

ST. ANDREW'S JUNIOR COLLEGE
PRELIMINARY EXAMINATIONS – 2018 (JC2)
General Certificate of Education Advanced Level
Higher 1

ECONOMICS

8823/01

Paper 1

11 September 2018

3 hours

Additional Materials: Answer Paper

READ THESE INSTRUCTIONS FIRST

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

Answer **all** questions.

Start Question 1 and 2 on a fresh sheet of paper.
At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.



This document consists of **9** printed pages and **1** blank page.

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[Turn Over]

Answer **all** questions.

Question 1: Water and Plastics

Extract 1: Water is at the core of sustainable development

From food and energy security to human and environmental health, water contributes to improvements in social well-being and inclusive growth, affecting the livelihoods of billions.

Global water demand is largely influenced by population growth, urbanization, food and energy security policies, and macro-economic processes such as trade globalization, changing diets and increasing consumption. By 2050, global water demand is projected to increase by 55%, mainly due to growing demands from manufacturing, thermal electricity generation and domestic use.

Competing demands impose difficulties in the allocation of water resources and limit the expansion of sectors critical to sustainable development, in particular food production and energy. The competition for water also increases the risk of localized conflicts and continued inequities in access to it, with significant impacts on local economies and human well-being.

Economic growth itself is not a guarantee for wider social progress. In most countries, there is a wide – and often widening – gap between rich and poor, and between those who can and cannot exploit new opportunities. Access to safe drinking water and sanitation is a human right, yet its limited realization throughout the world often has disproportionate impacts on the poor and on women and children in particular.

Source: Adapted from *Water for a Sustainable World*, United Nations UNwater Report, 2015

Table 1: Price Elasticity of Demand for Selected Drinks in Indonesia

Type of drink	Coefficient of Price Elasticity of Demand
Water packaged in bottle	-0.716
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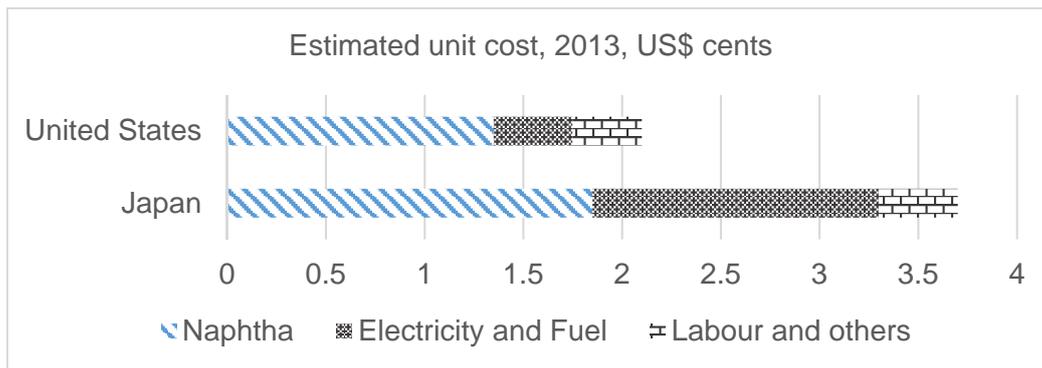
Source: *Economics and Finance in Indonesia*, Vol. 63 No 1, June 2017

Extract 2: Cost of plastic bottles

Plastic bottles are ubiquitous but the cost of producing them varies dramatically around the world. The main type of plastic used, polyethylene terephthalate (PET), is made from naphtha, an oil derivative, which can be partly substituted with ethane, a natural-gas derivative. Very little ethane is traded internationally, so only places such as America and the Middle East where natural gas is cheap and abundant, use it to make PET.

Source: Adapted from *The Economist*, Nov 2014

Figure 1: Cost of Making a Plastic Bottle



Source: Adapted from *The Economist*, 2014

Extract 3: The price of polyethylene terephthalate (PET)

A near 50 per cent fall in the cost of its major input would be a spectacular windfall for any industry. This is what has happened to European petrochemical companies over the past year, as the price of crude oil plunged. However, what was initially a windfall from lower oil prices, actually has turned into a moment of intense supply constraint.

The price of PET made by petrochemical companies, fell to a low of €1,085 per tonne in early February 2015, but it has subsequently jumped to about €1,635 in July 2015 — past its previous high of €1,452 in July 2014.

This is because years of chronic underinvestment has left petrochemical companies' plants facing a flurry of unscheduled shutdowns — leading to a shortage of plastic that has pushed up prices to new highs despite it costing less to make. Several of the big petrochemical companies have been hit by stoppages this year, including Shell, BP and Ineos.

Paul Hodges of International eChem, a chemicals and commodities consultancy, says the current situation is not simply an issue on the production side. He notes that the second quarter of the year is typically the strongest time for demand and that the limited rally in the value of oil at the beginning of 2015 caused buyers to rush to build plastics inventory in advance of expected price increases.

Source: Adapted from *The Financial Times*, July 2015

Extract 4: Addressing East Asia's growing environmental crisis

Eight million tons of plastics are dumped in the ocean each year – that is about one truck of garbage per minute. The same research lists China, Indonesia, Philippines and Vietnam – all in East Asia – as countries dumping the most plastic waste. Indeed, East Asia is producing waste faster than any other region in the world.

The financial toll is huge. Marine ecosystems globally suffer an estimated US\$13 billion a year in damages caused by plastic waste. APEC estimates the costs to tourism, fishing, and shipping industries to be US\$1.3 billion for the region. The adverse impacts on health, food chains and jobs are under study.

Countries in the region are responding to the growing problem. Indonesia launched a National Marine Debris Action Plan which targets a 70 percent reduction in marine plastic waste by the year 2025 included strategies such as giving incentives for its industries to use more recycled plastics. Others resort to fiscal instruments which can help to change producer

and consumer behaviour. These mechanisms can include taxes on single-use plastics that help correct market inefficiencies.

New technologies and innovation supported by the government, including upstream product redesign and reduced packaging, will be critical to beat plastic pollution – and this space for research and solutions is growing. The potential ‘greening’ of ports and logistics chains are opportunities for capturing waste. Cambodia’s entrepreneurs are offering consumers plastic bags made from cassava, a root vegetable widely consumed in developing countries.

Source: Adapted from *Planet over Plastic*, The World Bank, 8 June, 2018

Extract 5: Factors that make recycling plastic fall apart

As oil prices plummet, the market for recycled plastic is taking a huge hit surprisingly. Plastics, after all, are made from petroleum — so as the price of oil drops, so does the cost of making new plastic. In fact, making new plastic has become less expensive than the recycling process, since cleaning and preparing used plastics takes a lot of water, energy, and effort. The New York Times also reports that Waste Management — United States’ largest waste hauler¹ — even shut down 20 facilities in 2014 and 2015, due in part to decreased demand and shrinking profit margins.

There are other factors that contributed to the decreasing value of recycling. Early recycling programs had smaller bins, for example, and required consumers to sort their waste according to type. Now that single-stream recycling — that is, the big blue bin where you toss all your recyclables — is widespread in the United States, tons of stuff that can’t be recycled gets tossed in with the things that should be by well-meaning recyclers. This makes the sorting and cleaning process even more labour-intensive and costly. New plastics are more appealing to manufacturers than recycled plastics because the chemical composition is easier to nail down — recycled plastics can have issues, like rapid degradation or more limited uses.

Source: Adapted from Businessinsider.com, 5 April, 2016

Extract 6: \$180bn investment in plastic factories feeds global packaging binge

Despite the rising tide of concern, powerful corporations are pressing ahead with a new generation of plastic production facilities that will swamp United States’ efforts to move the economy away from single use plastic products. The new facilities being built by corporations like Shell Chemical will help fuel a 40% rise in plastic production in the next decade, exacerbating the plastic pollution crisis.

But the American Chemistry Council said the plastics boom had brought huge economic benefits to the US creating hundreds of thousands of jobs and allowing the manufacture of a wide range of important products from medical supplies to auto parts, piping to technology.

Steve Russell, vice president of the American Chemistry Council cited a study from 2016 that found using advanced plastics reduces environmental damage. “Advanced plastics enable us to do more with less in almost every facet of life and commerce. From reducing packaging, to driving lighter cars, to living in more fuel-efficient homes, advanced plastics help us reduce energy use, carbon emissions and waste.” Matthew Thaelke, an expert in the global chemical industry, said the expansion in the US will help meet growing demand for plastic in the existing big markets of the US, Europe and China.

Source: Adapted from *The Guardian*, 26 June, 2017

¹ A company that transports solid and residual waste to the treatment or recycling plants

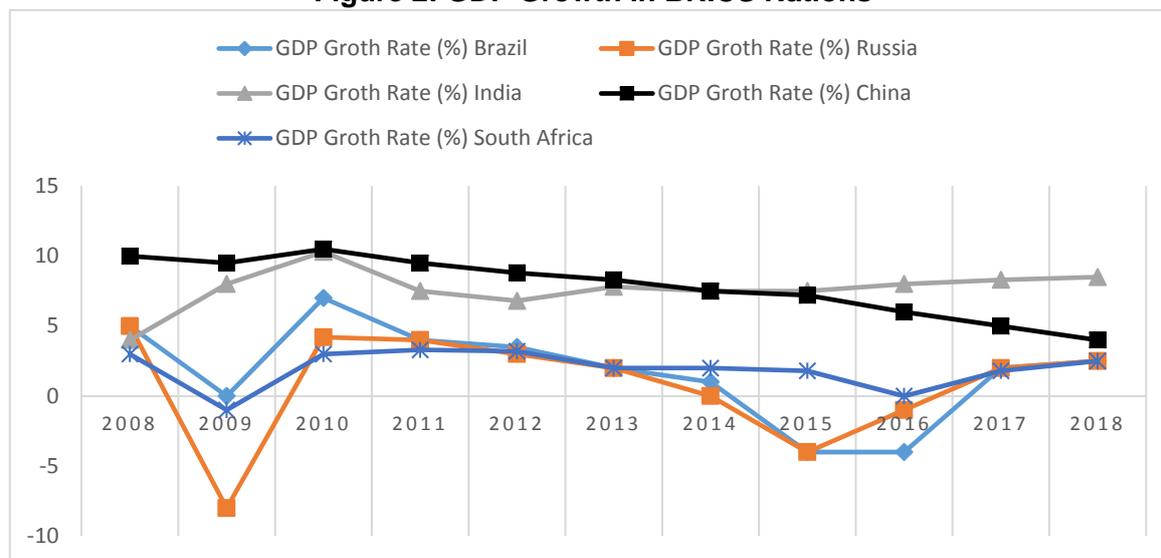
Questions

- (a)** “By 2050, global water demand is projected to increase by 55%, mainly due to growing demands from manufacturing, thermal electricity generation and domestic use.” (Extract 1) [2]
Is this an example of a normative economic statement? Explain your answer.
- (b) (i)** With reference to Extract 1, and using a diagram, explain the opportunity cost involved in the allocation of limited water resources. [4]
- (ii)** With reference to Extract 1, explain why the free market fails to achieve an equitable distribution of water resources. [4]
- (c) (i)** Using Figure 1, explain ONE reason why the cost of producing a plastic bottle is different between Japan and the United States. [2]
- (ii)** With reference to Extract 3, account for the sharp changes in the price of polyethylene in Europe from July 2014 to July 2015 and comment on whether the future price of polyethylene is likely to rise or fall. [8]
- (d) (i)** Explain how the consumption of plastic-bottled beverages could result in a case of market failure. [6]
- (ii)** Assess to what extent Table 1 is able to explain the relative effectiveness of imposing a tax to reduce the consumption of plastic-bottled water and plastic-bottled soft drinks. [7]
- (e)** With reference to the data, discuss whether the United States should adopt similar policies as those implemented in East Asia in the market for plastics. [12]

[Total: 45]

Question 2: Inclusive Growth in BRICS and Singapore

Figure 2: GDP Growth in BRICS Nations



Source: International Monetary Fund

Extract 7: Growth issues in BRICS

BRICS - Brazil, Russia, India, China and South Africa - registered solid rates of economic growth before the global financial crisis in 2009. While they were resilient in the first few years after the financial crisis, their growth pace has been slowing in recent years. BRICS are the largest emerging markets, accounting for about two-thirds of emerging market GDP.

An unfavourable external environment appears to have been the main source of the slowdown between 2010 and 2014. Among the most important external factors are weak global trade, a steady decline in commodity prices, and tightening global financial conditions. The steady decline in commodity prices has set back growth in commodity-exporting BRICS such as Russia, Brazil, and South Africa. Meanwhile, investment growth in BRICS has also slowed.

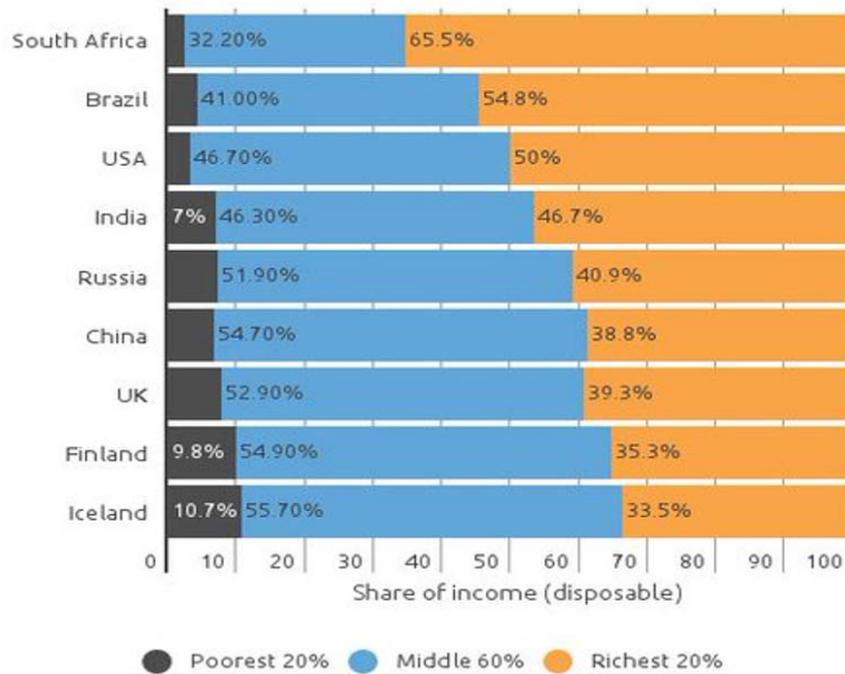
Since early 2014, domestic factors have become the predominant forces behind slowing growth in BRICS. These factors include a sustained decline in productivity and bouts of policy uncertainty. Also, the fiscal positions of BRICS have generally deteriorated.

Source: www.worldbank.org 1 Nov 2016

Table 2: Various Economic indicators of BRICS in 2017

Country	Brazil	Russia	India	China	South Africa
GDP per capita (in USD)	\$10 220	\$11 950	\$2 130	\$10 090	\$6 460
GDP per capita PPP (in USD)	\$16 200	\$28 960	\$7 780	\$18 070	\$13 840
Real GDP growth	2.3%	1.7%	7.4%	6.6%	1.5%
Population	209.2 million	156.9 million	1.33 billion	1.39 billion	57.7 million
Unemployment rate	11.8%	4.7%	3.4%	3.9%	26.7%
Life expectancy	75 years	70.5 years	68.3 years	76.1 years	62.9 years

Figure 3: Income Distribution of BRICS in 2017



Source: Unu-wider Data

Extract 8: The mixed fortunes of the BRICS countries

BRICS countries — Brazil, Russia, India, China and South Africa (South Africa joined in 2010) — were arguably the emerging superstars most likely to dominate the 21st century globalized economy. These five countries cover 40 percent of the world’s population and more than 25 percent of the world’s land.

China is now the second-largest economy in the world by GDP and poised to overtake the US over the next few years. In 1990, China produced less than 3 percent of the world’s manufacturing output when measured by value; by 2015, it produced roughly 25 percent. India is a similar story, but instead of focusing on manufacturing, it went the services route instead.

It would be easy to label India and China as the clear winners among the BRICS, but it’s not that simple. India and China have the fastest growth rates of any major economies in the world. But nearly 50 percent of Indians remain vulnerable to poverty, and China’s economy has slowed as higher wages make manufacturing more expensive. Both countries are especially vulnerable to technological changes that bring automation into the workplace on a larger scale. The World Bank estimates that 68 percent of all existing jobs in India are “at risk” from automation. In China, the figure is 77 percent. Leaders of both nations recognise that inflationary pressure might be a concern, but both are also confident that it will ease over time.

Source: Time.com, accessed on 06.07.2018

Extract 9: The Brazilian Competitiveness Cliff

Under OECD’s Brazil 2018 Economic Survey, figures showed that its economy grew 1 per cent last year, its first year of positive growth since 2014. Prior to the recovery from recession, disappointing export performance is the centre of an economic policy debate raging in Brazil. It was sparked by the sharp decline of GDP rate of expansion from 2010 to 2017.

Brazil has been facing considerable competitiveness challenges. A recent slowdown in industrial exports seemed to be related to supply-side difficulties stemming from a wide range of inefficiencies and rising costs, rather than insufficient demand. This diagnostic reinforces the urgency of the measures of increasing the investment-to-gross domestic product (GDP) ratio, and advancing toward better-skilled human capital.

Source: Worldbank.org, Feb 2013, accessed on 06.07.2018

Extract 10: China Pledges policy reforms in 2016 amidst slowing growth

China will make its monetary policy more flexible and expand its budget deficit in 2016 to support a slowing economy, state media said, citing top leaders who wrapped up an important meeting and vowed to push forward “supply-side reform”. The meeting called for tax cuts to reduce burden on companies and a gradual expansion of China’s fiscal deficit ratio. The government will take steps to expand aggregate demand while pushing supply-side reforms.

The People’s Bank of China (PBOC) has maintained a prudent monetary policy since 2011, raising or cutting interest rates in line with shifts in the economy. The PBOC has cut interest rates six times since November last year. The government has also stepped up spending on infrastructure projects and eased restrictions on home buying to boost the sluggish property market. Top leaders also pledged to push forward “supply-side reform” to help generate new growth engines, while tackling factory overcapacity and property inventories. Supply-side reform means to increase the efficiency of major sectors, or to improve allocation of resources like labour and capital, it may not be effective to boost economic growth in the short term.

Source: Reuters.com, 21.12.2015, accessed on 06.07.2018

Extract 11: Infrastructure, investment, inclusive growth – key BRICS goals

Inaugurating the BRICS Business Forum in New Delhi, Indian Vice-President Hamid Ansari said the first priority was “to create a business-friendly environment for investors and entrepreneurs in all member countries, to promote mutual trade and investment; and facilitate market inter-linkages and enhance market access opportunities.” Also, there is a need to build resilience to external economic shocks and strengthen policy coordination by promoting information exchange through agreed platforms and by deepening our interaction and cooperation with non-BRICS countries, international organizations and forums.” The basic principles for enhancing the trade and investment relations is to build responsive, inclusive and collective solutions in BRICS. Innovation and start-ups form a very significant component in the first BRICS exhibition/trade fair.

Likhachev, First Deputy Minister of Economic Development of Russia, expressed his hope for the initiative to become a tradition and an incentive in furthering BRICS development work. He said that BRICS should focus on industries. The Russian delegation will visit the Indian state of Maharashtra and would focus on the shipbuilding and oil and gas industry sectors.

Source: Russian Beyond Publications, Oct 2016

Extract 12: Singapore’s effort in ensuring more inclusive growth

Some changes may be made to social policies in the coming years to ensure a more inclusive society. One example is the \$8 billion Pioneer Generation Package. It helps citizens aged 65

and above in 2014 meet their healthcare costs for life, with further subsidies on services and medicine at polyclinics and outpatient clinics, among others.

Workfare, made permanent in 2007 and enhanced since, is a key pillar of social security, and has boosted the wages of low-income Singaporean workers. The Progressive Wage Model in 2012 has lifted wages of those in the security, cleaning and landscape sectors. The adequacy of government spending on social protection and social security, especially for the poor and underprivileged is as important as how progressive it is for the middle-class. Government has placed emphasis on ensuring social mobility, equal opportunities and an inclusive society.

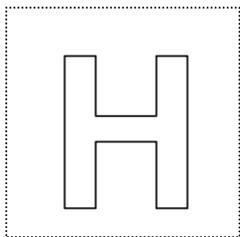
Source: The Straits Times, Sept 2015

Questions

- (a) (i) Using Figure 2, describe the trend in BRICS nations' GDP growth from 2010 to 2018. [2]
- (ii) With reference to Extract 7, explain **one** possible reason for the trend in GDP growth for BRICS nations. [2]
- (b) (i) From Table 2, identify the country that experienced the least improvement in material standard of living in 2017 and explain the reasons for your choice. [3]
- (ii) Using Figure 3, compare the income distribution between South Africa and India. [2]
- (iii) Comment on whether the data supports the view that South Africa experienced a lower standard of living compared to India in 2017. [5]
- (c) (i) Explain what it means by a fall in export competitiveness. [1]
- (ii) Extract 9 states that there was an "urgency of the measures of increasing the investment-to-gross domestic product (GDP) ratio, and advancing toward better-skilled human capital". [3]
- Explain how one of these measures stated in Extract 9 could improve Brazil's export competitiveness.
- (d) Using Extract 8, explain why the "winners" of BRICS may continue to face economic challenges. [7]
- (e) Discuss how China's policy reforms in Extract 10 will impact the Chinese economy. [8]
- (f) In the light of the information provided in Extracts 11 and 12, discuss the relative appropriateness of the approaches undertaken by the Singapore government and BRICS nations in attaining inclusive growth. [12]

[45 marks]

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Question 1: Water and Plastics

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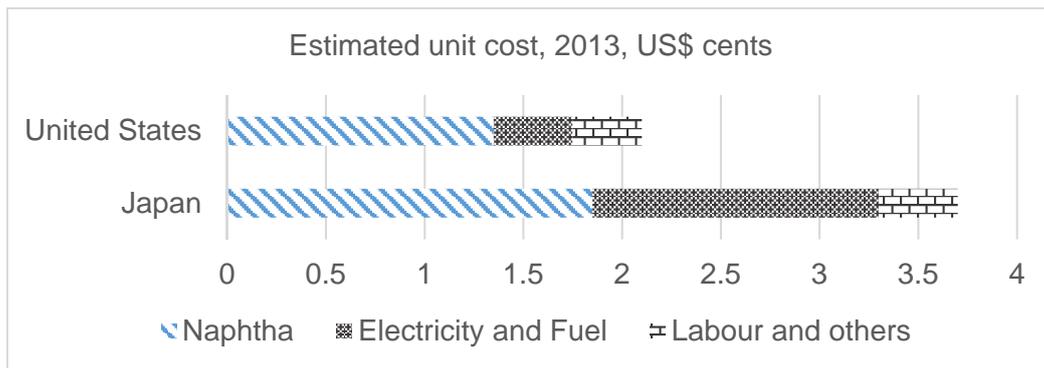
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Extract 2: Cost of plastic bottles

Plastic bottles are ubiquitous but the cost of producing them varies dramatically around the world. The main type of plastic used, polyethylene terephthalate (PET), is made from naphtha, an oil derivative, which can be partly substituted with ethane, a natural-gas derivative. Very little ethane is traded internationally, so only places such as America and the Middle East where natural gas is cheap and abundant, use it to make PET.

Source: Adapted from *The Economist*, Nov 2014

Figure 1: Cost of Making a Plastic Bottle



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A near 50 per cent fall in the cost of its major input would be a spectacular windfall for any industry. This is what has happened to European petrochemical companies over the past year, as the price of crude oil plunged. However, what was initially a windfall from lower oil prices, actually has turned into a moment of intense supply constraint.

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Source: Adapted from Businessinside.com, 5 April, 2016

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But the American Chemistry Council said the plastics boom had brought huge economic benefits to the US creating hundreds of thousands of jobs and allowing the manufacture of a wide range of important products from medical supplies to auto parts, piping to technology.

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Questions

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[Total: 45]

(a)		<p>“By 2050, global water demand is projected to increase by 55%, mainly due to growing demands from manufacturing, thermal electricity generation and domestic use.” (Extract 1) Is this an example of a normative economic statement? Explain your answer.</p>	[2]
		<p>This is not a normative statement as it is not an opinion/ value judgment. [1].</p> <p>This is a factual statement/projection that is based on facts (i.e. growing demands from manufacturing....). It can be tested/proven true or false. [1]</p>	
(b)	(i)	<p>With reference to Extract 1, and using a diagram, explain the opportunity cost involved in the allocation of limited water resources.</p>	[4]
		<p>Water is limited/scarce as there are many uses for water. Examples include the use of water for producing food or for producing energy. [1]</p> <p>Competing demands for water implies that there will be a trade-off involved when deciding whether to produce food or energy. When more water is used for producing food, there will be less amount of water available to produce energy (i.e. moving from Point A to Point B).[1]</p> <p>There will be opportunity cost since the net benefit derived from the next best alternative (i.e. energy) will be foregone. OR, there will be opportunity cost in terms of units of energy foregone. [1]</p> <p>Using a PPC diagram [1], illustrate the trade-off/opportunity cost [1]</p> <div data-bbox="395 1442 1235 1720" style="text-align: center;"> </div>	
	(ii)	<p>With reference to Extract 1, explain why the free market fails to achieve an equitable distribution of water resources.</p>	[4]
		<p>The free market determines the market <u>price</u> and <u>quantity</u> of water through the interaction of demand and supply.[1]</p>	

		<p>People with higher income will be more willing and able to buy water than those with lower income, [1]</p> <p>The free market could result in excessively high equilibrium price of water. And as such this market price will be out of their reach for the poor, despite the fact that water is a basic necessity of life and should be accessible fairly regardless of income level. [1]</p> <p>Hence, more quantity of water will be enjoyed by the rich than the poor. OR Hence, more quantity of water resources will be used to produce goods desired by the rich at the expense of the poor (Extract 1). [1]</p> <p>Therefore the distribution of water resources is inequitable between the rich and the poor.</p>	
c)	(i)	Using Figure 1, explain ONE reason why the cost of producing a plastic bottle is different between Japan and the United States.	[2]
		<p>From Figure 1, one possible reason is the difference in raw-material costs and/or energy prices.[1]</p> <p>Any of the following points to explain the reason [1]:</p> <p>The cost of naphtha, electricity and fuel used to make a plastic bottle in Japan is higher than in the US possibly due to Japan using more of these factors of production. They could be using more due to lower productivity or lower levels of technology compared to the US. OR The unit costs of these factors of production could be lower in US due to their greater abundance of resources. For example, they have an abundance of natural gas which might result in lower prices of fuel/electricity. OR US has a greater abundance of natural gas which allows them to have cheaper ethane which can be used to substitute naphtha, in the production of plastic bottles. This would result in them using less naphtha than Japan.</p>	
	(ii)	With reference to Extract 3, account for the sharp changes in the price of polyethylene in Europe from July 2014 to July 2015 and comment on whether the future price of polyethylene is likely to rise or fall.	[8]
		<p>Price of polyethylene fell from €1,452 in July 2014 to €1,085 in Feb 2015 then rose sharply to €1,635 in July 2015.</p> <p>From July 2014 to Feb 2015,</p>	

	<p>Oil is a factor of production for making polyethylene (PET). Price of oil fell during this period. Hence cost of production fell and supply of PET increased.</p> <p>The increase in PET supply led to surplus and a downward pressure on the price of PET at the old equilibrium price. Assuming that demand for PET is price inelastic (due to high degree of necessity of plastics in daily use or an essential raw material for producing plastic packaging etc), any fall in price would only result in a less than proportionate increase in quantity demanded.</p> <p>In order for the market to reach the new equilibrium, price would have to be much lower. Hence the sharp fall in price during this period.</p> <p><u>From Feb 2015 to Jul 2015.</u> Both supply and demand factors accounted for the rise in price this period.</p> <p><u>Supply factor:</u> Supply fell due to shutdowns of petrochemical plants. Given severe lack of investments past decades, the capacity to produce PET fell and output of PET fell.</p> <p><u>Demand factor:</u> Furthermore, expectation of future price increases lead to buyers bringing forward their demand and seasonal high demand. Hence DD increased.</p> <p>Fall in supply and increase in DD led to an increase in the price of polyethylene.</p> <p>PES was likely to be <1 given the supply constraints from the remaining plants. Hence firms were not able to increase quantity supplied in response to price changes readily</p> <p>The increase in demand and fall in supply would result in a shortage as well as an upward pressure on price at the old equilibrium price. Since any rise in price would only lead to a less than proportionate increase in quantity supplied, the new price would need to be much higher in order for the market to reach the new equilibrium. Hence price rose sharply during this period.</p> <p>Comment: Whether the price would rise or fall in the future would depend on whether the rise in the strong demand is larger than the rise in the supply as plastic inventories are built. If the plastic inventories are built quickly in response to expectations of price increases, prices might not rise as quickly as the increase in supply could match the increase in demand. On the other hand, if the demand rises significantly and outstrips any increase in supply, prices would rise.</p> <p><u>Mark Scheme</u></p> <p>Up to 4 marks for DD/SS analysis on the fall in price of polyethylene. Up to 2 of these marks should be explanation of one correct factor leading</p>	
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		<p>a price fall and up to another 2 marks for explanation of one correct factor affecting a price rise.</p> <p>Up to a further 2 marks for the use of at least one elasticity concept to explain the sharp fall or sharp increase in the price of polyethylene.</p> <p>Up to a further 2 marks for valid and relevant comment on whether the price would rise or fall in the future.</p>	
d)	(i)	Explain how the consumption of plastic-bottled beverages could result in a case of market failure.	[6]
		<p>From Extract 4, there is presence of negative externalities in the consumption of plastic bottles. [1]</p> <p>Used plastic bottles that are inappropriately disposed into the river may become plastic waste that pollutes river. This result in external costs in the form of threatened marine life, lower tourism revenues and losses on fishing revenue on third parties such as the fishermen and related industries. External costs are not taken into account by the consumers as it does not fall on them.[1]</p> <p>With reference to the diagram, there is</p> <ul style="list-style-type: none"> - Divergence between MSC and MPC due to presence of external cost. [1] - Consumers will consider their self-interest, and maximise utility at $MPB=MPC$ at output Q_p. whereas the society will maximise welfare at $MSB=MSC$ at social optimal output Q_s. [1] - As $Q_p > Q_s$, there is overconsumption of plastic bottles. [1] - Market fails and there is deadweight loss as additional cost incurred is higher than the additional benefit enjoyed for the amount overconsumed. [1] - 	
	(ii)	Assess to what extent Table 1 is able to explain the relative effectiveness of imposing a tax to reduce the consumption of plastic-bottled water and plastic-bottled soft drinks.	[7]
		<p>Analyse the effects of a tax</p> <p>A tax will have the effect of increasing cost of production (COP) for producers. This leads to a fall in supply of plastic-bottled soft drinks /bottled water. As such equilibrium price paid by the consumers will rise and equilibrium quantity will fall [1]</p> <p>Thesis: Table 1 is able to explain that a tax might be more effective in reducing the consumption of plastic bottled soft drinks since PED of soft drinks is >1</p> <p>According to Table 1, value of PED for bottled water is <1 while value of PED for soft drinks is >1 [1]</p>	

Due to the elasticity values, **quantity consumed (or equilibrium quantity) for bottled waters will fall less than proportionately** to the increase in price of the plastic bottled waters whereas quantity consumed (or equilibrium quantity) for **soft drinks will fall more than proportionately** to the increase in price of the soft drinks. [1]

Therefore the tax will be more effective in reducing the consumption of plastic bottled soft drinks.[1]

Anti-thesis: Table 1 may not be sufficient as other information is needed such (e.g the ceteris paribus condition might not hold).

Table 1 may not be sufficient in explaining the effectiveness as there could be changes in demand and supply that will affect the quantity consumed of both beverages. For example:

- The rise in world population is increasing the demand for plastic bottled beverages hence overall consumption may still increase after the tax (Extract 1).
- Increased urbanisation may lead to increasing demand for more uses of water after the tax (Extract 1).
- The fall in oil prices could lead to changes to supply such as a fall in the cost of production of bottled beverages which increases supply and negate the effect of the tax (Extract 3).

NB: Give at least one evidence of a change in demand or supply

Overall consumption may not fall by the extent discussed above in the two markets.

Other possible answers that Table 1 is not able to explain the effectiveness of the tax include the reliability of the PED estimates as it changes over time.

For example, discovery of new substitutes to replace bottled water/soft drinks such as Ooho boffins (edible pouches of water/soft drinks) which may increase the PED value. This will made the tax be more effective in reducing consumption over time.

Mark scheme

Up to 2m for analysing the effect of tax on P and Q in the market for plastic bottled markets.

Up to 3 further marks for explanation on how Table 1 explains the relative effectiveness of the imposition of a tax on the two different markets.

Up to 2 further marks for explaining why Table 1 may not be sufficient with the use of at least 1 appropriate example.

Alternatively, we can have

Up to 4m for analysing the effect of tax on P and Q in the market for plastic bottled markets and for explanation on how Table 1 explains the

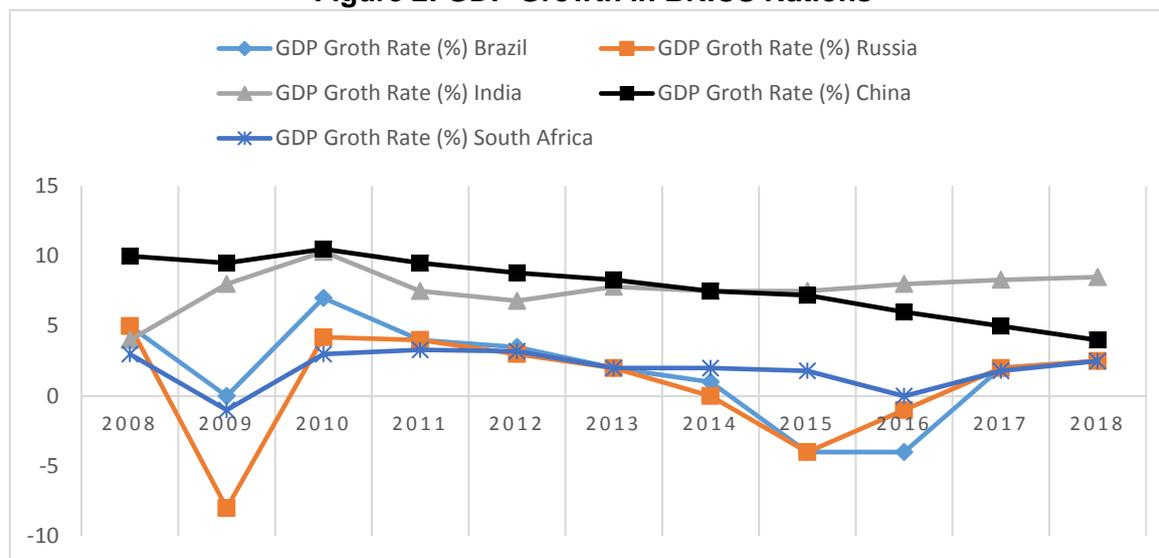
	<p>relative effectiveness of the imposition of a tax on the two different markets.</p> <p>Up to 3 further marks for explaining why Table 1 may be insufficient with the use of appropriate evidence from the extracts. One valid point, well-explained and supported with an appropriate evidence, can be awarded the full 3 marks.</p>	
(e)	<p>With reference to data, discuss whether United States should adopt similar policies as those implemented in East Asia in the market for plastics.</p>	[12]
	<p>With reference to Extract 4, the three main types of policies practiced in East Asia (including SE Asia) are:</p> <ol style="list-style-type: none"> 1. Incentives for its industries to use more recycled plastics. (Indonesia) 2. Fiscal instrument (taxes on single-use plastic) 3. New technologies on product redesign and reduce packaging/ greening of ports and logistics chain (A regional effort) <p>Thesis: The objective of the United States government is assumed to reduce the consumption of plastics or reduce the external cost generated i.e. reduce the plastic waste. Hence, similar policies by East Asia should be used</p> <p>These policies can work to correct the market failure in United States.</p> <p><u>Policy 1:</u> Increase incentives will increase the benefits of using recycled plastics (in the plastic bottled beverage market), this will lead to producers switching to use more recycled plastics. This will help increase the consumption of recycled plastics. This in turn make firms use less virgin plastics.</p> <p>Alternatively students may explain when more recycled plastics are used in the production of plastic bottled beverage market, plastic waste is reduced hence leading to lower external cost on the environment incurred in the consumption of the plastic bottled beverages.</p> <p><u>Policy 2:</u> Explain how taxes on single-use plastics or plastic bottled beverages can reduce consumption of plastic bottled beverages. Explain with the implementation of the tax, it leads to an increase in MPC, leading to consumption to fall to be nearer social optimal output.</p> <p><u>Policy 3:</u> Innovation such as use of cassava-based plastics or greener technology/logistics such as the use of biodegradable plastics will provide producers with better alternatives to plastic packaging.</p> <p>Anti-thesis: US may have other objectives besides to address market failure in the market for plastics. Despite the environmental concerns, US has allowed \$180bn investment by plastic corporation to build plastic factories to feed global packaging binge based on Extract 6.</p>	

	<p>The key reason for this investment is to increase In production of plastic plants that will lead to creation of more jobs and lower unemployment to the US economy via the multiplier effect. Some experts in US feel that innovation on advanced plastics will improve the environment via reducing energy use (Extract 6).</p> <p>Technology advancement in advanced plastics may also benefit other sectors and consumers in terms of the production methods and types of consumer products produced. As mentioned, plastics can reduce packaging, lead to production lighter cars, live in more fuel-efficient homes. Plastics may help to reduce energy use, carbon emissions and waste.</p> <p>Hence, East Asia's policies that reduce the consumption and production of plastic may run against US's objective to achieve economic growth.</p> <p>In addition, these policies by the East Asia countries have its limitations in the context of United States.</p> <p><u>Policy 1:</u> According to Extract 5, there are difficulties in persuading firms to use more recycled plastic. Firstly, making new plastics has become less expensive than the recycling process due to fall in oil prices. Secondly, it is getting more expensive in the US to recycle after they adopt single-stream recycling. Thirdly, freshly produced plastics are more versatile as it can be food grade, producers using freshly produced plastics struggle less with chemical composition/ rapid degradation issues.</p> <p>Whether firms will use recycled plastic or virgin plastic depends on the relative price/benefits between them. The net benefit of using recycle plastic must be higher than that of virgin plastics. Incentives must be sufficiently high for producers to make the switch. This would lead to more burden on the government budget.</p> <p><u>Policy 2:</u> As cost of producing plastic are relatively lower in US than other countries, producers may still prefer to use plastics over other materials. There could also be lack of cheaper substitutes.</p> <p>Given higher income and a high preference for convenience, plastic products such as plastic bottled beverages/packaging/disposables may be deemed as a necessity e.g. demand for plastic bottled beverage is less than 1, increase in price of plastic bottled beverage will lead to a less than proportionate fall in quantity demanded. A very large tax may be required to see the desired effect.</p> <p>It also depends on whether there are more environmental-friendly substitutes to plastics.</p> <p><u>Policy 3:</u> Innovation takes time and may not see significant results. Cost of adopting the greener alternatives may deter producers from switching if cost of making plastics is lower.</p> <p><u>Conclusion</u></p>	
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	<p>The policies implemented in East Asia is likely to have positive outcomes in addressing market failure in United States plastic market. However, US may not just want to implement policies to limit production and consumption of plastics.</p> <p>US may even to want to marry its objective of achieving economic growth with the objective to reduce market failure. Hence, US could implement some policies similar to East Asia and at the same time pushes ahead with the investments in plastic facilities.</p> <p>As US balances the 2 objectives, there will be trade-offs. If US prioritises economic growth, it may have to adopt a looser policies that limit plastics. If US believes in achieving a more sustainable world, then more resources may have to be allocated to implementing the similar policies as in South East Asia.</p> <table border="1" data-bbox="376 763 1214 1272"> <tr> <td data-bbox="376 763 453 999">L3</td> <td data-bbox="453 763 1137 999"> <p><i>An answer that explains how the United States' adoption of at least two policies implemented by East Asia work to improve the market failure in United States.</i></p> <p><i>Cap of 7m (TBC) if answers did not consider the effects of the policies in the context of United States.</i></p> </td> <td data-bbox="1137 763 1214 999">6-9</td> </tr> <tr> <td data-bbox="376 999 453 1205">L2</td> <td data-bbox="453 999 1137 1205"> <p><i>An answer that explains policies</i></p> <ul style="list-style-type: none"> <i>-WITHOUT linking them to the market failure, OR</i> <i>-Only one policy is discussed, OR</i> <i>-Unbalanced argument for not considering the problems/limitations of the policies.</i> </td> <td data-bbox="1137 999 1214 1205">4-5</td> </tr> <tr> <td data-bbox="376 1205 453 1272">L1</td> <td data-bbox="453 1205 1137 1272"> <p><i>An answer that superficially touches on the working of the policies.</i></p> </td> <td data-bbox="1137 1205 1214 1272">1-3</td> </tr> </table> <p>In addition, up to a further 3marks for valid evaluative comment. This should focus on "should US adopt those policies' aspect of the question such as comments on overall effectiveness, importance of factors that affect the success of these policies in US's plastic market.</p>	L3	<p><i>An answer that explains how the United States' adoption of at least two policies implemented by East Asia work to improve the market failure in United States.</i></p> <p><i>Cap of 7m (TBC) if answers did not consider the effects of the policies in the context of United States.</i></p>	6-9	L2	<p><i>An answer that explains policies</i></p> <ul style="list-style-type: none"> <i>-WITHOUT linking them to the market failure, OR</i> <i>-Only one policy is discussed, OR</i> <i>-Unbalanced argument for not considering the problems/limitations of the policies.</i> 	4-5	L1	<p><i>An answer that superficially touches on the working of the policies.</i></p>	1-3	
L3	<p><i>An answer that explains how the United States' adoption of at least two policies implemented by East Asia work to improve the market failure in United States.</i></p> <p><i>Cap of 7m (TBC) if answers did not consider the effects of the policies in the context of United States.</i></p>	6-9									
L2	<p><i>An answer that explains policies</i></p> <ul style="list-style-type: none"> <i>-WITHOUT linking them to the market failure, OR</i> <i>-Only one policy is discussed, OR</i> <i>-Unbalanced argument for not considering the problems/limitations of the policies.</i> 	4-5									
L1	<p><i>An answer that superficially touches on the working of the policies.</i></p>	1-3									

Question 2: Inclusive Growth in BRICS and Singapore

Figure 2: GDP Growth in BRICS Nations



Source: International Monetary Fund

Extract 7: Growth issues in BRICS

BRICS - Brazil, Russia, India, China and South Africa - registered solid rates of economic growth before the global financial crisis in 2009. While they were resilient in the first few years after the financial crisis, their growth pace has been slowing in recent years. BRICS are the largest emerging markets, accounting for about two-thirds of emerging market GDP.

An unfavourable external environment appears to have been the main source of the slowdown between 2010 and 2014. Among the most important external factors are weak global trade, a steady decline in commodity prices, and tightening global financial conditions. The steady decline in commodity prices has set back growth in commodity-exporting BRICS such as Russia, Brazil, and South Africa. Meanwhile, investment growth in BRICS has also slowed.

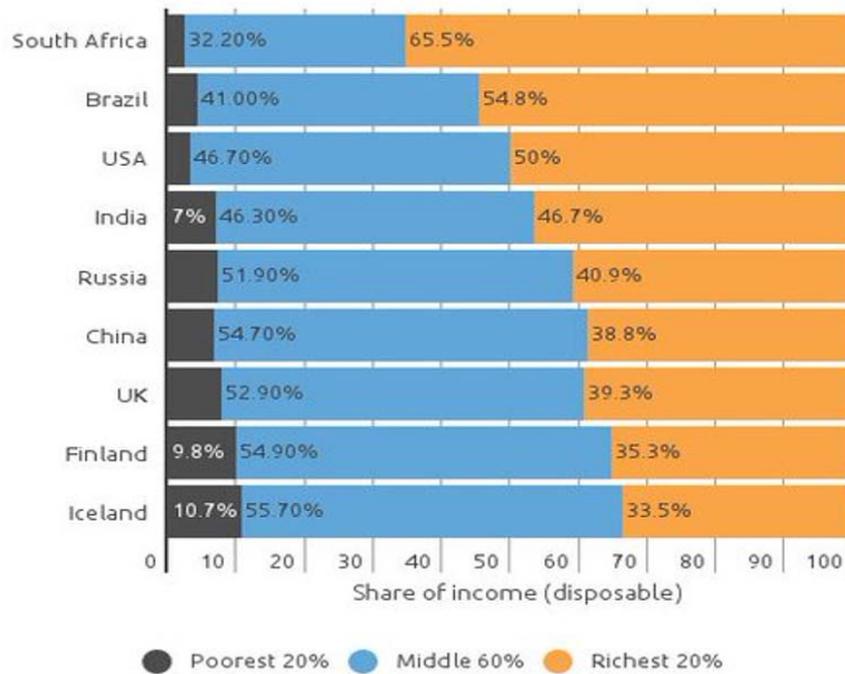
Since early 2014, domestic factors have become the predominant forces behind slowing growth in BRICS. These factors include a sustained decline in productivity and bouts of policy uncertainty. Also, the fiscal positions of BRICS have generally deteriorated.

Source: www.worldbank.org 1 Nov 2016

Table 2: Various Economic indicators of BRICS in 2017

Country	Brazil	Russia	India	China	South Africa
GDP per capita (in USD)	\$10 220	\$11 950	\$2 130	\$10 090	\$6 460
GDP per capita PPP (in USD)	\$16 200	\$28 960	\$7 780	\$18 070	\$13 840
Real GDP growth	2.3%	1.7%	7.4%	6.6%	1.5%
Population	209.2 million	156.9 million	1.33 billion	1.39 billion	57.7 million
Unemployment rate	11.8%	4.7%	3.4%	3.9%	26.7%
Life expectancy	75 years	70.5 years	68.3 years	76.1 years	62.9 years

Figure 3: Income Distribution of BRICS in 2017



Source: Unu-wider Data

Extract 8: The mixed fortunes of the BRICS countries

BRICS countries — Brazil, Russia, India, China and South Africa (South Africa joined in 2010) — were arguably the emerging superstars most likely to dominate the 21st century globalized economy. These five countries cover 40 percent of the world’s population and more than 25 percent of the world’s land.

China is now the second-largest economy in the world by GDP and poised to overtake the US over the next few years. In 1990, China produced less than 3 percent of the world’s manufacturing output when measured by value; by 2015, it produced roughly 25 percent. India is a similar story, but instead of focusing on manufacturing, it went the services route instead.

It would be easy to label India and China as the clear winners among the BRICS, but it’s not that simple. India and China have the fastest growth rates of any major economies in the world. But nearly 50 percent of Indians remain vulnerable to poverty, and China’s economy has slowed as higher wages make manufacturing more expensive. Both countries are especially vulnerable to technological changes that bring automation into the workplace on a larger scale. The World Bank estimates that 68 percent of all existing jobs in India are “at risk” from automation. In China, the figure is 77 percent. Leaders of both nations recognise that inflationary pressure might be a concern, but both are also confident that it will ease over time.

Source: Time.com, accessed on 06.07.2018

Extract 9: The Brazilian Competitiveness Cliff

Under OECD’s Brazil 2018 Economic Survey, figures showed that its economy grew 1 per cent last year, its first year of positive growth since 2014. Prior to the recovery from recession, disappointing export performance is the centre of an economic policy debate raging in Brazil. It was sparked by the sharp decline of GDP rate of expansion from 2010 to 2017.

Brazil has been facing considerable competitiveness challenges. A recent slowdown in industrial exports seemed to be related to supply-side difficulties stemming from a wide range of inefficiencies and rising costs, rather than insufficient demand. This diagnostic reinforces the urgency of the measures of increasing the investment-to-gross domestic product (GDP) ratio, and advancing toward better-skilled human capital.

Source: Worldbank.org, Feb 2013, accessed on 06.07.2018

Extract 10: China Pledges policy reforms in 2016 amidst slowing growth

China will make its monetary policy more flexible and expand its budget deficit in 2016 to support a slowing economy, state media said, citing top leaders who wrapped up an important meeting and vowed to push forward “supply-side reform”. The meeting called for tax cuts to reduce burden on companies and a gradual expansion of China’s fiscal deficit ratio. The government will take steps to expand aggregate demand while pushing supply-side reforms.

The People’s Bank of China (PBOC) has maintained a prudent monetary policy since 2011, raising or cutting interest rates in line with shifts in the economy. The PBOC has cut interest rates six times since November last year. The government has also stepped up spending on infrastructure projects and eased restrictions on home buying to boost the sluggish property market. Top leaders also pledged to push forward “supply-side reform” to help generate new growth engines, while tackling factory overcapacity and property inventories. Supply-side reform means to increase the efficiency of major sectors, or to improve allocation of resources like labour and capital, it may not be effective to boost economic growth in the short term.

Source: Reuters.com, 21.12.2015, accessed on 06.07.2018

Extract 11: Infrastructure, investment, inclusive growth – key BRICS goals

Inaugurating the BRICS Business Forum in New Delhi, Indian Vice-President Hamid Ansari said the first priority was “to create a business-friendly environment for investors and entrepreneurs in all member countries, to promote mutual trade and investment; and facilitate market inter-linkages and enhance market access opportunities.” Also, there is a need to build resilience to external economic shocks and strengthen policy coordination by promoting information exchange through agreed platforms and by deepening our interaction and cooperation with non-BRICS countries, international organizations and forums.” The basic principles for enhancing the trade and investment relations is to build responsive, inclusive and collective solutions in BRICS. Innovation and start-ups form a very significant component in the first BRICS exhibition/trade fair.

Likhachev, First Deputy Minister of Economic Development of Russia, expressed his hope for the initiative to become a tradition and an incentive in furthering BRICS development work. He said that BRICS should focus on industries. The Russian delegation will visit the Indian state of Maharashtra and would focus on the shipbuilding and oil and gas industry sectors.

Source: Russian Beyond Publications, Oct 2016

Extract 12: Singapore’s effort in ensuring more inclusive growth

Some changes may be made to social policies in the coming years to ensure a more inclusive society. One example is the \$8 billion Pioneer Generation Package. It helps citizens aged 65

and above in 2014 meet their healthcare costs for life, with further subsidies on services and medicine at polyclinics and outpatient clinics, among others.

Workfare, made permanent in 2007 and enhanced since, is a key pillar of social security, and has boosted the wages of low-income Singaporean workers. The Progressive Wage Model in 2012 has lifted wages of those in the security, cleaning and landscape sectors. The adequacy of government spending on social protection and social security, especially for the poor and underprivileged is as important as how progressive it is for the middle-class. Government has placed emphasis on ensuring social mobility, equal opportunities and an inclusive society.

Source: The Straits Times, Sept 2015

Questions

- (a) (i) Using Figure 2, describe the trend in BRICS nations' GDP growth from 2010 to 2018. [2]
- (ii) With reference to Extract 7, explain **one** possible reason for the trend in GDP growth for BRICS nations. [2]
- (b) (i) From Table 2, identify the country that experienced the least improvement in material standard of living in 2017 and explain the reasons for your choice. [3]
- (ii) Using Figure 3, compare the income distribution between South Africa and India. [2]
- (iii) Comment on whether the data supports the view that South Africa experienced a lower standard of living compared to India in 2017. [5]
- (c) (i) Explain what it means by a fall in export competitiveness. [1]
- (ii) Extract 9 states that there was an "urgency of the measures of increasing the investment-to-gross domestic product (GDP) ratio, and advancing toward better-skilled human capital". [3]
- Explain how one of these measures stated in Extract 9 could improve Brazil's export competitiveness.
- (d) Using Extract 8, explain why the "winners" of BRICS may continue to face economic challenges. [7]
- (e) Discuss how China's policy reforms in Extract 10 will impact the Chinese economy. [8]
- (f) In the light of the information provided in Extracts 11 and 12, discuss the relative appropriateness of the approaches undertaken by the Singapore government and BRICS nations in attaining inclusive growth. [12]

[45 marks]

Question 2: Inclusive Growth in BRICS and Singapore

Suggested Answers

(a)	(i)	<p>Using Figure 2, describe the trend in BRICS nations' GDP growth from 2010 to 2018. [2]</p> <p><u>General trend</u></p> <ul style="list-style-type: none"> All BRICS nations' GDP growth generally fell from 2010 to 2018. [1] <p><u>Refinement of trend</u></p> <ul style="list-style-type: none"> China and India still managed to enjoy +ve growth of above 5% throughout. <p>OR</p> <ul style="list-style-type: none"> Brazil and Russia, however, both had negative growth between 2014 and slightly before 2017, with 2015 having the greatest fall in GDP at a rate of -4% 	[2]
	(ii)	<p>With reference to Extract 7, explain one possible reason for the trend in GDP growth for BRICS nations. [2]</p> <p>A fall in net exports due to weak global trade. [1]</p> <p>For example, Extract 7 states that there was a steady decline in commodity prices and it had set back growth in commodity-exporting BRICS such as Russia, Brazil, and South Africa. This is assuming PED for the commodities was less than one, the fall in commodity prices would cause a fall in export revenue of BRICS nations.</p> <p>The fall in net export revenue would dampen the increase in AD of BRICS nations. Due to the slower increase in AD, BRICS nations experienced slower growth. [1]</p> <p>OR</p> <p>A fall in investment. [1]</p> <p>Extract 7 states that there was a sustained decline in productivity and bouts of policy uncertainty in BRICS nations.</p> <p>This means that due to the sustained decline in productivity, the firms in BRICS nations might experience a rise in unit cost of production, leading to a fall in expected returns of investment. Furthermore, due to policy uncertainty, the firms would not be able to predict about their expected returns of investment, causing them to lose confidence to invest in BRICS nations. As a result, the level of investment in BRICS nation might fall. [1]</p> <p>This fall in investment would dampen the increase in AD of BRICS nations. Due to the slower increase in AD, BRICS nations experienced slower growth. [1]</p>	[2]

		<p><i>The student could also link to a fall/slower increase in AS curve of BRICS nations due to lower investment/decline in productivity.</i></p> <p><i>Note for markers: If students say that AD falls (instead of explaining the slower increase in AD), cap at 1m</i></p>	
(b)	(i)	<p>From Table 2, identify the country that experienced the least improvement in material standard of living in 2017 and explain the reasons for your choice.</p> <p>Answers:</p> <ul style="list-style-type: none"> • South Africa experienced the least improvement of standard of living in 2017. [1] <p>Reasons:</p> <ul style="list-style-type: none"> • Assuming population size of all countries remained constant (or changed negligibly) over the course of one year in 2017 [1], South Africa experienced the lowest rate of real GDP growth, which means that an average household enjoyed the least increase in disposable income which allowed them to enjoy the lowest increase in the amount of goods and services consumed. [1] 	[3]
	(ii)	<p>Using Figure 3, compare the income distribution between South Africa and India.</p> <p>Answers:</p> <ul style="list-style-type: none"> • South Africa's income distribution is worse than India's income distribution [1] <p>Reason:</p> <p>This is because the 20% richest people in South Africa enjoyed a greater proportion of the national income as compared to the 20% richest people in India while the 20% poorest people in South Africa enjoyed a lower proportion of the national income as compare to the 20% poorest people in India.</p> <p>This suggests that the rich-poor gap is larger in South Africa as compared to India. [1]</p>	[2]
	(iii)	<p>Comment on whether the data supports the view that South Africa experienced a lower standard of living compared to India in 2017.</p> <p>Answers:</p> <p><u>Side 1: Data supports the view that South Africa experienced a lower standard of living compared to India in 2017 [2]</u></p> <p>Material SOL was lower in South Africa</p> <p>Reason: From Table 2, South Africa's unemployment rate was higher than India's in 2017.</p> <ul style="list-style-type: none"> • When unemployment rate is higher in South Africa, it means that there was a greater proportion of the labour force in South Africa not being able to find a job and earn a living. • With lower income, an individual in South Africa might not be able to consume more goods and services as compared to an individual in 	[5]

India. Hence, material standard of living (i.e. SOL) is lower in South Africa, as shown by the unemployment rate data.

Reason: From table 3, South Africa's **income distribution is more unequal** than India's income distribution.

- Even though South Africa's GDP per capita PPP (in USD) is higher than India's as shown in Table 1, income distribution was more unequal between the rich and the poor.
- This shows that an average person living in South Africa might not necessarily earning higher income than an average person living in India as the higher national income in South Africa might be contributed by the minority rich.
- Hence, material SOL in South Africa might be lower as a greater proportion of household in South Africa might be earning lower income and hence consuming lower amount of goods and services.

Award 1m for any one of the above reasons.

Non-material SOL is lower in South Africa

Reason: From Table 2, South Africa's **life expectancy was lower** than India's in 2017.

- When life expectancy was lower in South Africa, it means that an average person in South Africa might not be able to access to better quality healthcare facilities. A typical South African might not be able to cure illnesses to enjoy better quality of life.
- Due to lower quality of life, South Africa's non-material SOL was lowered as compared to India's as shown by the data on life expectancy.

Award 1m for explaining non-material SOL in South Africa is lower.

Side 2: Data does not supports the view that South Africa experienced a lower standard of living compared to India in 2017 [2]

Reason: Insufficient data to compare material and non-material SOL

Several relevant info missing. E.g.:

- Type/nature of goods produced in India. If India's output are mainly due to non-consumption goods/service. Its mat-SOL may not be higher.
- Pollution level. If India's pollution level is severe, non-mat SOL may not be higher too.

OR

Reason: The data shows that in some ways, South Africa might have a higher standard of living compared to India in 2017

E.g.

- South Africa had a higher GDP per capita (PPD-adjusted) than India in 2017 which suggested that the average person living in South Africa had access to more goods and services and thus could enjoy a higher material standard of living.

Conclusion,

Hence, even though the data found in Table 2 and 3 could help us to estimate that South Africa's material and non-material SOL was lower

		than India's, it is hard to accurately conclude South Africa's SOL was indeed lower than India's due to insufficient data. [1]	
(c)	(i)	<p>Explain what it means by a fall in export competitiveness.</p> <p>Answer: A fall in export competitiveness means that price of a country's exports is higher as compared to other countries' exports or that the quality of a country's exports is lower as compared to other countries' exports. [1]</p> <p>OR</p> <p>A fall in export competitiveness means that a country would not be able to compete with other countries in terms of price or quality of her exports. [1]</p>	[1]
	(ii)	<p>Extract 9 states that there was an “urgency of the measures of increasing the investment-to-gross domestic product (GDP) ratio, and advancing toward better-skilled human capital”.</p> <p>Explain how one of these measures stated in Extract 9 could improve Brazil's export competitiveness.</p> <p>Answer:</p> <p>Increasing investment to gross domestic production means increasing the amount of investment which involves an accumulation of capital goods.</p> <p>Accumulation of capital not only increases the quantity of factors of production but could also mean better methods of production e.g. advancement in technology.[1] Hence cost of producing exports can be lowered, improving Brazil's export competitiveness in terms of price. [1]</p> <p>Better skilled human capital allows labour to better make use of advanced technology and embark on innovation. This could improve labour productivity [1] which in turn helps to reduce unit cost of production of exports. Due to fall in unit cost of production, Brazil's export competitiveness would improve in terms of price.</p> <p>OR</p> <p>Better skilled human capital allows labour to better make use of advanced technology and embark on innovation. This could help to produce better quality goods/service, i.e. with less defects and better meet consumers' tastes and preferences. This improves competitiveness in terms of quality.</p>	[3]
(d)		<p>Using Extract 8 explain why the “winners” of BRICS may continue to face economic challenges.</p> <p>From Extract 8, China and India are the clear “winners” of BRICS due to the high rates of growth experienced for the past decade. This means that China and India could have experienced large increases in actual growth as AD increases from within the Keynesian range of AS to the</p>	[7]

	<p>intermediate range of AS. There has been better utilisation of resources. Material SOL of Chinese and Indian citizens have increased.</p> <p>However, they may continue to face economic challenges as inequality and poverty remain to be significant issues for the economy. Since the poor cannot gain access to essential goods/services, the microeconomic goal of equity is undermined.</p> <p>Rising structural unemployment poses macroeconomic difficulties for the economies as seen from extract 8, “Both countries are especially vulnerable to technological changes that bring automation into the workplace on a larger scale.” Technological disruptions may be due to structural reforms taking place in India and China. Existing industries find themselves less competitive and they may shut down. Workers’ skills become irrelevant with automation. If unemployed workers cannot find jobs that match their skills, structural unemployment takes place.</p> <p>Also, leaders of both nations recognise that inflationary pressure might be a concern as each of their economies continues to grow with rapid increase in AD in these two countries with the largest populations in the world. From extract 8 also, “China also faced increasing wage pressure” which show that cost-push inflation may hinder China’s macroeconomic progress.</p> <p>Hence, unless productive capacity increases, inflationary pressure will increasingly become a concern for both China and India.</p> <table border="1" data-bbox="347 1077 1275 1283"> <tr> <td>L3</td> <td>Well-elaborated explanation of economic challenges to China and India with clear link to economic aims</td> <td>6-7</td> </tr> <tr> <td>L2</td> <td>Undeveloped explanation of economic challenges to China and India with link to economic aims</td> <td>3-5</td> </tr> <tr> <td>L1</td> <td>There are some mention of economic challenges with no clear link to economic aims.</td> <td>1-2</td> </tr> </table>	L3	Well-elaborated explanation of economic challenges to China and India with clear link to economic aims	6-7	L2	Undeveloped explanation of economic challenges to China and India with link to economic aims	3-5	L1	There are some mention of economic challenges with no clear link to economic aims.	1-2	
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L1	There are some mention of economic challenges with no clear link to economic aims.	1-2									
(e)	<p>Discuss how China’s policy reforms in Extract 10 will impact the Chinese economy.</p> <p>INTRODUCTION China has embarked on both demand and supply-side policies in 2016 in efforts to combat slowing growth. These reforms are likely to positively impact the Chinese economy</p> <p>BODY <u>Demand-side policies</u> Expansionary monetary policy was undertaken and this can be seen from Extract 10 “PBOC has cut interest rates six times since November last year.” A cut in interest rate will cause cost of borrowing to fall → expected returns to investments increase → I increases. Also, since cost of borrowing falls, consumers will be more inclined to purchase big ticket items such as houses and cars → C increases. Given the large population size of China and the rapid rise in income of middle class, AD is likely to increase significantly → Real NY increases via k → actual economic growth → combats slowing growth. Employment increases too.</p> <p>In addition, there is an expansionary FP suggested by its budget deficit in 2016 to support a slowing economy. The government has also stepped</p>	[8]									

up spending (G) on infrastructure projects and eased restrictions on home buying to boost the sluggish property market. Tax cuts will boost consumption since disposable income of households increase. Since C , I and G are components of AD → AD is likely to increase significantly → Real NY increases via k → actual economic growth → combats slowing growth. Employment increases too.

<students may use a AD/AS diagram to support the above analysis>

Limitations/Disadvantages:

- DD-pull inflationary pressure as AD increases
- Crowding out effects with FP since govt borrows to fund G
- Interest inelasticity of demand for investments or Nearing liquidity trap.
- Small multiplier → Chinese are huge savers

Supply-side reforms

“Top leaders also pledged to push forward “supply-side reform” to help generate new growth engines, while tackling factory overcapacity and property inventories.” This means that China is aiming to increase the efficiency of major sectors, or to improve allocation of resources like labour and capital from inefficient to efficient sectors. As resources are re-allocated from inefficient sectors to more efficient sector, more innovation can take place within the efficient sectors. There can be more productive and cost-efficient production methods.

→ Both LRAS and/or SRAS shift(s) will be accepted

Limitations/Disadvantages

Such policies take time, may not be effective to boost economic growth in the short term

SYNTHESIS/CONCLUSION

All in all, China’s policy reforms are multi-pronged and are likely to bring about positive impact on its economy. With both DD and SS side policies in place, China is likely to be able to combat its slowing growth. Inflationary pressure will be the main concern of the government but given the amount of control the government has over its economy (China is still considered a command economy), they are likely to mitigate the inflationary pressures. Furthermore, Chinese government has huge reserves to see through its LR supply policies while implementing SR dd-side policies. Hence, the government should continue to monitor and refine its policies in order to ensure long-term success.

L2	An answer that explains how the reforms identified from Extract 10 work to create positive and negative impact on China’s key economic indicators.	4-6
L1	An answer that superficially explain how the reforms work with no or little links on how they could impact on China’s key economic indicators.	1-3

In addition, **up to a further 2 marks** for valid evaluative comment. This should focus on the overall effectiveness of the reforms to create positive impact on Chinese economy.

(f)	<p>In the light of the information provided in Extracts 11 and 12, discuss the relative appropriateness of the approaches undertaken by the Singapore government and BRICS nations in attaining inclusive growth.</p> <p>INTRODUCTION</p> <p>Inclusive growth refers to economic growth that is equitable and helps in reducing poverty. <i>Inclusive Growth is extended economic growth that is broad based across sectors and creates productive employment opportunities for all segments of the country's population. Inclusive growth distributes income from economic growth, in monetary and non-monetary terms, fairly across society. It should not worsen income inequality.</i></p> <p>Singapore and BRICS economy are different by nature and state of development. Singapore can be considered as a relatively developed economy while BRICS are the emerging markets that have grown significantly over the past decade (extract 1). Hence, the approaches undertaken by the governments to attain inclusive growth differ greatly.</p> <p>BODY</p> <p>Thesis 1: Singapore government's approaches to attain inclusive growth are appropriate</p> <p>(i) Pioneer Generation Package</p> <p>Under the Pioneer Generation Package, senior citizens aged 65 and above are given benefits to meet their healthcare costs for life, with further subsidies on outpatient medical services. In this way, even though these senior citizens, who might have retired, are not earning an income, they would have access to more affordable healthcare services. Due to such redistributive measures through subsidies, inequity would be alleviated and hence achieve a more inclusive society.</p> <p>(ii) Wage Credit Scheme</p> <p>To help companies compensate rising wage costs, the Singaporean government introduced the Wage Credit Scheme (WCS), co-funding a proportion of the wage increases for low-wage workers (40% during 2013 – 2015 and 20% during 2016 – 2017). In this way, the income of lower-income Singaporeans, whose wages might have depressed by incoming foreign workers, would increase, enabling them cope with the rise in the cost of living.</p> <p>Furthermore, this scheme also flows back additional foreign worker levies collected in a meaningful way to support productivity and gainsharing. As government provides support for companies to manage rising wage cost in a tight labour market, it frees up resources for businesses to invest in productivity. Hence, the scheme not only helps to reduce income inequality but also helps employers share productivity gains with their employees, encouraging inclusive growth.</p>	[12]
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(iii) **Progressive Wage Model**

The Progressive Wage Model (PWM) is a productivity-based wage progression pathway that helps to increase wages of workers through upgrading skills and improving productivity. It is mandatory workers in the cleaning, security and landscape sectors who have been earning low wages that hardly rose.

Under the PWM, the employers would have to pay their workers entry-level basic wages of at least S\$1,000 a month. Furthermore, the employers must find ways to help their cleaners achieve better skills and higher productivity so that they can earn higher wages and meet higher service standards.

In this way, the workers under the PWM would be able to achieve sustainable wage increases through better skills and higher productivity and enable help companies make better use of and retain manpower, instead of retrenching workers.

An increase in productivity in all sectors with lower wage workers earn higher wages that help close the income gap between the rich and the poor, Singapore would be able to achieve sustainable and inclusive growth.

Anti-thesis 1: However, the approaches by the Singapore government may not be so appropriate

- (i) Strain on government budget and hence the possibility of raising taxes to sustain approaches
 - The above approaches require government to incur spending and hence might cause a strain on fiscal budget. Hence, in view of future uncertainty, the approaches might not sustainable.
 - Evaluative comment (not necessary but possible points to get evaluation marks)***
 - Hence to ensure sustainability, it is inevitable to increase taxes to finance the increased social spending. Such tax increase to finance the increased social spending might end up causing work disincentive and hence lower labour productivity among higher income workers.

- (ii) The government might face challenge in estimating the right amount of subsidies given to the senior citizens and wage increment to the lower income workers that ensures the effectiveness of the approaches.
 - There might be a possibility that Singapore government might underestimate the amount of subsidies or wage increment given, resulting income inequality not alleviated effectively.

		<p>(iii) There might be a tendency for companies to abuse the programmes.</p> <ul style="list-style-type: none"> ○ Take for example, under the wage credit scheme, employers have been caught making fraudulent claims under the Wage Credit Scheme. Some false claims include inflating wages for family members who were not employees. On some instances, company owners hired phantom workers to qualify for the payout. ○ As a result, in order to curb such abuse or cheating cases from rising, the Singapore government might need spend resources to monitor appropriate behaviour among firms. <p>Thesis 2: BRICS nations’ approaches to attain inclusive growth are appropriate</p> <p>(i) To create a business friendly environment for investors in member countries; and to promote mutual trade</p> <ul style="list-style-type: none"> • Job creation, including quality jobs, is a necessary step towards inclusive growth in developing countries such as the BRICS nations. Hence, it is important for BRICS to achieve actual growth in the short run and hence create quality jobs. <p>(ii) Actual growth can be inclusive by engaging various sectors of the economy.</p> <ul style="list-style-type: none"> • <u>Increase I</u> → “create a business-friendly environment for investors and entrepreneurs in all member countries, • <u>Increase FDI and (X-M)</u> → to promote mutual trade and investment; and facilitate market inter-linkages and enhance market access opportunities.” • Above underpinned by strengthened resilience to external economic shocks and strengthen macro-economic policy coordination → promoting information exchange through agreed platforms and by deepening our interaction and cooperation with non-BRICS countries, international organizations and forums. • <<Explain with AD/AS>> → Due to an increase I and (X-M) → AD increase → illustrate that there is short run actual growth and creation of jobs. • As GDP increases, residents and firms in BRICS would be earning higher income and higher profits. This would give rise to higher tax base which governments could raise higher tax revenue to fund more social services, thus ensuring equity. • Without SR actual growth, not possible to have inclusive growth. <p>(iii) To encourage greater innovation and start-ups in BRICS</p> <ul style="list-style-type: none"> • Greater innovation and start-ups through encouraging entrepreneurship in BRICS would help increase productivity and productive capacity. 	
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- Innovation and start-ups involves accumulation of capital goods → productive capacity increase → LRAS increase.
- Greater innovation and start-ups might also involve technological advancement and this in turn increases future business productivity. An improvement in business productivity in the future would lower down unit cost of production → increase SRAS.
- This increase in aggregate supply would result in greater room for future growth to take place, leading to sustainable growth.
- Such increase in potential growth is important for BRICS countries to reduce inflationary pressure should they experience a fast increase in their aggregate demand near the full employment level of output.
- As GDP increases in the future, residents and firms in BRICS would be earning higher income and higher profits in the future. This would give rise to higher tax base which governments could raise higher tax revenue to fund more social services, thus ensuring equity.

Anti-thesis: However, BRICS nations' approaches may not be so appropriate

(i) Innovation policies tend to focus on productivity and growth objectives, rather than on how the fruits of growth are distributed. As a result, inclusive growth might not be attained in BRICS nations.

- As nations climb up the technological ladder or becoming an innovation-intensive economy, some groups (namely those holding assets and skills required) would benefit more than others. This means trade-offs between growth and inclusiveness can arise where policies focus strongly on supporting innovation in leading businesses, research institutions and activities. Such strategies provide few opportunities for those that do not aid the innovation or technological advancement.

(ii) Entrepreneurship in BRICS nations might not be effectively promoted especially in the rural areas. As a result, inclusive growth might not be attained in BRICS nations.

- In developing countries especially in the rural areas, would-be entrepreneurs might be from the poorer strata of society and as a result face even greater barriers, especially in access to finance such as bank loans or financial assistance such as grants for unemployed who wish to start a business.
- As a result, due to unequal access to financial capital, the growth would end up unequal in different segments of the economies of BRICS nation.
- Income inequality might happen → inclusive growth not achieved.

Evaluative comments (*not necessary but possible points to get evaluation marks*)

Hence, in view of the above limitations/challenges in achieving inclusive growth, it is important for BRICS nations to complement the approaches with inclusive and collective solutions as mention in Extract 11.

- Take for example, BRICS nation could implement policies to make entrepreneurship more inclusive by including more financial assistance for would-be entrepreneurs from rural areas or from poorer strata of society, even if their ideas could only result in small enterprises.
- Furthermore, to ensure inclusive growth via innovation, BRICS could implement inclusive innovation that
- ***Evaluative comment (not necessary but possible points to get evaluation marks)***
 - The 5 governments may have different objectives at different times, difficult to have a collaborative/collective effort for inclusive growth. The poor tend to be left behind when these economies grow too fast

SYNTHESIS/CONCLUSION

Compare relative appropriateness

All in all, the measures undertaken by the Singapore government and BRICS nations differ due to the different nature of the economies and state of development.

The measures can be considered appropriate to a large extent as they all has the same aim of attaining growth and improvement of their economies without leaving behind the lower incomes/poor.

Given that BRICS nations' state of development are still emerging, the approaches mentioned in Extract 11 focus more on attaining more sustainable growth, with little plan to reduce existing poverty and inequity.

On the other hand, Singapore state of development is more mature with higher growth that enable the government to enjoy greater fiscal budget. With greater budget and rich reserves, it is likely that Singapore are able to sustain the social spending or redistributive policies such as pioneer generation package.

Hence, overall, it can be said that Singapore government's approach may be more appropriate in attaining inclusive growth given the current state of development, assuming there is no government failure in estimating the wage increment or subsidies.

<p><i>Nonetheless, in the longer run, if the BRICS governments refine policies to ensure that benefits of growth are well spread across different segments of populations, the current policies to attain sustainable growth for inclusive growth to take place are appropriate.</i></p>		
L3	An answer that explains how Singapore and BRICS nations could implement one approach in each of their countries to achieve inclusive growth + limitations.	6-9
L2	<p>An answer that explains at least 1 approach each for Singapore and BRICS nations to achieve inclusive growth.</p> <p>-HOWEVER, there is NO attempt to discuss the limitation for the approaches.</p> <p>OR</p> <p>An answer that explains at least 1 approach that Singapore/BRICS nations could implement to achieve inclusive growth WITH limitations.</p> <p>-HOWEVER, there is NO attempt to explain the approach that BRICS nations/Singapore could implement to achieve inclusive growth.</p>	4-5
L1	An answer that superficially touches on the working of the approaches identified from the extracts to achieve inclusive growth in Singapore and/or BRICS nations. The links to the concept of inclusive growth are weak.	1-3
<p>In addition, up to a further 3marks for valid evaluative comment. This should focus on “comparing the relative appropriateness’ aspect of the question.</p>		

-THE END -