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Answer all questions.

### Question 1: The Not-So-Certain Economics of Electric Vehicles

#### Extract 1: Electric Vehicle Market

Electric vehicles (EVs) are essential to decarbonising transportation, with their numbers increasing due to rising global demand. While electric cars are significantly cheaper to run — potentially costing up to half as much per mile as similar-sized petrol or diesel vehicles — they are generally more expensive to purchase. To mitigate this cost barrier, many governments offer tax credits and other incentives, making EVs more accessible to a broader range of consumers.

Goldman Sachs Research now expects battery prices to fall to \$99 per kilowatt hour (kWh) of storage capacity by 2025 — a 40% decrease from 2022. Analysts estimate that nearly half of this reduction will be driven by falling prices of EV raw materials, including lithium, nickel, and cobalt.

Expanding charging infrastructure and advancing battery technology are crucial to accelerating the adoption of EVs. In response to growing demand, cities are increasingly installing more charging stations in public spaces like grocery stores and airports, making EVs a more practical option for everyday use. Furthermore, advancements in battery technology are extending the range of EVs, making them more viable for longer commutes. The combination of improved battery performance and faster charging technology is also minimizing downtime for EV drivers, further enhancing the appeal of electric vehicles.

Adapted from: *World Economic Forum, 26 Oct 2022 & Goldman Sachs, 1 Nov 2023*

#### Extract 2: The True Cost of Electrifying Transportation

The transportation sector accounts for 29 percent of U.S. carbon emissions (and 24 percent worldwide), it's only natural that electrification of the vehicle fleet, paired with the rapid greening of electricity production, is widely viewed as key to containing climate risk.

Emissions from internal combustion engine<sup>1</sup> (ICE) vehicles are easy to understand. Combustion of fossil fuels creates global greenhouse gases (GHGs) and local pollution. In contrast, the emissions associated with electric vehicles (EVs) are more complex to measure. The electricity used to charge EVs is generated through a mix of technologies, including wind, solar, hydro, nuclear, and various fossil fuels. Therefore, the pollution associated with EVs depends on the marginal source of electricity - the power plant that adjusts its output in response to increased demand.

Local pollution from traditional vehicles primarily affects respiratory health but is also linked to reduced labour productivity and cognitive performance. EVs can reduce GHGs compared to ICEs in areas where natural gas is the dominant energy source for the electricity grid. However, in regions dependent on coal, particularly in colder climates, EVs can sometimes be more greenhouse gas-intensive. While ICE vehicles emit pollutants directly where they are driven, EVs generate local pollution at the power plants that supply electricity during charging. Thus, the environmental benefits of EVs are most pronounced in urban areas with clean grids (e.g., Los Angeles), but can be diminished or even negative in coal-dependent regions.

<sup>1</sup> An internal combustion engine is a machine that converts internal energy into mechanical energy through the combustion of fossil fuels.

It is also important to consider that congestion externalities and accidents represent the largest market failures associated with driving, surpassing the impact of GHGs and local pollutants. Furthermore, policies intended to promote EV adoption, such as single-occupancy access to carpool lanes and EV purchase subsidies, may inadvertently exacerbate congestion by increasing the number of vehicles on the road or reducing the effectiveness of carpool lanes.

Adapted from: *Milken Institute*, 24 Jan 2022

### Extract 3: China's EV Industry Speeds Up

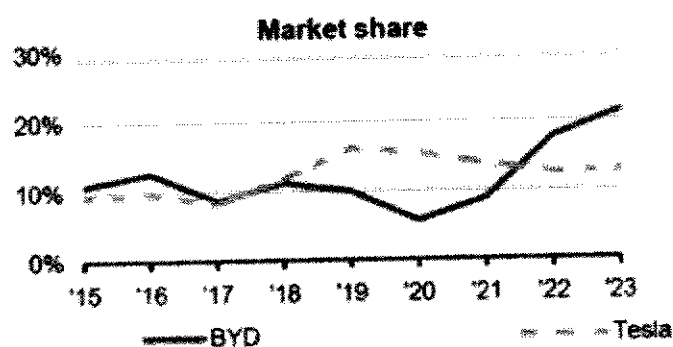
In the final quarter of 2023, BYD, a Chinese firm, surpassed Tesla as the world's biggest manufacturer of purely battery-powered vehicles, selling 526,000 of them to the American firm's 484,000. As the shift away from the ICE gathers pace, established carmakers are beginning to worry that Chinese upstarts might run them off the road.

China dominates the manufacture of electric vehicles' most critical component, batteries. And China's vast domestic market allows local firms to benefit from economies of scale. However, Chinese firms face significant obstacles. Despite generous government subsidies, many new EV startups in China are not yet profitable.

Since late 2022, heightened competition among front-runners has led electric car prices to fall quickly. The price of compact electric cars and SUVs dropped by up to 10% in 2023 relative to 2022. In the first quarter of 2024, Tesla once again slashed prices, by up to 6%, forcing competitors to follow suit, despite shrinking gross margins, which are calculated as the difference between revenue and the cost of goods sold, divided by revenue. Subsequently, BYD implemented a 10-20% price reduction across its models.

In 2023, BYD significantly increased its R&D investment to 39.57 billion Yuan, a 4.7-fold rise from the previous year, surpassing Tesla's expenditure by 11.18 billion Yuan. This substantial investment highlights BYD's commitment to innovation, particularly in the New Energy Vehicle sector. Meanwhile, Tesla, continues to focus its R&D efforts on developing advanced eco-friendly technologies, expanding production of solar energy panels and batteries and investing in charging stations to support the broader adoption of EVs.

**Figure 1: Share of global electric car markets by selected carmakers**



Source: *Global EV Outlook 2024 & The Economist*, 11 Jan 2024

**Extract 4: Rising Protectionism**

The Biden administration's plan to slap heavy new tariffs on Chinese EVs and batteries would provide temporary protection for U.S. automobile industry jobs. Few Chinese-made EVs are currently sold in the U.S., so the immediate impact of higher tariffs on consumers would be minimal, according to analysts. However, the White House also plans to more than triple tariffs on Chinese EV batteries and parts to 25%. U.S. automakers warn that without access to lower-cost batteries and materials from China, EVs could become prohibitively expensive for mainstream U.S. consumers.

Experts are divided over whether stronger tariff protection will help U.S. automakers in the long run, or work to the benefit of consumers. "The tariffs buy important time," said Michael Dunne, a consultant who has watched the Chinese automobile industry for years. "The U.S. is five to seven years behind China when it comes to electric vehicles and battery supply chains." China protected its automakers in the 1990s and 2000s, Dunne said. "U.S. political leaders could rightly say we are just borrowing a page from China's playbook."

Meanwhile, Washington is investing hundreds of billions of dollars to develop U.S. EV, solar, and other new industries. These provisions include grants, subsidies, tax credits, and direct purchases, with \$2 billion allocated for domestic manufacturing and conversion grants to retrofit existing assembly facilities for low-carbon vehicle production. Additionally, \$7 billion has been set aside to ensure domestic manufacturers have access to critical minerals and components necessary for battery production. The Inflation Reduction Act also provides \$3 billion in credit subsidies for advanced technology vehicle manufacturing through the Department of Energy's Loan Programs Office. The U.S. government has expressed concerns that China's state-driven excess production capacity in these sectors threatens the viability of American companies, and the tariffs are intended to protect American jobs from a potential flood of cheap Chinese imports.

*Adapted: Reuters, 15 May 2024 & 23 May 2024 and Automotive Logistics, 1 Nov 2022*

**Questions**

(a) Explain **one** demand factor and **one** supply factor that influence the adoption of electric vehicles. [4]

(b) (i) Compare the market share of BYD and Tesla from 2015 to 2023. [2]

Extract 3 states that in the first quarter of 2024, Tesla once again slashed prices, by up to 6%, forcing competitors to follow suit, despite shrinking gross margins.

(ii) Explain the likely market structure of the EV industry. [2]

(iii) Discuss whether this pricing strategy is the best for Tesla to maintain profitability in view of rising competition from Chinese EV car manufacturers. [8]

(c) The transportation sector accounts for 29 percent of U.S. carbon emissions (and 24 percent worldwide).  
With the use of a diagram, explain why the transport market fails. [4]

(d) Discuss whether imposition of tariff is the best strategy to protect employment in the American automobile industry. [10]

[Total: 30]

## Question 2 Sustainability Efforts in Singapore and China

**Table 1: Singapore, selected indicators**

	2019	2020	2021	2022	2023
<b>Real GDP Growth rate</b>	1.35%	-3.87%	9.69%	3.84%	1.08%
<b>Inflation Rate</b>	0.57%	-0.18%	0.92%	1.98%	0.23%
<b>Carbon emissions per capita (tons)</b>	5.8	9.3	9.4	8.9	9.46

**Table 2: China, selected indicators**

	2019	2020	2021	2022	2023
<b>Real GDP Growth rate</b>	5.95%	2.24%	8.45%	2.99%	5.24%
<b>Inflation Rate</b>	2.9%	2.49%	0.92%	1.98%	0.23%
<b>Carbon emissions per capita (tons)</b>	7.5	7.7	8.0	8.0	8.9

Source: <https://www.statista.com>, accessed 5 August 2024  
<https://ourworldindata.org>, accessed 5 August 2024

### Extract 5: Towards a sustainable and resilient Singapore

Since our founding, we have designed policies with longterm sustainability in mind. We integrated nature into our Garden City and prudently managed scarce resources such as water and energy. Today, all Singaporeans, rich or poor, young or old, enjoy clean air, water and sanitation, quality healthcare and education, as well as lush greenery and safe common spaces because of these policies. As a tropical small island developing state, we are vulnerable to extreme weather patterns and rising sea levels. We have designated 2018 as the Year of Climate Action and taken concrete steps to tackle climate change. We will implement an economy-wide carbon tax from 2019, one of the first Asian countries to do so.

Singapore's carbon tax regime was first implemented from 2019, with an initial tax rate of \$5 per tonne of greenhouse gas emissions. This tax rate was in place until 2023. Climate advocates had long said that a carbon tax of \$5 per tonne was too low to prompt large emitters to do more to cut their planet-warming emissions. In February 2022, Finance Minister Lawrence Wong said in his Budget speech that Singapore's carbon tax rate would be adjusted upwards, to \$25 per tonne of greenhouse gas emissions in 2024 and 2025. This will be raised further to \$45 per tonne from 2026 to 2027, with a view of reaching between \$50 and \$80 per tonne by 2030.

Source: *The Straits Times*, 3 April 2024  
 Singapore Voluntary Review Report, accessed 5 August 2024

**Extract 6: Firms tapping Budget 2024 green initiatives can gain from lower costs, business boost**

Local firms that tap the initiatives announced in Budget 2024 to support them in adopting green solutions can stand to gain from lower set-up costs as well as a boost to competitiveness as suppliers to multinational companies. Industry observers said that enhancements to the Enterprise Financing Scheme and the Energy Efficiency Grant, announced by Deputy Prime Minister Lawrence Wong during his Budget speech on Feb 16, can also bolster Singapore's sustainability goals.

Mr Samuel Han, director of energy and sustainability management at Savills Singapore, said that, "By enhancing the existing schemes, these grants serve as a powerful incentive for businesses to embrace green solutions and prioritise energy efficiency initiatives. This not only promotes environmental stewardship, but also offers tangible benefits for businesses, including cost savings and improved competitiveness." He added: "By incentivising the adoption of sustainable practices, the grants empower commercial organisations to play a more active role in reducing their carbon footprint and contributing to Singapore's broader sustainability goals." First announced in 2022, the Energy Efficiency Grant provides local companies in the food services, food manufacturing and retail sectors with up to 70 per cent of financial support to invest in energy-efficient appliances such as LED lighting, air-conditioners, refrigerators, cooking hobs and water heaters. As part of Budget 2024, the scheme will be expanded to include companies in more sectors, including manufacturing, construction and maritime, as well as data centres and their users.

DBS Bank chief sustainability officer Helge Muenkel said: "Additional financial levers such as the tax credit scheme and loans for SMEs to adopt green solutions will also progress the move towards sustainable practices and contribute to fostering a more resilient and sustainable business landscape in Singapore."

Source: *The Straits Times*, 22 Feb 2024

**Extract 7: Advancing China's Sustainable Economic Growth**

For the world, the year ahead will require careful calibration of monetary and fiscal policies to secure a soft landing — bringing inflation down while maintaining growth firmly in positive territory. Many central banks have the difficult task of deciding when to cut interest rates and by how much, based on data. They can no longer take cues from others as both the pace of disinflation and growth are diverging across countries. It will be also a challenging year for fiscal authorities in most countries — they need to embrace consolidation to reduce debt and rebuild buffers, and at the same time finance the digital and green transformations of their economies. The good news is that the digital and green transformations present opportunities to boost productivity growth and improve living standards. Deep structural reforms can enhance the conditions for entrepreneurship, innovation and economic performance.

Zooming in on China, we saw a strong post-Covid rebound in 2023, with growth exceeding five percent. A key feature of high-quality growth will need to be higher reliance on domestic consumption. Doing so depends on boosting the spending power of individuals and families that is driven by the strong social security system in China that covers pension and insurance for medical, unemployment, work-related and maternity.

## 8

Domestic consumption also depends on income growth, which in turn relies on the productivity of capital and labor. Policies that drive reforms such as deregulating the business environment and ensuring a level playing field between private and state-owned enterprises will improve the allocation of capital. Investments in human capital — in education, by subsidizing life-long training and reskilling and quality health care will deliver higher labor productivity and higher incomes.

This is particularly important as China seeks to seize the opportunities of the AI “big bang.” Countries’ preparedness for the world of artificial intelligence is no longer a goal for the future — it is already an issue for today. The IMF has identified four areas that are critical for countries’ AI preparedness — digital infrastructure, human capital and labor markets, innovation, and regulation and ethics. Our analysis finds that China is at the forefront of emerging economies in terms of AI preparedness, with well-developed digital infrastructure providing a head start. Establishing a robust AI regulatory framework and strengthening economic ties with other innovative countries will help China power ahead. Similarly, China has enormous potential in advancing the green economy. It is already the global leader in deploying renewable energy and is making rapid progress in green mobility. Its continued leadership is vital to addressing the global climate crisis.

Source: *International Monetary Fund*, 23 March 2024

### Questions

- a) (i) Compare the changes in real GDP for Singapore and China between 2019 and 2023. [2]
- (ii) Explain how real GDP growth rate can illustrate an improvement in standards of living in an economy. [4]
- b) With reference to Extract 5 and using an aggregate demand and aggregate supply diagram, explain **one** likely impact of the carbon tax on the economic growth of Singapore. [3]
- c) Extract 7 mentions how other economies uses interest rates to manage inflation, explain how interest rates can help to manage inflation. [3]
- d) In the light of the sustainability issues raised in the case study, assess whether economies should prioritise sustainable economic growth as the main macroeconomic goal. [8]
- e) Both Singapore and China targets to achieve sustainable growth. [10]
- Using economic analysis and based on the evidence provided, discuss the extent to which policies implemented by China to achieve sustainable growth can be applied to the Singapore economy.

[Total: 30]



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## Questions

a)	(i)	Compare the changes in real GDP for Singapore and China between 2019 and 2023.	[2]
		<p>[1] Both experienced General Increase            [1] In 2020, Singapore experienced a decrease in GDP while China has an increase in GDP</p> <p><u>Markers' comments:</u>            Most students demonstrated a strong understanding of the requirements for identifying similarities and differences, excelling in their responses to this question. However, some students experienced confusion regarding the interpretation of the data, specifically when presented with a positive but decreasing growth rate. They mistakenly believed that this indicated a decline in GDP, rather than understanding it as GDP increasing at a slower rate.</p>	
		(ii) Explain how real GDP growth rate can illustrate an improvement in standards of living in an economy.	[4]
		<p>[2] Illustrate an improvement in mat SOL            - Positive real GDP Growth rate shows an increase in GDP, with higher purchasing power            - Higher consumption of G&amp;S, increase in satisfaction and utility, therefore increase in material SOL</p> <p>[2] Illustrate an improvement in non- mat SOL            - Positive real GDP Growth rate shows an increase in GDP, with higher tax revenue collected</p>	

	<p>- More budget to spend on healthcare and education, improve literacy rate and life expectancy which shows improvement in quality of life indicated by HDI, shows a higher non-material SOL.</p> <p><u>Markers' comments:</u> Most students demonstrated a strong understanding of the requirements for identifying similarities and differences, excelling in their responses to this question. However, some students experienced confusion regarding the interpretation of the data, specifically when presented with a positive but decreasing growth rate.</p>			
b)	With reference to Extract 5 and using an aggregate demand and aggregate supply diagram, explain <b>one</b> likely impact of the carbon tax on the economic growth of Singapore.	[3]		
	<p>[1] higher unit COP-&gt; Decrease SRAS or Higher unit COP-&gt; Decrease I-&gt; Decrease AD [1] Diagram [1] Reference to diagram, reference a decrease in RNY (Slower economic growth)</p> <p><u>Markers' comments:</u> Most students effectively addressed the question requirements, either by analyzing SRAS or AD. However, a number of students incorrectly focused on the increase in LRAS without considering the immediate effects of the carbon tax on economic growth. This was not an acceptable approach, as it failed to acknowledge the short-term implications of the policy on aggregate demand or supply.</p>			
c)	Extract 7 mentions how other economies uses interest rates to manage inflation, explain how interest rates can help to manage inflation.	[3]		
	<p>[1] Increase interest rate-&gt; increase COB-&gt; [1] reduce Consumption of big ticket items, Investments also decrease [1] Fall in AD-&gt; Decrease GPL (Reduce demand pull inflation)</p> <p><u>Markers' comments:</u> Most students demonstrated a clear understanding of the question, effectively explaining the decrease in the general price level (GPL). However, there was noticeable confusion among some students regarding the distinction between the cost of borrowing and the cost of production, which led to errors in their analysis. Furthermore, a subset of students incorrectly anchored their responses on the assumption that a decrease in interest rates is expansionary and would exacerbate inflation, which was a misinterpretation of the question's context. This detracted from the quality of their responses.</p>			
d)	In the light of the sustainability issues raised in the case study, assess whether economies should prioritise sustainable economic growth as the main macroeconomic goal.	[8]		
	<p><b>Question Analysis</b></p> <table border="1"> <tr> <td><b>Command</b></td> <td><b>Assess</b></td> </tr> </table>	<b>Command</b>	<b>Assess</b>	
<b>Command</b>	<b>Assess</b>			

<b>Content</b>	Consequences of sustainable economic growth
<b>Context</b>	Generic
<b>Trigger-&gt; End</b>	sustainable economic growth-> Other aims
<b>Key Requirements</b>	R1: Economies should prioritise sustainable economic growth as the main macroeconomic goal. R2: Economies should not prioritise sustainable economic growth as the main macroeconomic goal.

R1: Economies should prioritise sustainable economic growth as the main macroeconomic goal.

**Economic Analysis:**  
Sustainable Economic Growth

- Increasing income level from sustained economic growth
- Generally Positive Growth rates from Table 1
- Rising purchasing power
- Increase Consumption of G&S
- Higher Satisfaction and utility
- **Increase in material standards of living**
  
- Sustainable environmental impact
- Lower environmental degradation
- Sustainability of resources over generations
- Extract 5 info:
  - o Integrated nature into our Garden City and prudently managed scarce resources such as water and energy.
  - o Enjoy clean air, water and sanitation, lush greenery and safe common spaces because of these policies.
- Better quality of environment and longer sustainable use of resources
- According to MEW, with a better environment sustainability indicates a higher quality of life
- **Higher non- material SOL**

*\*Any other Macroeconomic goals as a consequence is also acceptable, however, students should not be using Economic Growth as one of the consequence.*

R2: Economies should not prioritise sustainable economic growth as the main macroeconomic goal

**Economic Analysis:**  
Low inflation should be prioritized as the main macroeconomic goal

- To be able to achieve sustainable economic growth, it is necessary that the economy is experiencing low inflation
- If the economy is experiencing high inflation
  - o The higher cost of production of production would discourage investments by firms
  - o Decrease in I -> decrease AD-> Decrease actual economic growth

- Decrease in I-> decrease quantity of capital-> decrease productive capacity-> decrease LRAS-> Decrease potential economic growth (Slows down the increase)
- Discourages the attempts be sustainable that might be costly/ reduces profits
  - Extract 5, Singapore's carbon tax regime was first implemented from 2019 which will further increase cost and discourage investment
  - Extract 6, further invest in energy-efficient appliances such as LED lighting, air-conditioners, refrigerators, cooking hobs and water heaters which will be costly for the firms and might also discourage investments.

*\*Any other Macroeconomic goals as a consequence is also acceptable.*

**Evaluative Conclusion:**

<b><u>Stand</u></b>	Priorities of the economy should be dependent on the key macroeconomic problems faced by the different economies.
<b><u>Substantiation</u></b>	If the current problem faced is inflation, as seen in Extract 7 For the world, the year ahead will require careful calibration of monetary and fiscal policies to secure a soft landing — bringing inflation down while maintaining growth firmly in positive territory.
<b><u>Suggestion</u></b>	In the long run, the economies could continue to focus on sustainable economic growth, however, in the short run, it might be more applicable for economies to consider the key macroeconomic problem they are facing.

<b>Level</b>	<b>Knowledge, Application/Understanding, and Analysis</b>	<b>Marks</b>
L2	For a well-developed answer that has: <ul style="list-style-type: none"> <li>● <b>good scope and balance</b> – two-sided discussion on whether <u>economies should prioritise sustainable economic growth as the main macroeconomic goal</u></li> <li>● <b>good application to different context</b> – uses the case material where appropriate</li> </ul> <b>Max 4m</b> – one sided discussion	4 – 6
L1	For an under-developed answer that: <ul style="list-style-type: none"> <li>- lacks scope and balance – only explains how <u>economies should prioritise sustainable economic growth as the main macroeconomic goal</u> (1 sided)</li> <li>- lacks application to different context</li> </ul>	1 – 3

Level	Evaluation	Marks												
E	A well-reasoned judgement on whether data are sufficient to assess changes in standard of living in India.	1 – 2												
<p><u>Markers' comments:</u> This was the poorest-performing question, as many students failed to adequately explain the consequences of sustainable economic growth to justify why economies should prioritize it. A significant number of students instead focused their discussion on how sustainable economic growth can be achieved or how it leads to sustained growth. These approaches did not effectively address the question's requirements, as they shifted away from explaining the direct benefits and implications of prioritizing sustainable economic growth.</p>														
e)	Both Singapore and China targets to achieve sustainable growth.  Using economic analysis and based on the evidence provided, discuss the extent to which policies implemented by China to achieve sustainable growth can be applied to the Singapore economy.	[10]												
<table border="1"> <thead> <tr> <th colspan="2">Question Analysis</th> </tr> </thead> <tbody> <tr> <td><b>Command</b></td> <td>Discuss</td> </tr> <tr> <td><b>Content</b></td> <td>Policies implemented by China to achieve sustainable growth can be applied to the Singapore economy.</td> </tr> <tr> <td><b>Context</b></td> <td>China, Singapore</td> </tr> <tr> <td><b>Trigger-&gt; End</b></td> <td>Policies in China-&gt; Sustainable Growth-&gt; Applied to Singapore?</td> </tr> <tr> <td><b>Key Requirements</b></td> <td>R1: policies implemented by China to achieve sustainable growth can be applied to the Singapore economy. R2: policies implemented by China to achieve sustainable growth can be applied to the Singapore economy.</td> </tr> </tbody> </table> <p><b>R1: policies implemented by China to achieve sustainable growth can be applied to the Singapore economy to a small extent</b></p> <p>Extract 7: Doing so depends on boosting the spending power of individuals and families that is driven by the strong social security system in China that covers pension and insurance for medical, unemployment, work-related and maternity.</p> <p>Economic Analysis:</p> <ul style="list-style-type: none"> <li>- strong social security system in China that covers pension and insurance for medical, unemployment, work-related and maternity</li> <li>- Good planning of insurance on basic needs</li> <li>- More spending available for consumption of other G&amp;S</li> </ul>			Question Analysis		<b>Command</b>	Discuss	<b>Content</b>	Policies implemented by China to achieve sustainable growth can be applied to the Singapore economy.	<b>Context</b>	China, Singapore	<b>Trigger-&gt; End</b>	Policies in China-> Sustainable Growth-> Applied to Singapore?	<b>Key Requirements</b>	R1: policies implemented by China to achieve sustainable growth can be applied to the Singapore economy. R2: policies implemented by China to achieve sustainable growth can be applied to the Singapore economy.
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<b>Key Requirements</b>	R1: policies implemented by China to achieve sustainable growth can be applied to the Singapore economy. R2: policies implemented by China to achieve sustainable growth can be applied to the Singapore economy.													

- Increase in C-> Increase in AD-> Increase RNY by k-> Actual Economic Growth
- If applied to Singapore context, not as effective as:
  - o Small domestic market, the increase in C is insignificant in increasing RNY
  - o Small k in Singapore, does not increase RNY to large extent

**R2: policies implemented by China to achieve sustainable growth can be applied to the Singapore economy to a large extent**

Extract 7: Policies that drive reforms such as deregulating the business environment and ensuring a level playing field between private and state-owned enterprises will improve the allocation of capital. Investments in human capital — in education, by subsidizing life-long training and reskilling and quality health care will deliver higher labor productivity and higher incomes.

Economic Analysis:

- Retraining and reskilling
- Increase in quality of labour
- Increase productive capacity
- Increase LRAS
- Increase potential Economic Growth
- Deregulation
- Increases investments
- Increase AD-> Increase RNY by k-> Actual Economic Growth
- If applied to Singapore context, highly applicable:
  - o With the small population size and constraints to increasing quantity of labour given the small land space, improving the quality of labour is an alternative
  - o Labours are generally high skilled with good foundational knowledge, training will be more effective to bring about increase in LRAS.

Extract 7: Seeks to seize the opportunities of the AI “big bang.” Countries’ preparedness for the world of artificial intelligence is no longer a goal for the future — it is already an issue for today. The IMF has identified four areas that are critical for countries’ AI preparedness — digital infrastructure, human capital and labor markets, innovation, and regulation and ethics.  
(Encouraging the use of AI)

Economic Analysis:

- Increase in quality of Capital
- Increase productive capacity
- Increase LRAS
- Increase potential Economic Growth
- If applied to Singapore context, highly applicable:
  - o With the small population size and ageing population, the switch from labour intensive production to capital intensive production can sustain growth
  - o Labours are generally high skilled and equipped with relevant skills set necessary to support development



Extract 7: Establishing a robust AI regulatory framework and strengthening economic ties with other innovative countries will help China power ahead. Similarly, China has enormous potential in advancing the green economy. It is already the global leader in deploying renewable energy and is making rapid progress in green mobility

**Economic Analysis:**

- Increase in quality of Capital
- Increase productive capacity
- Increase LRAS
- Increase potential Economic Growth
- Bringing about Technological transfer especially with regards to green technology-> Cleaner production processes-> lesser carbon emissions-> manage environmental degradation
- Deploying renewable energy-> manage use of resources and energy-> ensures availability of energy over generation
- If applied to Singapore context, highly applicable:
  - o As a small economy with limited talents, we thrive to work closely with other economies to learn the skills and transfer the technology, this reduces the training and development period necessary for new and green technology to take place. Furthermore, the R&D is often costly and does not guarantee success.
  - o Carbon emission per capita has been increasing over the year and the deployment of renewable energy will reduce the emissions and better help to sustain the environment.

Level	Knowledge, Application/Understanding, and Analysis	Marks
L2	<p>For a well-developed answer that has:</p> <ul style="list-style-type: none"> <li>● <b>good scope</b> – analyses two policies used by China on sustainable growth</li> <li>● <b>good balance</b> – explains both the workings and addressed the extent to which it can be applicable to Singapore</li> <li>● <b>good rigour</b> – uses AD/AS analysis and diagram(s) where appropriate; and</li> <li>● <b>good application to context</b> – uses the case material where appropriate, to support analysis or relating to the Singapore context</li> </ul> <p><b>Max 4m</b> – one policy  <b>Max 6m</b> – without addressing sustainable economic growth (need not be one point, can be overall)</p>	4 – 7
L1	<p>For an under-developed answer that:</p> <ul style="list-style-type: none"> <li>● lacks scope – analyses only one policy, or lacking either AD or AS effects</li> </ul>	1 – 3

	<ul style="list-style-type: none"> <li>• lacks balance – analyses only the workings or Singapore's applicability of the policies</li> <li>• lacks rigour – descriptive explanation little use of AD/AS analysis or diagram</li> <li>• lacks application to context – limited use of case material to support analysis or policies chosen are not fully applied to the Singapore context</li> </ul>	
<b>Level</b>	<b>Evaluation</b>	<b>Marks</b>
E	<ul style="list-style-type: none"> <li>• A well-reasoned judgement on whether Singapore was able to effective use policies implemented by China to achieve sustainable economic growth.</li> </ul>	1 – 3
<p><u>Markers' comments:</u>  This question was relatively well answered. Most students effectively identified the policies used by China to achieve sustainable economic growth and demonstrated a solid understanding of the contextual differences between China and Singapore. Students were able to recognize how the differing economic structures influenced the applicability of these policies. However, some students missed the key aspect of achieving sustainable economic growth, while others neglected to explain supply-side policies. These omissions were critical, as they were essential components of the required economic analysis.</p>		
<b>[Total: 30]</b>		

In 2022, the domestic price of rice in India increased drastically due to poor monsoon rains and a rise in demand. In response, India, the world's largest rice exporter, has periodically imposed export bans.

(a) Explain the reasons for the significant increase in the price of rice in India. [10]

Suggested answer:

Question Analysis:

Command word: Explain – elaboration of reasons with relevant examples

Content: Significant increase (magnitude of change in price) → suggesting use of elasticities / Use of demand/supply analysis or diagram

Context: Market for rice in India

R1: Explain demand and supply reasons for the increase in price

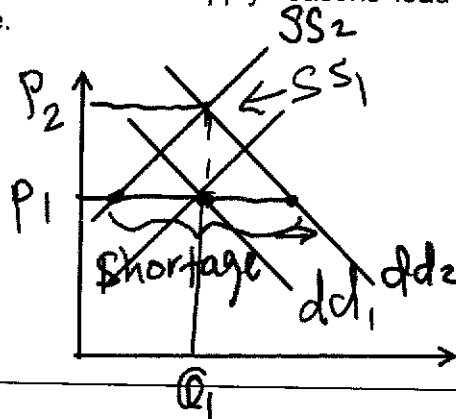
R2: Explain how the demand and supply reasons lead to the significant increase in price of rice.

The significant increase in the price of rice in India can be attributed to several demand and supply reasons. It can also be attributed to the price inelasticity of its demand and supply.

R1: Explain demand and supply reasons for the increase in price

- **DD:** In 2022, there is post-pandemic economic recovery in most countries. As countries open their borders, travel restrictions eased and improvement in trade → economic activities resumed, especially in food and beverage industry → see a rise in demand for rice globally as well as in India, since rice is a staple and essential input in the food and beverage market
- **SS:** Due to poor monsoon rains (extreme weather conditions) → lack of rainfall, an important factor input to rice crops → this damaged crops, reduced yields, and led to lower rice output → reducing supply of rice in India.

R2: Explain how the demand and supply reasons lead to the significant increase in price of rice.



1. Reinforced effect:

- The increase in the demand and fall in supply of rice will lead to a significant shortage of rice at the original price level. With a huge shortage, this will lead to significant increase in prices of rice in India to clear the shortage.
- As seen from the diagram, the increase in demand and fall in supply creates a significant shortage.
- As a result of a huge shortage of rice in the market, prices will have to increase significantly from  $P_1$  to  $P_2$  to clear the shortage in the market.

2. Elasticity

- The demand for rice is price inelastic as it is a staple food in India and therefore a necessity.
- The supply of rice is price inelastic as well as rice has a long gestation period.
- The fall in supply and rise in demand has led to a shortage at the original price level. Given that both PED and PES of rice are likely to be low, quantity demanded and quantity supplied will not be responsive to price changes. Hence to eliminate the shortage of rice caused by the rise in demand and fall in supply of rice, price must increase significantly.

In conclusion, the significant increase in the price of rice in India is the result of an interplay of factors.

Markers' Comment:

- Question requirement:
  - Majority of answers understood the need to explain both demand and supply factors but only a handful recognised that the 2<sup>nd</sup> requirement which required them to explain the extent of increase in price.
- Tools of analysis:
  - Majority were able to apply price mechanism (dd/ss analysis).
  - A few answers used AD/AS analysis to analyse the impact on prices. This is inaccurate as the question focuses on the market for rice and hence not acceptable.
- Content:
  - All answers were able to identify the direction of change in demand and supply accurately, i.e. supply fell and demand rose.
  - However, a handful of answers were not able to elaborate on the reasons for the rise in demand (i.e. answers merely stated

that demand has increased based on the pre-amble) → This has resulted to most answers attaining a cursory grade.

- Most answers were able to recognise that poor monsoon rainfall will result in lower crop yield, reducing supply of rice.
- Some attributed the increased in demand to changes in the consumers' taste and preferences. However, this is a weak reason as rice has always been part of the people's diet in India. It is unlikely that taste and preferences have changed, resulting in an increase in the demand for rice.
- Also, some explained the rise in demand is due to rice being a staple. However, this would explain the PED value (i.e. demand is price inelastic) and not the reason for an increase in demand.
- Most answers were not able to explain clearly why prices of rice has increased significantly. Even when elasticity concepts were applied, these concepts were explained without any application (i.e. answers accurately explained that demand for rice is price inelastic as it is a necessity or a staple, without showing how this concept can be used to explain the significant increase in price). A well-elaborated answer would explain that because quantity demand is not responsive to the price increase, prices would need to increase significantly to clear the shortage in the market.
- Besides, students tend to apply the wrong elasticity concept. I.e. applying PED when demand increased / applying PES when supply decreased.
- Very few answers explained the significant rise in price of rice using the reinforced effect.
- Quite a handful of students did not explain that the fall in supply and rise in demand will result in a "shortage" in the market, resulting in price to rise. Rather, answers described the rise in price via the diagram, lacking analysis.

Mark Scheme:

Knowledge, Understanding, Application, Analysis		
<b>L3</b>	<b>Analysis &amp; Application</b>	<b>8-10</b>
	<p>For an <b>analytical</b> answer that addresses the question thoroughly with clear explanation well supported by <b>tools of analysis</b>, such as demand supply analysis and diagram. The demand and supply reasons as well as how prices rise significantly is clearly explained.</p> <p>There is good ability to <b>organise</b> ideas or discriminate between <b>relevant</b> and irrelevant factors. Answer is <b>well-focused on question</b>.</p>	

	<p><b>Knowledge &amp; Understanding</b> For an answer that demonstrates an <b>accurate knowledge and understanding</b> of economic concepts, theories related to question, e.g. demand and supply analysis</p> <p><b>Marks within L3:</b></p> <table border="1" data-bbox="400 864 1134 1218"> <thead> <tr> <th>Annotation</th> <th>Description</th> <th>Mark</th> </tr> </thead> <tbody> <tr> <td><b>A + A</b></td> <td>Analytical explanations for 2 question requirements</td> <td><b>10</b></td> </tr> <tr> <td><b>A + C + K</b></td> <td>1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant</td> <td><b>9</b></td> </tr> <tr> <td><b>A + C</b></td> <td>1 analytical and 1 cursory explanation for 2 question requirements</td> <td><b>8</b></td> </tr> </tbody> </table>	Annotation	Description	Mark	<b>A + A</b>	Analytical explanations for 2 question requirements	<b>10</b>	<b>A + C + K</b>	1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant	<b>9</b>	<b>A + C</b>	1 analytical and 1 cursory explanation for 2 question requirements	<b>8</b>		
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L2	<p><b>Analysis &amp; Application</b> For an <b>under-developed</b> answer that attempts to address the question and explain why prices of rice increased significantly. Answers may be <b>descriptive, lack an analytical approach</b> (e.g. not supported with tools of analysis, incomplete use of diagram) or is <b>incompletely explained</b> with gaps in analysis.</p> <p>[Or For a <b>one-sided analytical answer</b> that address only one of the two question requirements.</p> <p>For an answer that is <b>supported with some application to the context of the question</b>. There is limited ability to organise ideas or discriminate between relevant and irrelevant materials. Answer has some relevance to the question context but is generic (e.g. pre-learnt answer that is not focused on addressing the question specifically) or addresses only selected parts of the question.</p> <p><b>Knowledge &amp; Understanding</b></p>	5-7													

For an answer that demonstrates <b>largely accurate knowledge and understanding</b> of economic concepts, theories related to question (i.e. no major conceptual errors).		
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<b>Annotation</b>	<b>Description</b>	<b>Mark</b>
<b>A + K</b>	1 analytical explanation for 1 question requirement and an explanation of additional factor that is relevant	<b>7</b>
<b>C + C + K</b>	Cursory explanations for 2 question requirements and an explanation of additional factor that is relevant	<b>7</b>
<b>C + C</b>	Cursory explanations for 2 question requirements	<b>6</b>
<b>A + 0</b>	1 analytical explanation for 1 question requirement	<b>6</b>
<b>K + C + K</b>	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements and an explanation of additional factor that is relevant	<b>6</b>
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<b>L1</b>	<p><b>Knowledge &amp; Understanding</b> For an answer that shows <b>limited knowledge and understanding</b> of relevant economic concepts and theories (e.g. basic description or definitions). Few valid points made which are scant and inadequately explained. Answers are <b>mostly irrelevant and inaccurate</b>. Answer demonstrates that the meaning of question is not properly grasped or may contain basic errors of theory.</p> <p><b>Marks within L1:</b></p> <table border="1" data-bbox="399 616 1173 873"> <tr> <td data-bbox="399 616 526 750">K=1 -</td> <td data-bbox="526 616 1173 750">For basic <b>unexplained</b> knowledge, e.g. an unexplained statement or definition of a concept that showed some correct knowledge but no understanding</td> </tr> <tr> <td data-bbox="399 750 526 873">K=2 -</td> <td data-bbox="526 750 1173 873">For some <b>additional explanation</b> that shows an understanding of the concept that is not applied to the context of question but show limited knowledge and understanding</td> </tr> </table> <table border="1" data-bbox="399 896 1189 1411"> <thead> <tr> <th data-bbox="399 896 574 940">Annotation</th> <th data-bbox="574 896 1077 940">Description</th> <th data-bbox="1077 896 1189 940">Mark</th> </tr> </thead> <tbody> <tr> <td data-bbox="399 940 574 1008"><b>C + 0</b></td> <td data-bbox="574 940 1077 1008">One cursory explanation for 1 question requirement</td> <td data-bbox="1077 940 1189 1008"><b>4</b></td> </tr> <tr> <td data-bbox="399 1008 574 1075"><b>K + K</b></td> <td data-bbox="574 1008 1077 1075">Knowledge and understanding of 2 question requirements</td> <td data-bbox="1077 1008 1189 1075"><b>4</b></td> </tr> <tr> <td data-bbox="399 1075 574 1164"><b>K + K</b></td> <td data-bbox="574 1075 1077 1164">Knowledge and understanding of 1 question requirement and knowledge of the second requirement</td> <td data-bbox="1077 1075 1189 1164"><b>3</b></td> </tr> <tr> <td data-bbox="399 1164 574 1209"><b>K + K</b></td> <td data-bbox="574 1164 1077 1209">Knowledge of 2 question requirements</td> <td data-bbox="1077 1164 1189 1209"><b>2</b></td> </tr> <tr> <td data-bbox="399 1209 574 1265"><b>K + 0</b></td> <td data-bbox="574 1209 1077 1265">Knowledge and understanding of 1 question requirement</td> <td data-bbox="1077 1209 1189 1265"><b>2</b></td> </tr> <tr> <td data-bbox="399 1265 574 1332"><b>K + 0</b></td> <td data-bbox="574 1265 1077 1332">Knowledge of one question requirement</td> <td data-bbox="1077 1265 1189 1332"><b>1</b></td> </tr> <tr> <td data-bbox="399 1332 574 1411"><b>0</b></td> <td data-bbox="574 1332 1077 1411">Nothing of relevance in the answer</td> <td data-bbox="1077 1332 1189 1411"><b>0</b></td> </tr> </tbody> </table>	K=1 -	For basic <b>unexplained</b> knowledge, e.g. an unexplained statement or definition of a concept that showed some correct knowledge but no understanding	K=2 -	For some <b>additional explanation</b> that shows an understanding of the concept that is not applied to the context of question but show limited knowledge and understanding	Annotation	Description	Mark	<b>C + 0</b>	One cursory explanation for 1 question requirement	<b>4</b>	<b>K + K</b>	Knowledge and understanding of 2 question requirements	<b>4</b>	<b>K + K</b>	Knowledge and understanding of 1 question requirement and knowledge of the second requirement	<b>3</b>	<b>K + K</b>	Knowledge of 2 question requirements	<b>2</b>	<b>K + 0</b>	Knowledge and understanding of 1 question requirement	<b>2</b>	<b>K + 0</b>	Knowledge of one question requirement	<b>1</b>	<b>0</b>	Nothing of relevance in the answer	<b>0</b>	<b>0-4</b>
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(b) )	<p><b>Discuss the measures that the Indian government may adopt to stabilise the domestic price of rice in India.</b></p>	[15 ]
<p><u>Suggested answer:</u></p>		
<p><u>Question Analysis:</u>  Command word: Discuss – appropriateness of at least 2 measures that the Indian government may adopt to reduce price of rice  Content:  - demand/supply analysis / analysis on export ban / measures to stabilise supply to prevent prices from rising significantly  - <b>Stabilise prices</b> → ensure prices do not fluctuate or rise too significantly  - Measures to stabilise prices aims to prevent supply from falling too much or demand from rising too much or to increase the values of PED/PES  Context: rice market in India  Possible policies:  1. Export ban  2. Subsidies (on FOP) to increase production  3. Subsidies (on methods of production) to prevent supply fluctuations  4. Grant / subsidies for R&amp;D and innovation to ensure resilience in the rice crops to prevent supply fluctuations  5. Price Ceiling</p>		
<p>R1: Explain export ban + limitations (<i>for markers to note: to accept any policy</i>)</p>		
<p>R2: Explain any 1 alternative policies + limitations</p>		
<p>R1: Explain how export ban works to stabilise prices and its limitations</p> <ul style="list-style-type: none"> <li>- Export ban involves the government putting a ban on the export of rice, reducing global supply of rice → to increase domestic supply of rice in India</li> <li>- The increase in supply of domestic supply of rice will create a surplus at the original price level → resulting in a downward pressure on prices</li> <li>- Demand for rice in India is likely to be price inelastic as it is a staple food and essential input in the food and beverage industry → any change in price will lead a less than proportionate change in qty demanded → hence, prices of rice in India will fall significantly to clear the surplus → effective in preventing a significant rise in price of rice in India</li> <li>- Limitations: <ul style="list-style-type: none"> <li>o Export ban may result in a fall in revenue for rice producers due the price decrease <ul style="list-style-type: none"> <li>▪ decrease in price will lead to a less than proportionate increase in qty demand → reducing total revenue</li> </ul> </li> </ul> </li> </ul>		

- For firms that rely heavily on export market will also experience a greater fall in revenue due to the export ban
- Given the above, firms may find loopholes to continue selling rice illegally overseas, smuggling through illegal trade route → rendering this policy ineffective to raise domestic supply of rice.
- India may face a fall in export revenue → fall in (X-M) → causing a decrease in AD → fall in RNY / rise in cyclical unN. BOT also worsens.

- EV:

- Export ban **temporarily** increase domestic supply to stabilise prices but is not a long-term solution. An export ban addresses symptoms rather than underlying causes of price increases, such as poor infrastructure, inefficient supply chains, or climate-related production shortfalls. Without addressing these root causes, prices may remain volatile or rise again after the ban is lifted.
- Export ban may create more problems for India as it leads to global supply of rice to fall, raising global price of rice, which may lead to retaliation from trading partners → harming future export opportunities.
- Hence, though export ban to some degree is effective to stabilise prices, it is at best only a short-term measure.

R2: Explain how an alternative policy works to reduce prices and its limitations (investing in R&D and infrastructure)

- India can stabilise the price of rice by reducing the impact of climate change on the supply of rice
  - The government could invest in improving crop resilience through investing in agricultural technology and improving agricultural infrastructure.
  - i.e. Indian government could give grants for firms to innovate to create improved seed variety that are high-yielding, drought resistant, or even pest resistant.
  - i.e. Indian government could also invest in climate-resilient infrastructure such as flood control system, improved drainage system, better irrigation system and water management system to ensure reliable water supply for the crops.
  - This could ensure stable supply of rice despite changes to weather conditions → supply may not vary too significantly in times of adverse weather conditions → resulting in price stability
- Such precision farming as well as expanding storage facilities, improving capacity could also ensure that quantity supplied of rice is more responsive to a price increase → increasing the value of PES

(supply more price elastic) → this would prevent huge changes to prices when demand changes.

- Limitations:

- This policy could potentially drain the government's budget, worsening deficit and may result in rising debt for the government. The high cost could mean this policy may not be sustainable in the long run if the government may not have enough funds to support these efforts.
- In addition, R&D requires a long timeframe to develop results. The process of developing, testing, and commercialising new seed varieties or irrigation technologies can take several years, if not decades. This long timeline means that the benefits may not be realised in the short term, delaying the impact on rice production → unable to stabilise prices in the short run.
- Many farmers may be unaware of new technologies or resistant to adopting them due to a lack of understanding or mistrust in unproven methods. This can slow the spread of innovations, limiting their impact.
- Even when new seeds or irrigation systems are developed, they may be too expensive for small and marginal farmers to afford, leading to low adoption rates. The benefits of R&D might primarily reach larger, wealthier farms, exacerbating inequalities in the rice market.
- In many rural areas, the lack of proper infrastructure, such as roads and distribution networks, hampers the availability and accessibility of new seeds and irrigation technologies. This limits the reach of R&D innovations to remote and underdeveloped regions.
- Advanced irrigation infrastructure requires regular maintenance and skilled labor for operation. Without proper maintenance, these systems can quickly deteriorate, leading to inefficiencies and reduced effectiveness.

- EV:

- The above measures address critical issues in rice production and food security. However, its effectiveness depends on addressing the challenges associated with R&D, ensuring equitable access to new technologies, and providing the necessary support for widespread adoption. To enhance the policy's impact, it would be beneficial to include complementary measures such as **subsidies or financial support** for small and marginal farmers to access new technologies, **farmer education** to promote the adoption of innovations, **monitoring and evaluation mechanisms** to

track the effectiveness of implemented technologies and adjust as needed.

- By addressing these aspects, the policy can be more inclusive, effective, and sustainable, making it a strong component of India's agricultural strategy.

In conclusion, the Indian government can adopt a multifaceted approach to stabilise domestic rice prices, combining immediate interventions with long-term strategies. While short-term measures such as export ban can provide quick relief, structural improvements in agricultural practices and infrastructure are crucial for sustainable price stability. The success of these measures depends on effective implementation, coordination among stakeholders, and continuous monitoring of market conditions.

Markers' Comment:

- Question requirement:
  - Majority of answers understood the need to explain at least 2 policies with limitations.
  - Answers also understood the need to have an evaluative comment on the appropriateness of the policies.
  - All answers did not show understanding of what it meant to stabilise prices. I.e. students analysed how the policies will lead to a fall in prices instead of how prices will be stabilised. Fall in prices was accepted as an accurate analysis but students should be aware that stabilising of prices is different from reducing prices.
- Content:
  - Common policies mentioned: 1) Subsidies, 2) Price Ceiling, 3) Innovation to increase supply, 4) Export Ban
  - Though most answers were able to provide relevant policies, the depth of elaboration varies.
  - **Price Ceiling** was better explained, showing how government could set a price below the equilibrium price to stabilise prices. Diagrams were mostly accurately drawn as well. Limitations were also well explained. Common limitation included the emergence of black markets (due to the shortage created) where rice may be sold at an even higher price.
    - Only a few explained price floor instead of ceiling.
  - **Subsidies** was commonly brought up as a policy, explaining, how government may provide rice producers with subsidies to reduce COP to increase supply, to reduce the price of rice. However, it is not well-elaborated with relevant examples that are applicable to the context.

	<ul style="list-style-type: none"> <li>▪ Answers should provide an example of what can be subsidised, i.e. government could subsidise irrigation methods to reduce cost of adopting irrigation to ensure supply of rice is resilient to weather changes, preventing a fall in supply due to poor monsoon rainfall, stabilising prices or</li> <li>▪ subsidies on factor inputs such as seeds, fertilisers etc. can reduce COP, increasing supply.</li> <li>▪ Answers generally lack such examples, earning only a cursory grade.</li> </ul> <ul style="list-style-type: none"> <li>○ <b>Limitations of subsidies</b> were also very generic, explaining how subsidies may drain the government's budget, and incurring opportunity costs. Examples and elaboration were often lacking, i.e. what are the opportunity costs and what is the impact of a drain in budget.</li> <li>○ <b>Export Ban</b> was more uncommonly used. Some answers were able to explain how export ban will lead to an increase in supply of rice in India, while some inaccurately explained how export ban will lead to decrease in demand instead as external demand for rice has fallen. This led to inaccurate analysis of the policies. Limitations centred around how export revenue will fall for India and countries may retaliate, which are acceptable.</li> <li>○ Very few answers were able to provide a long-term solution such as <b>investing in R&amp;D</b> to develop weather resilient rice crops to prevent supply from fluctuating due to changes in weather conditions. Even if some did, they were not able to provide sound and well develop analysis and mostly descriptive. Limitations are also mostly generic, i.e. time-lag as well as drain on government's budget.</li> <li>○ Some irrelevant policies were brought up such as 1) taxes on rice, 2) subsidies on the consumption of rice, 3) public education on alternatives. These policies were not accepted. <ul style="list-style-type: none"> <li>▪ Taxes on rice will only further increase the price of rice instead of stabilising the prices</li> <li>▪ Subsidies on the consumption of rice will lead to increase demand, fuelling price increase</li> <li>▪ Public education / subsidies on alternatives to rice, though logical, may not be too feasible as rice is a staple in India. If explained logically, these answers may be awarded a "k".</li> </ul> </li> </ul> <p>- Evaluative comment:</p> <ul style="list-style-type: none"> <li>○ Most answers scored around 1-2 marks for evaluations. Evaluation lack elaboration to justify their conclusion</li> </ul>
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- i.e. answers may state that both policies should be implemented as they complement each other, without elaborating or justifying).
- i.e. answers are descriptive in justifying why one policy is better than the other by just merely stating that one policy is only effective in the long run etc.

### Knowledge, Understanding, Application, Analysis

<b>L3</b>	<p><b>Analysis &amp; Application</b> For an <b>analytical</b> answer that addresses the question thoroughly with clear explanation well supported by <b>tools of analysis</b>, such as demand and supply analysis and diagram.</p> <p>There is good ability to <b>organise</b> ideas or discriminate between <b>relevant</b> and irrelevant factors. Answer is <b>well-focused on question</b> with the good use of relevant economic concepts, theories or principles.</p> <p>Good application to the <b>context</b> of the question.</p> <p><b>Knowledge &amp; Understanding</b> For an answer that demonstrates an <b>accurate knowledge and understanding</b> of economic concepts, theories related to question.</p> <p><b>Marks within L3:</b></p> <table border="1"> <thead> <tr> <th>Annotation</th> <th>Description</th> <th>Mark</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><b>A + A</b></td> <td>Analytical explanations for 2 question requirements</td> <td style="text-align: center;"><b>10</b></td> </tr> <tr> <td style="text-align: center;"><b>A + C + K</b></td> <td>1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant</td> <td style="text-align: center;"><b>9</b></td> </tr> <tr> <td style="text-align: center;"><b>A + C</b></td> <td>1 analytical and 1 cursory explanation for 2 question requirements</td> <td style="text-align: center;"><b>8</b></td> </tr> </tbody> </table>	Annotation	Description	Mark	<b>A + A</b>	Analytical explanations for 2 question requirements	<b>10</b>	<b>A + C + K</b>	1 analytical and 1 cursory explanation for 2 question requirements and an explanation of additional factor that is relevant	<b>9</b>	<b>A + C</b>	1 analytical and 1 cursory explanation for 2 question requirements	<b>8</b>	<b>8-10</b>
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<b>L2</b>	<p><b>Analysis &amp; Application</b> For an <b>under-developed</b> answer that attempts to address the question and explain the potential strategies Indian government could adopt. Answers may be <b>descriptive</b>, <b>lack an analytical approach</b> (e.g. not supported with tools of analysis, incomplete use of graph) or is <b>incompletely explained</b> with gaps in analysis, e.g. missing links in the impact of the strategies on price stability.</p> <p>Or For a <b>one-sided analytical answer</b> that addresses only 1 measure.</p> <p>For an answer that is <b>supported with some application to the context of the question</b>. There is limited ability to organise ideas or discriminate between relevant and irrelevant materials. Answer has</p>	<b>5-7</b>												

some relevance to the question context but is generic (e.g. pre-learnt answer that is not focused on addressing the question specifically) or addresses only selected parts of the question (e.g. limited reference to the impact on prices).

### Knowledge & Understanding

For an answer that demonstrates **largely accurate knowledge and understanding** of economic concepts, theories related to question, e.g. revenue and cost analysis and diagram (i.e. no major conceptual errors)

Annotation	Description	Mark
A + K	1 analytical explanation for 1 question requirement and an explanation of additional factor that is relevant	7
C + C + K	Cursory explanations for 2 question requirements and an explanation of additional factor that is relevant	7
C + C	Cursory explanations for 2 question requirements	6
A + 0	1 analytical explanation for 1 question requirement	6
K + C + K	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements and an explanation of additional factor that is relevant	6
K + C	1 cursory explanation and 1 basic, unexplained statement or definition for 2 question requirements	5

#### Marks within L2:

<b>L1</b>	<p><b>Knowledge &amp; Understanding</b></p> <p>For an answer that shows <b>limited knowledge and understanding</b> of relevant economic concepts and theories (e.g. basic description or definitions). Few valid points made which are scant and inadequately explained. Answers are <b>mostly irrelevant and inaccurate</b>. Answer demonstrates that the meaning of question is not properly grasped or may contain basic errors of theory.</p>	<b>0-4</b>
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#### Marks within L1:

Annotation	Description	Mark
<b>C + 0</b>	One cursory explanation for 1 question requirement	<b>4</b>
<b>K + K</b>	Knowledge and understanding of 2 question requirements	<b>4</b>
<b>K + K</b>	Knowledge and understanding of 1 question requirement and knowledge of the second requirement	<b>3</b>
<b>K + K</b>	Knowledge of 2 question requirements	<b>2</b>
<b>K + 0</b>	Knowledge and understanding of 1 question requirement	<b>2</b>
<b>K + 0</b>	Knowledge of one question requirement	<b>1</b>
<b>0</b>	Nothing of relevance in the answer	<b>0</b>

#### Evaluation detailed marking guide

Note:

A **well-explained evaluative judgement** should be supported by arguments presented in the answer and is linked to the context of the question.

An **evaluative statement** is a judgement that is not supported by arguments presented in the answer or not linked to the context of the question, e.g. pre-learnt evaluative statement.

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