate.

Marker's comments

- This question was not well done as many students have forgotten the diagram and concepts that are relevant to PPC. A large number of students were not able to draw a complete and accurate PPC diagram. Many students wrongly label the axis, or did not even bother to label the axis.
- Students should recall that a PPC shows different combination of two goods that an economy can produce and both axis should be labelled with quantities of different type of goods, namely consumer and capital goods. The labelling of the axis as quantities of good A and good B would not be as suitable as these are hypothetical and less contextualised to the macroeconomy.
- Students should note that they need to label the PPC curves.
- Many students drew the PPC shifting inwards due to a cut in immigration numbers, which is inaccurate, as there would still be immigrant entering the economy, just at a slower rate each year and hence the PPC should shift outwards by a smaller extent.

(c)		**Using Extract 8, explain how automatic stabilisers work.**	**[3]**

Define automatic stabilisers [1]

- Automatic stabilisers are a form of fiscal policy that offsets fluctuations in aggregate demand during changing economic conditions without policymakers having to take any deliberate action. [1]

Explain how automatic stabilisers work using evidence from Extract 8 [2]

- Extract 8 mentioned that there "fewer Americans applied for unemployment benefits" and "unemployment claims slide by 14000". This suggests that unemployment benefits fell as there are fewer unemployed workers due to the expansion of the economy, possibly due to an increase in AD. [1]
- As the US government spends less on unemployment benefits, there would be a contractionary effect. Assuming the workers spend these benefits on domestic consumption (C), lesser unemployment benefits given out will prevent further increases in AD. This dampens the initial expansionary effect and stabilises the US economy. [1]

Marker's comments:

- Many students were unfamiliar with what automatic stabilisers are and their role in the economy, indicating a need to review this concept.
- A significant proportion of students who were able to explain how automatic stabilisers work, did not explain it based on Extract 8. Such answers explained about progressive tax systems and/or a rise in unemployment benefits during a recession. Students should recognise that the automatic stabiliser mentioned in Extract 8 is unemployment benefits, which fell due to the growing economy. This helps to prevent AD from rising excessively and dampens the expansionary effect felt in the economy.
- A point to note is that automatic stabilisers do not alter the direction of change in AD, but merely reduce the extent of the initial change in AD, thus mitigating the initial contractionary or expansionary effect on the economy.

(d)		**Comment on whether the data provided is sufficient to conclude that there has been inclusive and sustainable growth in the US economy.**	**[8]**

Question interpretation

Command word/phrase	*Comment on*	Provide balanced analysis and make a judgement on whether data provided is sufficient to conclude that there has been inclusive and sustainable growth in US economy
Content	*Data provided* *Inclusive and sustainable growth*	Use data to link to inclusive and sustainable growth Two different types of economic growth
Context	*US economy*	Economy of USA

This answer requires students to utilise the data to explain the parts where the data is able and unable to show that there has been inclusive and sustainable growth in the US economy. The evaluation involves an appropriate and reasoned comment on whether the data is sufficient or insufficient to conclude that there has been inclusive and sustainable growth in the US economy.

Introduction

- Inclusive growth indicates a rate of growth that is sustained over a period of time, is broad-based across economic sectors, and creates productive employment opportunities for the majority of the country's population.
- Sustainable economic growth indicates a rate of growth that can be maintained without creating other significant economic problems.
- This response aims to analyse whether the data provided is sufficient to conclude that there has been inclusive and sustainable growth in the US economy.

Thesis: Explain how the data concludes that there is inclusive growth in US economy

- The data in Table 1 may be sufficient to conclude that there has been inclusive growth in the US economy.
- The GDP per capita has increased from \$52,726 in 2013 to \$59,535 in 2017. Inflation rates as measured by the change in consumer price index has been positive from 1.46% in 2013 to 2.13% in 2017. The unemployment rate has fallen from 7.38% in 2013 to 4.35% in 2017. These three indicators show that there has been sustained economic growth in US.
- Furthermore the GINI coefficient, which measures the wealth distribution of a country's residents, fell from 0.396 in 2013 to 0.391 in 2017. This reflects that there has been a more even distribution of income in the US economy, thus suggesting that there has been inclusive growth.

Anti-thesis: Explain how the data may not conclude that there is inclusive and sustainable growth in US economy

- While there was a fall in unemployment rate, it is not clear from the data if this was due to a rise in productive employment opportunities across a broad range of economic sectors. Also, it cannot be concluded if the employment opportunities were for a majority of the country's population or mainly for the higher-skilled workers. Hence, the data may not be entirely sufficient in showing that there has been inclusive growth in US.
- Despite a fall in the Gini coefficient, the fall is slight and the Gini coefficient remains relatively high. For a more accurate conclusion on inclusive growth, it would be beneficial to know if the Gini coefficient has taken into account taxes and transfers. If the Gini coefficient is significantly lower after taking into account the effects of the redistributive policies, there is clearer evidence of inclusive growth.
- The data provides information on the economic growth situation of the US. However, it does not provide information of how the growth is achieved, which could have been at the expense of the environment. There is no data or indicators on the environmental situation in US, or information on the policies taken by the government to mitigate adverse impacts to the environment, which could have allowed us to determine whether there was sustainable growth.

Evaluative Conclusion

- **[Stand]** The data provided is insufficient to conclude that there has been inclusive and sustainable growth in the US economy.
- **[Alternatives]** In order to determine if there was sustainable growth, we would require more data on the impact of economic growth on the environment. Some examples include, the level of carbon taxes, air quality index and the environmental sustainability index. For us to determine accurately if there was inclusive growth, we would require data on the type of employment opportunities created in the economy. Also, we would need to have information on whether the GINI coefficient has taken into account the level of taxes and transfers.

Mark Scheme

Level	Knowledge, Application/Understanding, and Analysis	Marks
L2	For a well-developed and balanced answer that • discusses both the sufficiency **and** insufficiency of the data in concluding inclusive and sustainable growth in the US economy. **A well-explained one sided response for how the data might be sufficient in concluding inclusive and sustainable growth can score a max of 4 marks.*	4 – 6
L1	For an underdeveloped answer that • is one-sided and only discusses how the data might be sufficient **or** insufficient in concluding inclusive and sustainable growth in the US economy, OR • briefly discusses how the data might be sufficient and insufficient in concluding inclusive and sustainable growth in the US economy.	1 – 3
E	Up to 2 marks for valid evaluative comment (s) on whether the data provided is sufficient in concluding that there is inclusive and sustainable growth in the US economy.	1 – 2

Marker's Comments:

- Many students were confused with the requirements of the question and misinterpreted the question as one of the following:
  - Comment on whether the data shows that there is inclusive and sustainable growth in the US economy.
  - Comment on whether the policies implemented have achieved inclusive and sustainable growth in the US economy.
- It is important to be clear what the issue of contention is in the question - whether there is enough data provided in the case to show that inclusive and sustainable growth exist in the US economy. If it is argued that there is insufficient data, students should clearly point out the limitations of the data present and the data that is lacking in the case.
- Students are reminded to be discerning in their selection of case material as data or evidence to be used to support their arguments.
  - A number of students did not use the data provided in Table 1 at all, though the economic indicators provide the most objective evidence of the growth situation in the US economy. Instead, these responses made often tenuous inferences of the existence of inclusive and sustainable growth from other data present in the case, such as Trump's immigration laws (Extract 7) or the increased protectionism in US

(Extract 9). Such responses ended up explaining the possible impact of such policy measures on inclusive and sustainable growth in US instead.

(e)		**Discuss the factors that governments should consider when enacting protectionist measures like tariffs.**	**[10]**

Question interpretation

Command word/phrase	*Discuss the factors*	Discuss the different factors that governments would consider before making the decision to enact protectionist measures
Content	*Factors to consider, protectionist measures like tariffs*	Factors to consider: benefits, costs, unintended consequences, constraints, information Protectionist measures: Tariffs, Import quota
Context	*No specific context*	Students are to set their own context

This question requires students to consider the different factors in the government's decision making process before enacting protectionist measures like tariffs. The evaluation would require a well-reasoned judgement on which factor (s) is/are more important to the government in making the decision.

Introduction

- Protectionism is defined as the act of imposing economic policies aimed at restricting or restraining trade between countries, designed primarily to protect domestic producers and workers from foreign competition.
- Protectionist measures can be implemented to give domestic producers an advantage in the international market or to narrow a trade gap.
- An import tariff is a tax levied on imported goods or factor inputs.
- This answer aims to discuss the different factors that governments should consider when enacting protectionist measures like tariffs.

Body

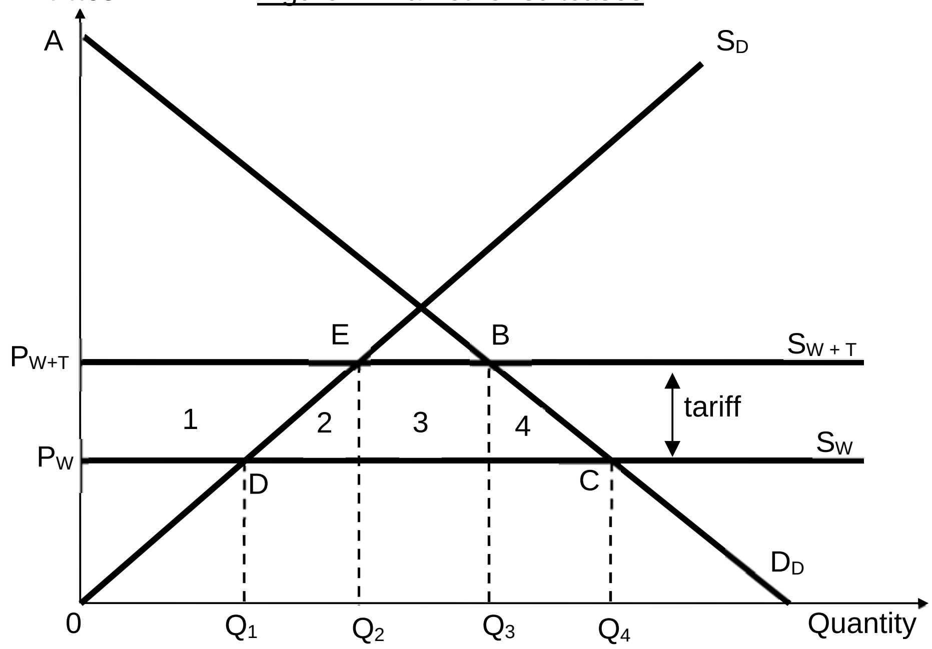
Key Argument 1: The government should consider the benefits of enacting protectionist measures

- When making a decision to enact protectionist measures like tariff, governments would consider the higher profits, increased producer surplus enjoyed by domestic producers, and the sheltering of domestic industries from foreign competition.
  - From Figure 4, if the country produces a good like suitcases on its own without free trade, the domestic demand and supply curves for suitcases are represented by D_D and S_D respectively.
  - When the country is open to free trade, and assuming that the country is too small to affect world markets and prices, the country faces the perfectly price inelastic world supply for suitcases, S_W. Price of suitcases is now at P_W, domestic consumers

consume $0Q_4$ units of suitcases while domestic producers produce $0Q_1$ units. The remaining Q_1Q_4 units of suitcases are imported.

- When a specific import tariff on suitcases is enacted, the supply curve for suitcases shift upwards by the amount of tariff per unit of suitcase, to S_{W+T}. The price of suitcases now increases to P_{W+T}, where domestic consumers consume $0Q_3$ units of suitcases while domestic producers produce $0Q_2$ units. The remaining Q_2Q_3 units of suitcases are imported.

Figure 4: Market for suitcases



- These are the benefits for that the governments have to consider:
  - Domestic producers gain from higher producer surplus, as it increases from $0P_WD$ before the tariff to $0P_{W+T}E$ after the tariff.
  - In addition, they benefit from higher revenue as the price P_{W+T} and the quantity Q_2 are both higher than before (P_W and Q_1). Assuming costs remain constant, they will earn higher profits as a result of the tariffs.
  - Industries that tariffs are implemented on benefit from being sheltered from foreign competition.
    - When tariffs are implemented on an infant industry, it has time and room to develop its comparative advantage. They can therefore grow to a point where they become internationally competitive.
    - When tariffs are implemented on a sunset industry, it slows down the contraction of the industry, allowing workers more time to acquire skills to transit into another industry, thus lowering structural unemployment.
  - Government achieves their macroeconomic goals of actual growth and low unemployment.
    - With tariffs and assuming demand for imports is price elastic, import expenditure (M) falls (price of imports increase, quantity demanded decrease) as domestic consumers switch to cheaper domestic products. As M falls and domestic consumption increases, there is an increase in AD.

  - As AD increases, real national output increases, and actual growth is achieved. Demand-deficient unemployment decreases as the higher output requires firms to demand more labour.

Key Argument 2: The government should consider the costs of enacting protectionist measures

- When making a decision to enact protectionist measures like tariff, governments would consider the costs of the decision, like higher prices, reduced consumer surplus, welfare loss, negative growth and unemployment.
- The costs that governments should consider are:
  - With a tariff, consumers now pay a higher price to consume the good (P_{W+T}) compared to P_W before the tariff.
  - Consumers suffer from lower consumer surplus, as it decreases from ACP_W before the tariff to ABP_{W+T} after the tariff.
  - There is also a welfare loss of Areas 2 and 4 after the tariff is imposed, thus resulting allocative inefficiency.
    - Area 2 is incurred due to the higher price that consumers pay after the tariff is imposed, and area 4 is incurred because the less efficient domestic producers are producing the extra Q_1Q_2 units of the good in the market.
  - There would also be a 'beggar-thy-neighbour' effect, preventing the government from achieving their macroeconomic goals.
    - When a country imposes tariffs, her import expenditure falls and hence the export revenue of her trading partner falls. As a result, the trading partner's (X – M) and hence AD falls, leading to a fall in national income.
    - With a lower income, the trading partner will reduce demand for the exports of the country that imposed the tariffs. With reduced export revenue, AD falls, leading to negative growth and demand-deficient unemployment.

**Note: you may decide to include this following argument to broaden the scope of discussion. Other possible arguments would include: constraints that the government face, and information that they require in their decision making.*

Key Argument 3: The government should consider the unintended consequences of enacting protectionist measures

- When making a decision to enact protectionist measures like tariff, governments would consider the unintended consequences of the decision.
- When a country imposes a tariff, there may be potential unintended consequences like retaliation. Trading partners may retaliate with similar tariffs on that country's goods and services.
  - From Extract 10, it can be seen that China retaliated with tariffs after US imposed tariffs on Chinese goods.
  - When China retaliates with tariff on US goods, US export revenue will fall, leading to a fall in her AD. This may offset the initial benefits reaped by the US from imposing tariffs on Chinese goods.

Evaluative Conclusion

- **[Stand]** Governments would have to first weigh the benefits and the costs before enacting protectionist measures like tariffs. When the benefits outweigh the costs, protectionist measures should be enacted. When the costs outweigh the benefits, they should not be enacted.
- **[Situation + Magnitude]** A country's reliance on its imports and exports could determine whether the benefits outweigh the costs, or vice versa.
  - A small and open country like Singapore is likely to be very dependent on her trade sector, hence protectionist measures would incur higher costs than benefits.
    - As Singapore lacks natural resources, tariffs imposed on imported factor inputs would raise their prices and hence the economy wide cost of production, leading to the high costs of inflation and negative growth.
    - Furthermore, Singapore relies heavily on her exports as the driver of her economic growth. With protectionist measures in place, the high costs incurred due to her trading partners' loss of income would severely impact her economy.
  - A large country with a big domestic market on the other hand, may reap greater benefits than costs when enacting protectionist measures.
    - Countries like China have abundance of resources and are likely incur lesser costs from enacting protectionist measures as they tend to not be reliant on imported factor inputs.
    - Moreover, they may not be dependent on their exports as they can tap on their large domestic market to drive their economic growth.
    - **[Magnitude]** Furthermore, as the trade sector is likely to take up a smaller proportion of their AD relative to other components, the costs and negative unintended consequences incurred by enacting protectionist measures (like the 'beggar-thy-neighbour' effect and retaliation) are likely to be less significant.

<u>Mark Scheme</u>

Level	Knowledge, Application/Understanding, and Analysis	Marks
L2	For a well-developed and balanced answer that • rigorously discusses different factors that governments have to consider before enacting protectionist measures	5 – 7
L1	For an underdeveloped answer that • lacks sufficient scope of discussion (e.g. only discusses one factor), OR • has sufficient scope but lacks rigour in analysing different factors that governments should consider when enacting protectionist measures	1 – 4
E	Up to 3 marks for valid evaluative comment (s) on the most significant factor that governments should consider when enacting protectionist measures.	1 – 3

Marker's comments:

- This question was fairly well attempted, with a good number of students scoring L2 marks.
- Students who did not do as well mainly listed factors that the government should consider and vaguely described them without much economic concepts. These weaker answers lacked rigour in explanation.
- For questions on protectionism, students are reminded that the tariff diagram is a powerful tool as it is able to help them explain **both** benefits and costs of these policies. As such, they should make it a point to learn how to describe the workings of a tariff and how to use it to discuss both benefits and costs of such a policy.
- The evaluation for similar decision making styled questions could involve a weighing of the factors: benefits vs costs, or a progressive ranking of the factors: consider benefits and costs first, then constraints, then unintended consequences.