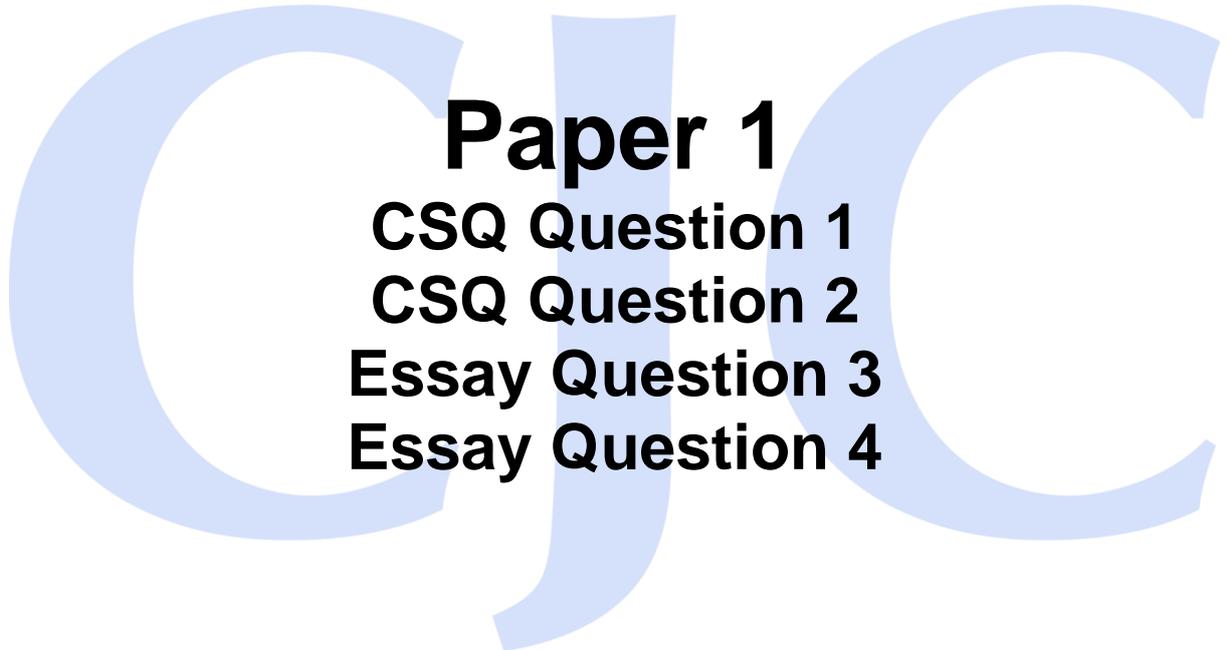




2016

**Catholic Junior College
H1 Economics / 8819**

**Preliminary Examination
Mark Scheme**



Paper 1

CSQ Question 1

CSQ Question 2

Essay Question 3

Essay Question 4

Section A

Answer **all** questions in this section.

Question 1

The oil market

Figure 1: World oil price



Source: *Bloomberg*, accessed 11 December 2015

Extract 1: Oil price plunge continues

The price of oil continued its steep fall on Friday, hitting five-and-a-half-year lows after the International Energy Agency (IEA) predicted demand next year would be lower than expected. Crude oil price has dropped 47% since June and fell to just over \$61 a barrel. The oil price has plummeted in response to a massive build-up of shale-derived oil in the US through fracking, reduced fears of fighting in Iraq disrupting supplies, and due to the faltering world economy.

The Paris-based IEA singled out Venezuela as a potential flashpoint for trouble and the warning came as Venezuela's currency, the bolívar, continued to lose close to 80% against the US dollar since the plunge in oil price. This is only part of an even bigger decline since Nicolas Maduro took office two years ago, and the oil price isn't the only thing to blame. The country's draconian capital flight controls, excessive money printing in face of a stalling economy are also factors.

But while the oil-producing countries face lost revenues and budget shortfalls, lower energy prices are expected to have a beneficial impact on the world economy. Many countries, particularly in Asia, are desperately dependent on foreign oil and gas imports, so cheaper prices should cut inflation and give impetus to manufacturing output and consumer spending. Analysts at investment bank ING said: "The recent fall in oil prices may not be sustained but, in the meantime, it provides a very welcome boost to real incomes for most major economies."

Source: Adapted from *The Guardian*, 12 December 2014

Extract 2: US\$20 Billion subsidy to fossil fuel industry

A joint investigative report by Oil Change International and the Overseas Development Institute reveals that, in the United States alone, the fossil fuel industry has benefitted from over \$20 billion per year in government subsidies between 2008 and 2015. These subsidies occur throughout the fossil fuel exploration, production and transportation along the supply chain. This also means subsidizing oil spills, in which oil companies can write off the cost of clean-up as a business expense, including the 2010 BP oil disaster in the Gulf of Mexico. Subsidies are also used extensively in the research of new drilling technologies.

“Since the initial G20 commitment in Pittsburgh six years ago, US subsidies have increased dramatically in [the Obama] Administration, in line with the increase in US oil and gas production,” said Steve Kretzmann, executive director of Oil Change International. “The President can and must do more to eliminate subsidies at home amidst the growing government budget deficit and concerns on climate change.”

Source: Adapted from *Overseas Development Institute*, 12 November 2015

Extract 3: The true cost of oil production

Every link in the chain of oil production, from exploration through consumption, generates profound damage to the local environment and communities. As the industry moves towards increasingly risky forms of fossil fuel production, the impacts become more pronounced.

A notable Harvard Medical School study identifies impacts from many aspects of oil production. Exploration for new oil and gas often brings seismic explosions and the clearing of huge swaths of forest; drilling produces toxic drilling muds and waste waters; oil transport creates additional hazards, as oil spills from pipelines, tankers and tank farms are still routine, despite industry claims of safety measures. Oil refining creates further chemical, thermal and noise pollution and affects the health and safety of refinery workers and nearby communities and ecosystems. Gasoline and many of its additives are toxic and are associated with some types of cancer, with oil industry employees and those living near refineries, transfer and storage facilities at greater risk.

A 2011 United Nations Environment Programme study estimates that in Ogoniland, Nigeria, “countering and cleaning up the pollution and catalysing a sustainable recovery could take 25 to 30 years.”

Communities in Ogoniland have fought back against this oil pollution, through protest, which at times has met brutal repression, and through lawsuits. Several lawsuits specifically on gas flaring – the burning of natural gas during oil extraction - succeeded in obtaining a court order against flaring, however, Shell and other oil producers continue the practice despite the legislation enacted.

Source: Adapted from *Oil Change International*, 10 April 2014

Extract 4: Renewable energy can't replace fossil fuels entirely

While technological advancements have made it possible for renewable energy to be used in many of the same applications as fossil fuels, there are still some limitations. For example, the energy efficiency of electric vehicles is much lower than traditional cars. Additionally, renewable energy can never and will not replace oil, coal and gas entirely. As the world's higher-quality fossil fuel reserves rapidly deplete, no combination of alternative energy sources is likely to be enough to sustain industries at their current scale. Nonetheless, large government funds have been poured into the renewable energy industry as countries seek to increase their energy self-reliance, which may bolster their economic resilience and reduce their ecological footprint.

Alternative energy sources have their own issues, such as energy transfer or destruction of the natural habitat. Hydro energy involves building dams and this, in turn, will destroy the habitat of the river or lake they are placed in. The past and the foreseeable future still belong to hydrocarbons, and we can expect natural gas, the cleanest of the hydrocarbons, to garner a bigger share of the global energy pie in the near and long term.

Source: Adapted from *The Straits Times Forum*, 17 December 2015

Questions:

- (a) Using Figure 1, compare the overall change in world oil price between 2000 and 2008 with that between 2009 and 2014. [3]
- (b) With reference to Extract 1,
- (i) Identify and explain **two** reasons for the fall in world oil price after 2014. [4]
- (ii) Briefly explain **two** reasons that led to the depreciation of Venezuela's bolívar. [4]
- (c) Extract 2 mentions subsidies implemented by the US government in the fossil fuel industry. Comment on the possible consequences of the imposition of such subsidies for the producers and consumers of fossil fuel, as well as the US government. [8]
- (d) (i) Briefly explain the relationship between fossil fuels and renewable energy. [2]
- (ii) Identify one possible opportunity cost of pouring large government funds into the renewable energy industry. [1]
- (e) Do you think the use of government legislation would be the best measure in tackling the circumstances as those described in Extract 3? [8]

[Total: 30]

Section A - CSQs

Question 1: The Oil Market

- (a) Using Figure 1, compare the overall change in world oil price between 2000 and 2008 with that between 2009 and 2014. [3]

Answers:

Similarity: Both periods indicate increasing trend in oil price. [1]

Difference: Rate of increase is larger in 2000 – 2008 as compared to 2009 – 2014. [1]

Difference: 2009 – 2014 showed greater fluctuations in oil price. [1]

- (b) With reference to Extract 1,

- (i) Identify and explain two reasons for the fall in oil price after 2014. [4]

Answers:

From Extract 1:

Increase in world SS of oil as production levels from producers rise due to “fracking in the US” OR “reduced fears of instability in Iraq”. With the rise in SS, ceteris paribus, equilibrium price of oil will fall. [2]

Decrease in world DD of oil due to falling demand for oil due to lower economic growth / fall in real output in the “faltering world economy”. OR due to consumer expectations of falling future prices as there is “reduced fears of instability in Iraq”. With the fall in DD, ceteris paribus, equilibrium price of oil will fall. [2]

- (ii) Briefly explain two reasons that led to the depreciation of Venezuela’s bolívars. [4]

Answers:

A fall in the price of oil will reduce Venezuela’s export revenue from oil (assuming that demand for exports of oil is price inelastic) [1] A fall in exports revenue will reduce the demand for bolívars in the international foreign exchange market [1] thus decreasing the value of bolívars.

OR

In order to stimulate the stalling economy via Monetary Policy → Excessive money printing increase the SS of money leading to a fall in interest rates [1] Fall in interest rates will lead to outflow of hot money thus increasing supply of bolívars in the international foreign exchange market decreasing the value of bolívars. [1]

OR

Strict capital controls/regulations lead to reduced capital inflows [1m] → reduce the demand for bolívars in the international foreign exchange market thus decreasing the value of bolívars. [1]

- (c) With reference to Extract 2, comment on the possible consequences of the imposition of subsidies in the fossil fuel industry for the producers, consumers and the US government. [8]

Answers:

Introduction

As mentioned in Extract 2, the US government has implemented the use of a subsidy in the fossil fuel industry. This essay will aim to consider the various consequences on the consumers, producers and the US government.

Thesis: Subsidies benefit consumers and producers

P: The fossil fuel subsidy will benefit the consumers by making the fossil fuel more affordable (lower price) for the consumers, with more quantity available (higher q).

E: With subsidy, the cost of production for the producers of fossil fuel drops. This will lead a rise in supply of fossil fuel as seen in the diagram by a movement from S_1 to S_2 (diagram is expected). With the demand for fossil fuel remaining the same, there is a surplus created at the initial price P_1 as quantity supplied is greater than quantity demanded. This will create a downward pressure on the price until the new equilibrium is reached as a lower price P_2 from P_1 . The new equilibrium also has a higher quantity of fossil fuel, rising from Q_1 to Q_2 in Figure 2. This results also in a higher consumer surplus, as shown in Figure 1, where consumer surplus increases with the lower price.

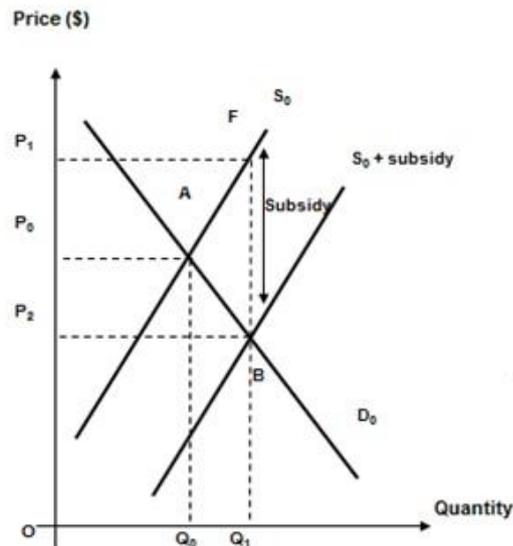


Figure 1: Subsidy in Fossil Fuel Production

P: Though the fall in price of fossil fuel may result in lower total revenue for producers given that demand for fossil fuel is relatively price inelastic, the per-unit subsidy given by the government on the increased quantity sold will more than cover the fall in TR due to the lowered price. This is reflected in the Figure 1, where there is an increase in total income of producers after subsidy $P_1FBP_2 + P_2BQ_1O$. Thus, this will increase the profitability of the producers.

P: The subsidies are also given to lower the cost of R&D for producers, which will likely create higher incentive for producers to invest in the development of new methods of production which will lower cost of production further. Producers will also research into new innovations that will create better quality products that will have positive benefits to consumers.

Evidence: "These subsidies occur throughout the fossil fuel exploration, production and transportation along the supply chain" and/or "Subsidies are also used extensively in the research of new drilling technologies."

L: Thus, subsidies have benefits for the consumers and producers. However, there are also disadvantages with the use of government subsidies.

Anti-Thesis: Fossil fuel subsidies disadvantage 3rd parties & government

P: As shown from Figure 1, the use of subsidies has also increased the quantity of fossil fuel consumed from Q_0 to Q_1 . As the production of fossil fuels leads to negative externalities as evidenced in Extract 3, “creates further chemical, thermal and noise pollution and affects the health and safety of refinery workers and nearby communities and ecosystem”. This will negatively impact consumers and producers who are 3rd parties in the oil transaction.

P: Provision of subsidies in the fossil fuel industry in the long term will not only add significant financial strain on the government’s budget, there will also be less funds available for other uses which will post considerable opportunity cost.

E: Due to limited government budget, there is a trade-off when the US government provides fossil fuel subsidy. There is an opportunity cost involved in this policy decision.

E: For example, the government will have to allocate a larger budget for the purpose of providing fossil fuel subsidy and have fewer funds to budget for other key areas of expense such as military defence, education and healthcare.

Also, even those with financial ability may exploit the opportunity and that might add on the burden on US government, which is currently running on a large government budget deficit. This will lead to the unintended consequence of financing the budget deficit with higher tax rates in future. The higher tax rates will create the disincentive to work and investment, which will negatively hurt the consumers and producers in the long run.

Conclusion

[Time & Space]

The subsidies do indeed benefit the consumers and producers especially in the short run with the lower price and higher profits; the imposition of a long term fossil fuel subsidy is not feasible as it will create a financial burden on the government and weakens its fiscal position. As seen in Extract 2, “President can and must do more to eliminate subsidies at home amidst the growing government budget deficit and concerns on climate change”, the use of the subsidy will likely leads to more negative consequences in the long run for all economic agents.

[Recommendation]

The use of a subsidy is merely a short-term intervention, which will create inefficiency in the market, especially when inefficient producers develop dependency on government for the subsidies. The government should instead encourage the use of cleaner renewable alternatives to fossil fuels which will seek to minimize the environmental impact as well.

L2: 4-6m	<p>Two-sided analysis with all consumers, producers and government perspectives considered</p> <p>Elaboration with sufficient theoretical links to lower prices / COP / Impact on govt budget</p> <p>Explicit and consistent reference to extract evidence</p>
L1: 1-3m	<p>One sided analysis (either consumers or producers or government perspectives considered)</p> <p>Elaboration lacks theoretical links to lower prices / COP / Impact on govt budget</p>

	Conceptual errors – misunderstanding of what government subsidies are and how they work No reference to extract evidence
E2: 2m	Stand with justification (through appropriate criteria)
E1: 1m	Stand without appropriate justification

(d) (i) Briefly explain the relationship between fossil fuels and renewable energy. [2]

Answers:

Fossil fuels and renewable energy are substitutes in consumption [1].

As seen in Extract 4, “While technological advancements have made it possible for renewable energy to be used in many of the same applications as fossil fuels... the energy efficiency of electric vehicles is much lower than traditional cars”, though both could be used in satisfying the same wants / needs (for eg energy input for driving vehicles). [1]

OR

When the price of fossil fuel increases, there will be a fall in quantity demanded of fossil fuel. Consumers will turn to renewable energy to meet their needs for energy input, thus the demand for renewable energy increase. [1].

(ii) Identify one possible opportunity cost of pouring large government funds into the renewable energy industry. [1]

Answers:

One of the possible opportunity cost is spending by the government on other sectors such as healthcare, education or defence. [1m]

(e) Do you think the use of government legislation would be the best measure in tackling the circumstances as those described in Extract 3? [8]

Answers:

Introduction

Market failure occurs when free markets fail to bring about an efficient allocation of resource when marginal social benefits do not equal marginal social costs. From Extract 3, as seen from “Oil refining creates further chemical, thermal and noise pollution and affects the health and safety of refinery workers and nearby communities and ecosystems”, it has been shown market failure occurs in the production of oil whereby third parties are negatively implicated. Hence there is a need for government intervention. Whether the use of government legislation or any other policy would be best depends on the criteria of effectiveness in achieving Qs and if there are any side effects of the policies in place, which this essay will seek to discuss.

BODY

The implementation of government legislation would be best in resolving market failure in oil production. Government legislation refers to the application of law through various policies in resolving market failure. Where MSC is greater than MSB for all output levels, the use of government legislation in the form of a ban of oil production will be effective in resolving market failure.

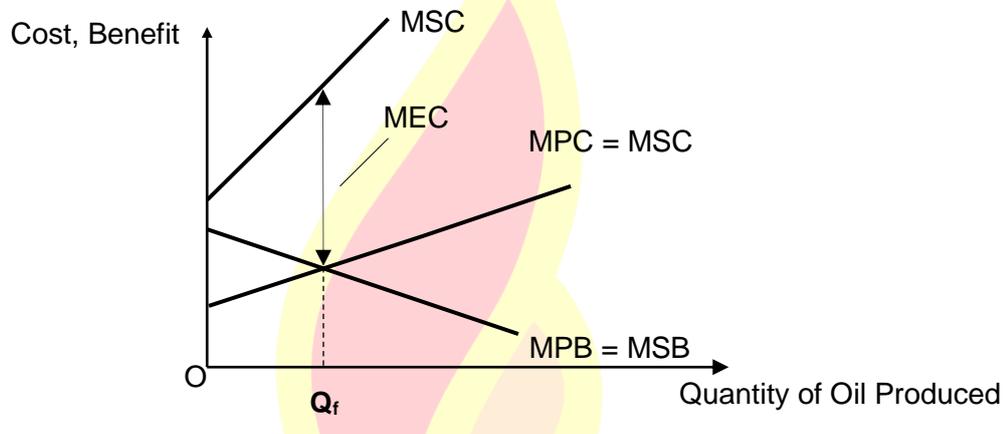


Figure 2: A ban is socially efficient

In the case of fossil fuel production plant that may result in an extremely large negative externality (i.e. a large MEC). This causes the divergence between MPC and MSC to be extremely large. In Extract 3, it was mentioned that “Gasoline and many of its additives are toxic and are associated with some types of cancer, with oil industry employees and those living near refineries”, this is shown in Figure 2, where the negative externality from oil production is so large that MSC exceeds MSB at all outputs. MSC and MSB do not intersect, i.e. the socially efficient amount of fossil fuel to be produced is zero. It is more optimal to ban the good, as any non-zero production of fossil fuel would result in an inefficient resource allocation for society. Thus, a ban will be best when the MEC of oil production is extremely large for production plants situated in densely populated regions.

However, when the negative externalities generated by the oil production do not cause such a great divergence such that MSC exceeds MSB at all output levels, i.e. there is still a positive socially efficient quantity that should be consumed, it will be inefficient to implement a ban. As can be seen from the Figure 3, MSC does not exceed MSB at all levels of output, i.e. there is still a positive amount of good that is socially efficient if produced (Q_s). Hence, by completely banning oil production, potential net benefit from producing oil is lost and this is illustrated by area A in Figure 3. In the example above, this area A, in fact, is far larger than the deadweight loss that would have been generated if the government had not intervened and had allowed the free market to prevail at Q_f , as illustrated by area B. The ban has created an even larger welfare loss (A) than at free market equilibrium (B). Therefore, the use of government legislation in the form of a ban would not be the best measure in tackling negative externalities in oil production.

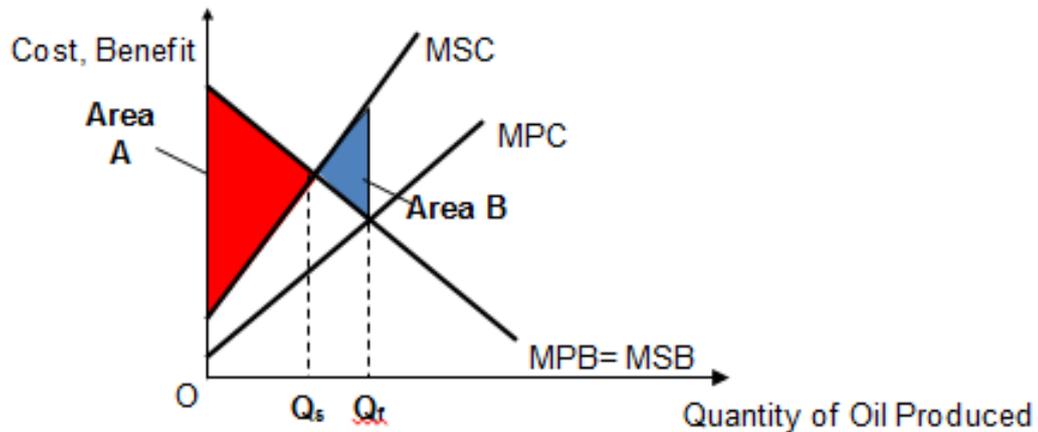


Figure 3: A ban is socially inefficient

Beside the use of a ban, the government can consider the implementation of a Pigouvian tax to reduce the production of oil to Q_s . The free market originally consumes at point Q_f where $MPB = MPC$. Pollution Tax is a tax is imposed by the government on oil producers. With the imposition of tax equal to the MEC at Q_s , there is internalisation of the negative externality, i.e. a tax makes oil producers consider the negative externality in their decision making. This causes the producers' MPC to shift up to MPC^* . As a result of this, the producers now produce until its new $MPC^* = MPB$, i.e. at Q_s . The allocative efficient output is achieved and the deadweight loss is eliminated. There is also a change in prices in the market. The equilibrium price was initially at P_1 but the new price is P_3 .

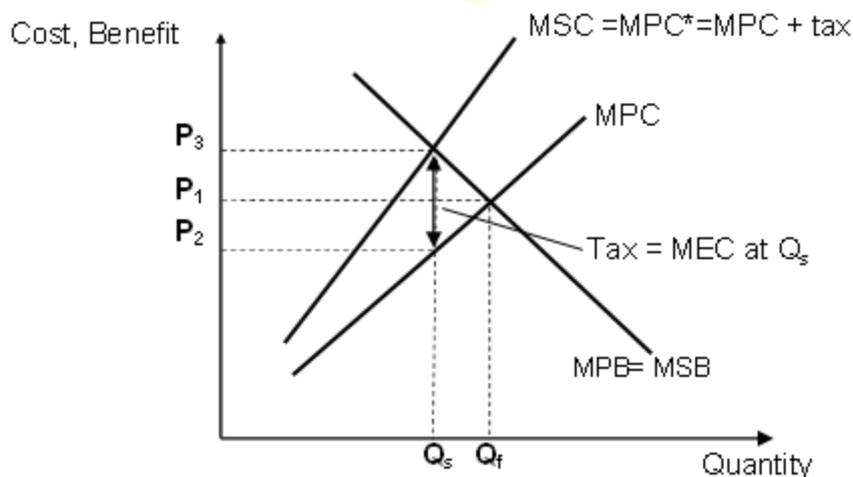


Figure 4: Use of tax to correct negative externality

The pollution tax will increase government revenue. And thus which is a source of funds to finance economic, social and community development projects (e.g. build or enhance the infrastructure). The increase in tax revenue can also be used as a subsidy to producers in developing cleaner technologies to reduce the negative externalities in oil production.

However, it is difficult to estimate MEC and therefore an accurate amount of pollution tax. An over-valuation of MEC means that output is below social optimum and society's welfare is not maximised. An under-valuation of MEC will also not maximise society's welfare as the output is reduced but the tax is not sufficient to reduce output

to the social optimal level. In addition, the demand for oil is price inelastic, thus producers will shift the burden of the tax to consumers and the fall in quantity produced will not be as effective as targeted.

In conclusion, the effectiveness in achieving Q_s should determine if the use of government legislation will be the best measure in tackling negative externalities in oil production. The ban is the best measure when the MEC is extremely large as the socially efficient quantity of production is zero in such cases. Alternatively, market-oriented measures such as pollution tax could be implemented to reduce the production levels to Q_s too. The government should implement a combination of policies as they complement one another

Note: Use of other measures such as Quota / Pollution Permit is accepted under Government Legislation.

L2: 4-6m	<p>Two-sided analysis – Explanation of the advantages and disadvantages of BOTH government legislation AND an alternative policy.</p> <p>Detailed explanation of the advantages and disadvantages of the use of government legislation can award up to 4m max.</p> <p>Elaboration with sufficient theoretical links to concept of negative externalities and elaboration of one other policy beside government legislation</p> <p>Explicit and consistent reference to extract evidence.</p>
L1: 1-3m	<p>One sided analysis - Explanation of the advantages and/or disadvantages of government legislation only.</p> <p>Elaboration lacks theoretical links to negative externalities or consist conceptual errors – misunderstanding of the source of market failure (negative externalities) and what government legislation is and how it works.</p> <p>No reference to extract evidence.</p>
E2: 2m	Stand with justification (through appropriate criteria)
E1: 1m	Stand without appropriate justification

Question 2

Trade and its impacts on Economies

Table 1: US: Selected economic indicators, 2010 – 2014

Economic indicators	2010	2011	2012	2013	2014
Growth in real gross domestic product (% change per annum)	2.5	1.6	2.3	2.2	2.4
Inflation Rate (% change per annum)	1.6	3.2	2.1	1.5	1.6
Unemployment Rate (% change per annum)	9.7	9.0	8.2	7.4	6.2
Merchandise Exports (US\$ trillion)	1.28	1.48	1.55	1.58	1.62
Merchandise Imports (US\$ trillion)	1.97	2.27	2.34	2.33	2.41

Table 2: China: Selected economic indicators, 2010 – 2014

Economic indicators	2010	2011	2012	2013	2014
Growth in real gross domestic product (% change per annum)	10.6	9.5	7.8	7.7	7.3
Inflation Rate (% change per annum)	3.3	5.4	2.6	2.6	2.0
Unemployment Rate (% change per annum)	4.2	4.3	4.5	4.6	4.7
Merchandise Exports (US\$ trillion)	1.58	1.90	2.05	2.21	2.34
Merchandise Imports (US\$ trillion)	1.40	1.74	1.82	1.95	1.96

Sources: *World Trade Organization* and *World Bank*

Extract 5: Economists see trade imbalance as a threat to US growth

In 2001, China joined the World Trade Organisation (WTO). Although this did not change any US tariffs on Chinese imports, a tsunami of cheap Chinese imports followed – Chinese imports surged from 1% of GDP in 2000 to 2.7% by 2015. Many blamed the yuan's peg to the dollar for creating a trade imbalance. By 2014 China had accumulated nearly \$4 trillion in foreign currency to sustain the peg.

At the same time, another threat to U.S. economic growth is the slowdown in China, say economists polled by *The Wall Street Journal*. The majority sees a risk from China's economy because the slowdown is already under way. China reported weakness in production and retail sales. Plus, as the world's second biggest economy, China has a large impact on trade flows, emerging-market currencies and the overall global financial system.

Sources: Adapted from *Wall Street Journal* and *The Economist*, 2014

Extract 6: Trade, at what price?

Cheap imports were a windfall for American consumers and more trade brought more choice too. The gains from cheap stuff flowed disproportionately to the less well-off, because the poor spend more of their incomes on goods than the rich.

Exports to China grew by almost 200% between 2005 and 2014, with agriculture and the aerospace and car industries leading the charge. Some workers have benefited from rising exports, because firms that export pay more – it is estimated that exporting firms pay 18% more than non-exporting firms. Economic theory predicts that trade, though often good for average incomes, will squeeze the pay of those workers whose skills are relatively abundant overseas. A sharp rise in the additional wages earned by skilled workers from around 30% in 1979 to almost 50% by 2000 seemed to corroborate that theory, as it coincided with the first wave of cheap imports. Economist Paul Krugman warned that the sheer volume of trade with China and other poor countries was probably increasing inequality. In 2013, his model showed that trade with poor countries depressed unskilled workers' wages by 10% in 2011, up from 2.7% in 1979.

For other economists, the impact of trade on jobs was a growing concern. The sharp decline in American manufacturing employment began in 2000, just as Chinese imports took off. Economists estimate about 1 million of 5.5 million manufacturing jobs lost between 1999 and 2011 to Chinese competition. However, similar-sized job losses in other non-export industries imply many other factors at play. Technological change is probably the prime culprit for shrinking manufacturing employment. Productivity increases in the industry have been staggering. For instance, since 1994 car-making's contribution to GDP has fallen by about 10%, but there are 30% fewer car-making jobs. This had led to the false impression that America's car industry has outsourced most of its work. But advances in manufacturing technology are such that if China disappeared tomorrow, far fewer jobs would return to America's shores than left them.

Source: *The Economist*, 2 April 2016

Extract 7: Rising tide of protectionism imperils global trade

It is clear there has been greater protectionism since 2012. Simon Evenett, professor of economics at the University of St Gallen and head of Global Trade Alert (GTA), says the world is witnessing “a resurgence of interest in industrial policy, the use of local content requirements and lots and lots of government subsidies for exporting.” He adds: “It's a reaction to weak economic growth”. Examples of export subsidies include Brazil's 3 per cent tax rebate for exports, and rebates on imported inputs that are used in exported finished goods in China and India.

Export incentives allow countries to steal market share from their competitors, in a classic beggar-thy-neighbour approach. However, Professor Evenett speculates that may not be the case. This is because some subsidized exporters may refrain from seeking to win business since they face uncertainty over whether they are competing against a subsidised rival backed by the firepower of its finance ministry. Export incentives should increase exports, but if they become so pervasive, murky and non-transparent, that creates uncertainty and uncertainty is a killer of exports.

Source: *Financial Times*, 18 February 2016

Extract 8: Relocation of jobs as Singapore economy restructures hit PMETs hardest

Older workers and those with higher educational qualifications took longer to find jobs after they were retrenched last year, compared to other groups. And the relocation of companies overseas, mainly from the services sector, is at its highest since 2004, resulting in more workers being laid off. Among the 9,090 residents made redundant last year, more than seven in ten were Professionals, Managers, Executives, and Technician (PMETs) and about 40 per cent of those laid off from PMET jobs are in their 40s.

Concern over the employability of older PMETs has prompted the Government to roll out schemes to help this group, including enhancements to Career Support Programme, which provides a wage subsidy to employers who hire older PMETs.

Among the reasons for axing workers, business restructuring remained the top-cited factor – where companies relocate some of their operations to low-cost countries. However, more companies pointed to the economic slowdown as their reason for trimming manpower. The Ministry of Manpower noted that the decline in oil prices affected jobs in the marine and offshore-related industries. Likewise, slowing demand for marine and construction affected industries such as fabricated metal products and engineering services.

Human Resource experts believed that layoffs will continue to rise considering the bleak economic outlook, even with the Monetary Authority of Singapore moderating the Singapore currency appreciation to support economic growth. The rising cost of production here will only spur more firms to relocate their operations, and those in the manufacturing sector will need to train in new skills and move to another industry. As the economy goes into upmarket manufacturing, that requires a lot of innovation to maintain cost, there will be no replacement on headcount as technology takes over.

Source: *Today*, 21 April 2016

Questions:

- (a) (i) Using Tables 1 and 2, compare China's balance of merchandise trade with that of US between 2010 and 2014. [2]
- (ii) Explain whether the balance of visible trade of these two countries support their growth rates shown in Tables 1 and 2. [4]
- (b) Explain how an undervalued Chinese yuan may worsen US balance of trade deficit. [2]
- (c) Explain how a slowdown in China may lead to a decrease in material SOL of US citizens. [2]
- (d) Using evidence from Extract 6, discuss the impact of trade liberalization on US households. [6]
- (e) Assess the impact of using export subsidies as a protectionist measure on the national income of a country. [6]
- (f) Discuss the extent to which current supply-side policies are adequate to reduce unemployment amongst PMETs as highlighted in Extract 8. [8]

[Total: 30]

ai)	<p>Using tables 1 and 2, compare China's balance of visible trade with that of US between 2010 and 2014.</p> <p>Difference: US has a BOT Deficit from 2010 to 2014 whereas China has a BOT surplus from 2010 to 2014 [1m]</p> <p>Difference 2: US deficit stable whereas China's surplus increasing OR Similarity: US deficit and China surplus increasing [1m]</p>	[2m]
aii)	<p>Explain whether the balance of visible trade of these two countries support their growth rates shown in Tables 1 and 2.</p> <p>[for each country] 1m for stating observation of data 1m for explaining link between (X-M) and NY + deciding whether it supports/doesn't support</p> <p>For US: US trade deficit is increasing, which means that (X-M) is decreasing, hence AD decreases and NY decreases. This does not support US positive growth rates OR This supports US' decreasing growth rates, since when (X-M) decreases, AD decreases and NY decreases, causing growth rates to decrease. OR US trade deficit is stable, hence this does not support US positive growth rates – NY may be increasing due to other AD/AS determinants OR since (X-M) doesn't change, AD and NY would have no change but NY is increasing.</p> <p>For China: The positive growth rates experienced by China can be supported by her increasing trade surplus since an increase in (X-M) will increase AD and therefore national income. OR However, despite experiencing an increase in trade surplus China still experiences a fall in growth rates. (Fall from 10.6% in 2010 to 7.3% in 2014). Other components of China's AD may be falling, offsetting partially the increase in (X-M). (Possible to be explained/substantiated by the previous point's explanation).</p>	[4m]
b)	<p>Explain how an undervalued Chinese yuan may worsen US balance of trade deficit.</p> <p>An undervalued yuan may cause Chinese exports to be cheaper than domestically produced US goods in terms of USD. (1m)</p> <p>If these Chinese exports are substitutes of domestically produced US goods, US consumers will increase their demand for Chinese imports instead of consuming locally. (or $PED > 1$; demand for Chinese goods is price elastic) This increase in import expenditure may worsen a US trade deficit. (1m) OR Demand for US' exports decrease since Chinese exports are more price competitive, hence US' X decreases, worsening US trade deficit (1m).</p>	[2m]

c)	<p>Explain how a slowdown in China may lead to a decrease in material SOL of US citizens.</p> <p>A decrease in China's NY would induce <u>a decrease in M</u>. This would lead to a <u>decrease in US' X</u>, decreasing US' AD. Hence, US' NY will decrease more than proportionately due to the multiplier effect. (1m)</p> <p>US citizens are now less able to consume goods and services, therefore material SOL decreases. (1m)</p> <p>OR</p> <p>China's exports decrease, causing US citizens to enjoy less/less variety of gds and services. (1m)</p>	[2m]
d)	<p>Using evidence from Extract 2, discuss the impact of trade liberalization on US households.</p> <p>Introduction</p> <p>Trade liberalization will lead to positive and negative impacts. The following response will outline these from the perspectives of households as consumers and workers.</p> <p>Thesis: Trade liberalization has led to positive impacts on US households.</p> <p>1/ Competition from cheaper foreign imports would drive prices of domestic goods down through an increase in supply, leading to an increase in consumer welfare in terms of consumer surplus. As evident in extract 2, "prices of goods have fallen almost every year due to a rise in imports". Trade liberalization also forces domestic producers to innovate, cut costs and improve product quality/variety. Hence, consumers also benefit in terms of more product choices as explained in extract 2. This either happens through intra-industry trade or the imports of new foreign products.</p> <p>2/ As shown in extract 2, some workers have benefited from rising exports, because firms that export pay more". Since demand for exports increase, demand for labour being a derived demand from export sectors would increase, leading to a rise in wages. Those working in export sectors would experience an increase in household income, leading to a greater ability to consume goods and services, increasing material SOL.</p> <p>Anti-thesis: Trade liberalization has led to negative impacts on US households.</p> <p>1/ As shown in extract 2, "A sharp rise in the additional wages earned by skilled workers...trade with poor countries depressed unskilled workers' wages". Although increased trade may increase average incomes through an increase in AD and NY, the impacts on skilled and unskilled labour would differ due to the relative abundance of unskilled labour. The abundance of unskilled labour in poor countries would lead to a fall in wages of unskilled labour whereas the relative scarcity of skilled labour would cause a rise in wages of skilled labour. This leads to an increase in income inequality, which decreases non-m SOL.</p> <p>2/ According to extract 2, "the sharp decline in American manufacturing employment began in 2000, just as Chinese imports took off." Trade liberalization may lead to the outflow of available manufacturing jobs as producers shift jobs to lower-cost countries in order to reduce costs of</p>	[6m]

	<p>production to compete with cheaper foreign imports. This would lead to an increase in unemployment and decrease in material SOL as households are less able to consume g/s.</p> <p>Synthesis: Stand: Generally positive impact Justification: [SPACE]/[Many thinking hats] Increase in unemployment is concentrated in manufacturing and “technological change is probably the prime culprit” instead of trade. Technological unemployment may be a result of producers’ efforts to increase productivity through the use of technology. This would make them competitive in the LR w.r.t lower-cost foreign producers.</p> <p>Costs are also concentrated on unskilled workers or workers in non-export sectors that do not reap benefit. Trade liberalisation should continue with policies to aid workers to move into higher growth exporting sectors.</p> <table border="1" data-bbox="264 763 1278 1070"> <tr> <td data-bbox="264 763 459 936">L2: 4-6m</td> <td data-bbox="459 763 1278 936">6m: only if overall synthesis is present Two-sided analysis Elaboration with sufficient theoretical links (to SOL, AD/AS, 4 macro aims, household income, consumer surplus) Reference to extract evidence</td> </tr> <tr> <td data-bbox="264 936 459 1070">L1: 1-3m</td> <td data-bbox="459 936 1278 1070">One sided analysis Elaboration lacks theoretical links (to SOL, AD/AS, 4 macro aims, household income, consumer surplus) No reference to extract evidence</td> </tr> </table>	L2: 4-6m	6m: only if overall synthesis is present Two-sided analysis Elaboration with sufficient theoretical links (to SOL, AD/AS, 4 macro aims, household income, consumer surplus) Reference to extract evidence	L1: 1-3m	One sided analysis Elaboration lacks theoretical links (to SOL, AD/AS, 4 macro aims, household income, consumer surplus) No reference to extract evidence	
L2: 4-6m	6m: only if overall synthesis is present Two-sided analysis Elaboration with sufficient theoretical links (to SOL, AD/AS, 4 macro aims, household income, consumer surplus) Reference to extract evidence					
L1: 1-3m	One sided analysis Elaboration lacks theoretical links (to SOL, AD/AS, 4 macro aims, household income, consumer surplus) No reference to extract evidence					
e)	<p>Assess the impact of using export subsidies as a protectionist measure on the national income of a country.</p> <p>Introduction This response will outline the effect of export subsidies on national income – whether it increases or decreases.</p> <p>Thesis: 1/ Protectionist measures stated in extract 3, like “tax rebate for exports, and rebates on imported inputs that are used in exported finished goods” will decrease cost of producing exported goods. This would increase supply of exports, decreasing its price. Given the availability of substitutes in the global market, quantity of exports will increase more than proportionately. X increases, leading to an increase in AD and a more than proportionate increase in national income due to the multiplier effect.</p> <p>Anti-thesis: 2/ As stated in extract 3, “Export incentives allow countries to steal market share from their competitors, in a classic beggar-thy-neighbour approach”. This would lead to foreign countries’ X decreasing, decreasing their NY, inducing their M to fall. Ultimately, the protectionist country’s X decreases leading to further rounds of decrease in each country’s X and NY due to the international multiplier.</p> <p>3/ The tax rebates would mean a decrease in tax revenue and hence decrease the government’s budget. This would mean less government budget left for the provision of other social services, merit and public goods; less government reserves for the use of fiscal policy to increase national income in times of recession.</p>	[6m]				

	<p>Synthesis: (various possibilities) [Space] The overall impact on the country's national income would depend on whether the export subsidy is narrowly/widely applied. When applied to a small export sector, impact on X-M may not be significant.</p> <p>[Questioning Assumption] The national income of the country using export subsidies may not increase if the demand for its exports is price inelastic – an increase in export price competitiveness would not be the most significant factor in consumer's choice about which country's good to produce. Hence quantity demanded for exports increase less than proportionately, X may decrease instead.</p> <p>[Predictions/Outcomes] There will be no impact on national income as uncertainty may lead to firms not expanding market share "some subsidised exporters may refrain from seeking to win business since they face uncertainty over whether they are competing against a subsidised rival backed by the firepower of its finance ministry", hence the export subsidy will not achieve its intended objective as firms remain status quo.</p> <table border="1" data-bbox="264 936 1278 1205"> <tr> <td data-bbox="264 936 456 1104">L2: 4-6m</td> <td data-bbox="456 936 1278 1104">6m: only if overall synthesis is present Two-sided analysis Elaboration with sufficient theoretical links (to AD/AS, NY, PED) Reference to extract evidence</td> </tr> <tr> <td data-bbox="264 1104 456 1205">L1: 1-3m</td> <td data-bbox="456 1104 1278 1205">One sided analysis Elaboration lacks theoretical links (to AD/AS, NY, PED) No reference to extract evidence</td> </tr> </table>	L2: 4-6m	6m: only if overall synthesis is present Two-sided analysis Elaboration with sufficient theoretical links (to AD/AS, NY, PED) Reference to extract evidence	L1: 1-3m	One sided analysis Elaboration lacks theoretical links (to AD/AS, NY, PED) No reference to extract evidence	
L2: 4-6m	6m: only if overall synthesis is present Two-sided analysis Elaboration with sufficient theoretical links (to AD/AS, NY, PED) Reference to extract evidence					
L1: 1-3m	One sided analysis Elaboration lacks theoretical links (to AD/AS, NY, PED) No reference to extract evidence					
f)	<p>Discuss the extent to which current supply-side policies are adequate to reduce unemployment amongst PMETs as highlighted in extract 4.</p> <p>Introduction This response will discuss the effectiveness of SSP in reducing unemployment amongst PMETs by explaining how such policies work and exploring their limitations.</p> <p>Thesis: According to extract 4, one such SSP is "a wage subsidy to employers who hire older PMETs". This would lower firms' cost of production by reducing firms' wage bill. This would increase their demand (or mitigate the fall in demand) for labour and reduce the rate of outflow of jobs to low cost countries, hence reducing the unemployment rate in Singapore.</p> <p>Counter argument: However, wage cost is not the root cause of the fall in demand for labour. Redundancy of workers is caused by a fall in AD, causing NY to decrease more than proportionately due to the multiplier effect, and increasing (cyclical) unemployment since labor is a derived demand. As evident in extract 4, "more companies pointed to the economic slowdown as their reason for trimming manpower."</p>	[8m]				

Anti-thesis: Supply-side policy alone may hence be inadequate in dealing with unemployment since the economic slowdown is the root cause. Demand management policy will also be required. The government could practice expansionary fiscal policy. By increasing G and decreasing T, consumption and investment will increase since there will be more disposable income for consumers and more after-tax profits for producers. Increasing G, C and I would lead to an increase in AD and more than proportionately increase in NY. Demand for labour will increase since it is a derived demand, which would decrease cyclical unemployment amongst PMETs.

Retraining reduces structural unemployment

Another cause of the rise in unemployment is due to business restructuring, which according to extract 4, “remained the top-cited factor – where companies relocate some of their operations to low-cost countries”. Furthermore, the rising cost of production here will only spur more firms to relocate their operations, and those in the manufacturing sector will need to train in new skills and move to another industry”. Hence SSP policies such as retraining of workers will help workers to acquire new skills to enable them to move on to other industries where there is still high demand for labour or into industries where there is potential comparative advantage. Retraining could also mitigate the rise in cost of production by increasing productivity – a rise in output per man hour would lead to a decrease in unit cost of production.

Counter argument:

However, it is uncertain whether retraining could be successful in increasing productivity. It may either take a long time or some workers may not successfully retrain.

Synthesis:

[Time]

Stand: wage subsidy adequate in the SR to reduce negative impact on PMETs
Justification: Retraining crucial in the LR due to expected increase in technological unemployment in the manufacturing industry -> need to move to other industries. According to extract 4, “As we want to go into upmarket (manufacturing), that requires a lot of innovation to maintain cost ... so there will be no replacement on headcount as (technology) takes over”

L2: 5-6m	Two-sided analysis Elaboration with sufficient theoretical links (to AD/AS, NY, PED) Reference to extract evidence
L1: 3-4m	One sided analysis or two sided analysis but lacking in elaboration Elaboration lacks theoretical links (to COP, AS, productivity) No reference to extract evidence
L1: 1-2m	One sided analysis Conceptual errors – misunderstanding of what SSPs are and how they work.
E2: 2m	Stand with justification (through appropriate criteria)
E1: 1m	Stand without appropriate justification

Section B - Essays**Question 3:**

(a) Using the production possibility curve (PPC) diagram, explain the central economic problem that all societies have to address. [10m]

(b) Discuss the most appropriate economic policies for a country to shift its PPC outwards. [15m]

3a) Using the production possibility curve (PPC) diagram, explain the central economic problem that all societies have to address. [10m]

Question Analysis

Command	Explain: Students need to illustrate with the use of a PPC diagram the concepts of scarcity, choice and opportunity cost.
Content	Scarcity, Choice and Opportunity Cost
Context	No specific context
Approach	This question requires students to utilise the PPC to explain the central problem of economics that all economies face. The answer should explain the relevant concepts of scarcity, choice and opportunity cost and make clear and specific reference to a PPC diagram.

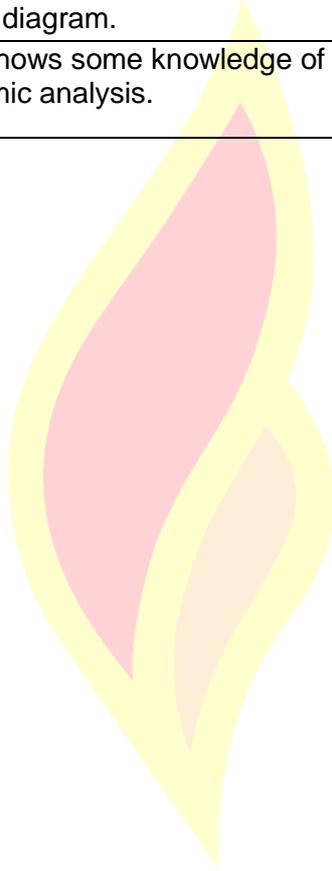
Introduction	<p>The Central Problem of Economics is the issue of scarcity. The problem of scarcity arises because human wants are unlimited, but limited resources are not enough to meet all of society's wants.</p> <p>As a result, scarcity necessitates choice, such that the society allocates limited resources to produce a certain combination of goods and services that satisfies maximum wants.</p> <p>When any choice is made, the next best alternative foregone is the opportunity cost associated with that choice.</p> <p>These concepts can also be clearly illustrated with the help of a Production Possibility Curve (PPC).</p>	<p>Definition/ Overview</p>
Body	<p>Paragraph 1</p> <p>Scarcity necessitates choice and leads to opportunity costs.</p> <p>Individuals are assumed to be rational in their decision making by weighing the benefits and costs carefully when making a choice. Choice is the act of selecting among alternatives and it involves the need to make sacrifices.</p> <p>For example, the country can choose to allocate resources in numerous ways to produce different combinations of consumer goods and capital goods, i.e. the country can choose to produce more consumer goods but less capital goods or to produce less consumer goods but more capital goods.</p>	<p>Point</p> <p>Explain the concepts of choice</p> <p>Example</p> <p>Explain opportunity cost</p>

	<p>The sacrifice of alternatives in the production or consumption of a good or the carrying out of an action is known as its opportunity cost, which is the next best alternative foregone. This represents the real cost of the good consumed or produced or the activity being carried out.</p> <p>For example, given the amount of resources and the state of technology, an additional unit of consumer goods produced implies giving up the opportunity to produce capital goods. The more consumer goods a nation produces, the less resources available to produce capital goods, due to scarce resources.</p> <p>Scarcity of resources puts a limit on how much goods and services an economy is capable of producing to satisfy maximum wants necessitates choices to be made. Every time an economic agent makes a choice, there is a trade-off for the use of that resource for one or more alternative use(s). The trade-off associated with that choice is known as the opportunity cost.</p>	<p>Example</p> <p>Link</p>
<p>Body</p>	<p>Paragraph 2 The concepts of scarcity, choice and opportunity cost can be illustrated graphically by using a production possibility curve (PPC)</p> <div data-bbox="399 1075 1165 1612"> </div> <p>Figure 1 is the PPC that shows all the possible combinations of two goods (i.e. capital goods and consumer goods) that a country can produce with all its available resources / factors of production fully and efficiently employed within a specified period of time with a given state of technology.</p> <p>By definition, the PPC indicates the maximum quantity of the two goods illustrated that can be produced with the resources and technology available. Thus, combinations beyond the boundary are unattainable.</p>	<p>Point</p> <p>Explain the PPC</p> <p>Explain the central economic problem, using the PPC diagram</p> <p>Illustration/ Example</p> <p>Explain choice, using</p>

	<p>Hence, the problem of scarcity is represented by the unattainable combinations of consumer goods and capital goods, which lie outside of the PPC (e.g. Point Y)</p> <p>Movement along the PPC represents the concept of choice.</p> <p>For example, the country can choose combination A that consists of all capital goods and no consumer goods produced or combination E that consists of all consumer goods and no capital goods produced. Combinations B, C and D consist of both capital goods and consumer goods produced, with the amount of each good differing. Since it is impossible to increase the production of consumer goods without reducing the production of capital goods, the movement along the PPC also represents the concept of opportunity cost.</p> <p>The concept of opportunity cost is also illustrated by the negative slope of the PPC. The PPC is downward-sloping from left to right illustrating that scarce resources have alternative uses and the trade-off as we move resources from one industry into the other.</p> <p>If the country wishes to produce more of consumer goods, it will have to give up some units of capital goods.</p> <p>Referring to Figure 1, suppose the country is currently producing at point C and it wishes to increase the production of capital goods by 1 unit.</p> <p>To do so, it will have to divert resources away from the production of consumer goods, thereby reducing the output by 12 units (from 30 units to 18 units), moving from point C to D. This trade-off of consumer goods production is the opportunity cost associated with the above choice.</p>	<p>the PPC diagram</p> <p>Illustration/ Example</p> <p>Explain opportunity cost using the PPC diagram</p> <p>Illustration/ Example</p>
Conclusion	<p>All societies face the problem of scarcity because resources are limited and human wants are unlimited. Scarcity forces society to choose between the competing uses of the limited resources which results in opportunity costs.</p>	

Level	Descriptor	Marks
L3	<p>For a well-developed answer that demonstrates scope and detailed economic explanation of the central problem using the PPC framework linking to concepts of scarcity, choice, opportunity costs.</p> <p>Clear reference of the above concepts made to the PPC diagram.</p>	7 - 10

L2	Underdeveloped or erroneous explanation of the the central economic problem and the concepts of scarcity, choice and opportunity cost to resource allocation. Makes scant or unclear reference of the above economic concepts to the PPC diagram.	5 - 6
L1	For an answer that shows some knowledge of what scarcity is but lacking in economic analysis.	1-4



3b) Discuss the most appropriate economic policies for a country to shift its PPC outwards. [15m]

Question Analysis

Command words:	Discuss... the most appropriate To consider the various governmental policies and its strengths and limitations. 'most appropriate' the stand has to be concerning which of the policies raised will the most appropriate according to a set criteria.
Content:	Factors that shift the PPC (Quantity of resources, Quality of resources, State of Technology)
Context:	No specific context
Approach	Set criteria of what constitute "most appropriate" The question invites students to discuss of how governments are able to shift their PPC outwards to improve the SOL of a country by allowing for the possibility of a higher level of consumption of the 2 goods represented on the PPC. Students need to show how governments are able to utilise policies to achieve the above mentioned aim. A balanced view should recognise the trade-offs and limitations of each policy before a justified synthesis needs to be made on the most appropriate policy choice based on the initial criteria set.

Outline

Introduction	Provide a context for the analysis of the policies. Provide specific criteria to determine the most appropriate policy in said context.
P1	Show how governmental policies are able to increase the quantity of resources in a specific context. Provide real-world examples of how this is done Provide an evaluation of the limitations of the policy mentioned.
P2	Show how governmental policies are able to increase the quality of resources in a specific context. Provide real-world examples of how this is done Provide an evaluation of the limitations of the policy mentioned.
P3	Show how governmental policies are able to increase state of technology in a specific context. Provide real-world examples of how this is done Provide an evaluation of the limitations of the policy mentioned.
Conclusion	Provide a reasoned stand on the most appropriate policy choice for a government by using the initial criteria set.

Introduction	In any economy, it is also important for the government to seek to maximise the standard of living for its country. This can be done if the government is able to achieve both actual and potential economic growth. Actual growth is illustrated by a movement from a point within the PPC to a point on the PPC while potential growth is shown when the government shifts the PPC outwards. This results in the growth of the productive capacity of the economy, enabling the economy to achieve long-term non-inflationary growth and remains as a key long term	Identify objectives of the government.
---------------------	---	--

	<p>objective for most governments.</p> <p>The PPC can shift outwards if there is an increase in the quantity and quality of resources or if there is an improvement in the state of technology within an economy. Thus, Supply-Side policies are conventionally utilised by governments as they targeting the 3 areas mentioned above.</p> <p>To decide on the most appropriate policy option, governments need to critically examine the strengths and limitations of its policies with the most appropriate policy being that which delivers short term results but can also be sustainable in the long run.</p>	<p>Define criteria for decision on 'most appropriate'</p>
<p>Paragraph 1</p> <p>How the Govt. is able to increase the quantity of resources</p>	<p>The PPC can be shifted outwards if there is an increase in the quantity of resources within a country. The government can consider relaxing its immigration policies to allow for a higher influx of foreign labour as well as land reclamation.</p> <p>Both land and labour are key factor inputs required in the production of goods and services within an economy. By making available greater quantities of these resources, the economy will be able to increase its level of output resulting in an outward shift of the PPC.</p> <p>For example, in land scarce Singapore, the government faced the challenge of having sufficient land for the nation's competing needs. Land reclamation has enable the government to develop industrial sectors in Tuas and Jurong while not compromising on the existing land already designated for other purposes such as Residential or Commercial needs. Furthermore, faced with an ageing population and the dwindling birth rate, the Singapore Government has adopted an open immigration policy to allow the hiring of foreign workers to sustain the economic activity within the country amidst the manpower crunch. This has resulted in double-digit growth rates even after the global recession in 2008.</p> <p>However, these policy choices are not without its downsides. While the hiring of foreign workers definitely helped boost economic activity within the country, the nation's infrastructure could not accommodate the exponential increase in population numbers. This has resulted in overcrowding in the public transport and residential sectors across the country. On the other hand, the process of land reclamation is a long and costly process. On average, it could take up to ten years before reclaimed land can be utilised, not to mention the high cost involved in importing the raw materials required for this process given the lack of natural resources in Singapore.</p> <p>Hence, while governments can consider policies to increase land and labour resources in its countries, these policies may lead to unintended consequences and may not yield the required results in the short term.</p>	<p>Point</p> <p>Elaboration</p> <p>Example</p> <p>Evaluation</p> <p>Link</p>

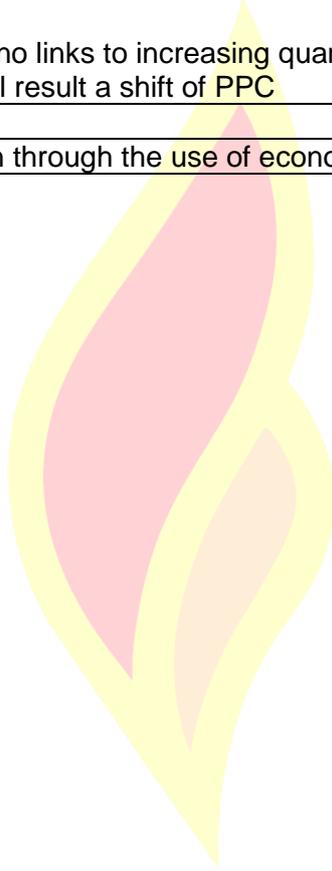
<p>Paragraph 2</p> <p>How the Govt. is able to increase the quality of resources</p>	<p>The PPC can also be shifted outwards if there is an improvement in the quality of the resources in a country. The government can also consider a reduction in tax to encourage capital accumulation and entrepreneurship.</p> <p>The productive capacity of an economy can be increased by increasing the quantity and quality of its capital equipment. Investment in capital is able to increase the existing productivity and produce more goods/services per resource unit in a specific time period, thereby leading to an output increase within the economy. The funds needed for capital formation can be obtained from foreign direct investment (FDI).</p> <p>Another way to improve productive capacity is the development of Human Capital. Human capital refers to the accumulated skill and knowledge of workers. It is regarded as the most fundamental source of economic growth. It can be acquired through education, training and work experiences. If knowledge is lacking, other resources may not be used efficiently.</p> <p>For example, in Singapore, our Corporate Income Tax is extremely low at 17%. This is done so as to encourage the inflow of FDI. On the labour front, the Singapore government has pursued many policies to develop its workforce through initiatives such as Skills Future, Skill Programme for Upgrading and Resilience (SPUR), Continuing Education and Training (CET) etc. These initiatives ensure that our workforce is able to remain competitive in terms of knowledge and skills such that they are able to leverage upon the capital equipment to boost the nation's productivity levels.</p> <p>However, these policies may have limited effect on improving productivity. Corporate tax is only one factor which affects investment decisions. Ultimately for firms to invest in a country there are many other contributing factors such as the business climate or ease of conducting business in the country. Also, although the shift in tax regime helps to encourage investment and work efforts, it may result in greater income inequality. Training Programmes for workforce improvement also may not achieve its desired outcome as these programmes are still largely voluntary. Moreover, training and education takes time and the effects of productivity boosts may only be observable in the long term.</p> <p>Hence, improving the quality of resources may not be as useful in the short-run to shift the PPC outwards.</p>	<p>Point</p> <p>Elaboration</p> <p>Example</p> <p>Evaluation</p> <p>Link</p>
<p>Paragraph 3</p> <p>How the Govt. is able to improve the state of technology</p>	<p>Lastly, the PPC can be shifted outwards if there is an improvement in the state of technology in the country. The government can adopt measures to encourage R&D and innovation to level up the existing technology within its country.</p> <p>Over the years, technology has been playing an increasingly crucial role in increasing the productivity of existing resources. The productivity of the country's</p>	<p>Point</p> <p>Elaboration</p> <p>Example</p>

	<p>resources increases when technology improves.</p> <p>In recent years, Singapore has made leaps and bound in terms of technological progress. The government has invested heavily in developing the islands connectivity and network capabilities. Since its inception in 2015, the Singapore government has adopted the Intelligent Nation 2015 (iN2015) Masterplan with the primary objective harnessing info-communication technologies to enrich and add value to the economy. These technological advances have many benefits such as allowing for remote access and diagnostics within the healthcare sector, opening avenues of e-commerce for businesses and improving the logistics and supply chain productivity across the island to name a few. This boost in both human and capital equipment productivity will definitely allow Singapore to achieve much desired potential growth in time to come.</p> <p>However, similar to education and training, technological progress also takes time to reach its fullest potential. Also, technological progress must be matched with the improvement of human capital in terms of the requisite knowledge and skills for it to be optimally utilised.</p> <p>Therefore, technological advancement policies cannot be a stand-alone policy if the government intends to achieve a long-run sustainable approach to achieving potential economic growth and an outward movement of the PPC.</p>	<p>Evaluation</p> <p>Link</p>
Conclusion	<p>The most effective policies need to be sustainable in the long term in terms of cost effectiveness as well as deliver short term results. The policies should also not achieve potential growth at the expense of other objectives. No one policy is capable of achieving all the above on its own so the most appropriate option for any government is to use a combination of various policies to achieve potential growth and shift its PPC outwards.</p> <p>Taking reference from the context of Singapore, a country's government can first lower Corporate Tax to attract FDI. This approach will likely yield results in the short run. However, to ensure that the country remains a choice location for foreign business investments, the government must continually ensure that there are policies in place to develop and improve both the human capital and the state of technology so as to remain competitive in the long run.</p>	

LORMS

Level	Descriptor	Marks
L3	<p>2-sided discussion of the effect of the various policies for economies, linking adequately to both the increase in quantity and quality of resources and the state of technology.</p> <p>Excellent exemplification of the examples given.</p>	9-11m
L2	<p>One-sided explanation of the effect of various policies for economies,</p> <p>OR</p>	6-8m

	Underdeveloped 2-sided explanation of the various policies for economies with adequate reference to the increase in quantity and quality of resources.	
L1	Failure to grasp the relevant economic concepts Mere listing of policies with little or no elaboration. OR Presented policies but no links to increasing quantity and quality of resources or technology which will result a shift of PPC	1-5m
E1	Unjustified evaluation	1-2m
E2	Well justified evaluation through the use of economic arguments.	3-4m



CJC

Question 4

- (a) Explain how a recession in USA might cause a balance of payment deficit in Singapore. [10]
- (b) Discuss the view that depreciating the exchange rate is a more appropriate policy in correcting a BOP deficit in Singapore than expenditure reducing policy. [15]

Part a

Explain why a recession in USA might cause a balance of payment deficit in Singapore. [10]

Introduction

Definition of BOP and components of BOP

BOP deficit

- When the value of payments made to other countries, from imports, outflow of investment and financial capital, exceeds the earnings made from exports and inflows of investment and financial capital.
- The deficit can originate from current account or capital account. A country can have a current account deficit and yet having overall surplus due to a surplus in the capital account that exceeds the current account deficit.

Body**Paragraph 1****Recession in the USA**

- Define recession: an economic condition when a country experiences a decline in Gross Domestic Product (GDP) over two consecutive quarters (six months). Define GDP.
- Recession is usually accompanied with rising unemployment rate and falling or negative rate of inflation.
- Examples of recession in the USA: Subprime crisis, Global recession, September 11th

Paragraph 2

How recession in the USA can cause a BOP deficit in Singapore

- Singapore's dependence on exports makes her vulnerable to negative economic conditions in other countries such as the USA. If one of Singapore's trading partners were to experience a recession, demand for her exports would fall. This reduces AD which leads to lower equilibrium national output. Thus, the Singapore economy is susceptible to demand shocks. A fall in her exports would worsen her current account. For example, Singapore's current account was affected during the financial crisis of 2007/2008.
- US recession which causes falling GDP, rising unemployment → falling imports (imports directly related to national income) + falling investment and portfolio capital outflows to Singapore → worsening of Singapore's current account and capital account and financial account → may lead to overall BOP deficit in Singapore

Paragraph 3

- As an economy structurally dependent on international trade, Singapore's export sectors were affected by a slump in export demand. It was observed that the most iconic industries of Singapore's value-adding restructuring effort – bio-medicals and tourism –

relied heavily on external demand and had ironically made Singapore more vulnerable to the recession in the US. Singapore was also one of the most exposed Asian economies during the crisis; as although volumes of intra-Asian trade in intermediate goods increased, US markets remained the final export destinations of high-end manufacturing products such as electronics. In 2008, GDP contracted due to manufacturing in Q2 and then the slippage extended to construction and a broad range of services → deterioration of the BOT account of the current account.

Paragraph 4

- Singapore's position as a trade hub supporting trade-related services from transportation to trade finance mean that the recession in the US will have ramifications exceeding the export-oriented manufacturing sector. Its financial services industry contracted and trading activities fell substantially in foreign exchange, stock brokerage, and fund management. This accounts for why Singapore was one of the hardest hit economies during the global downturn. In fact, this financial crisis was the worst Singapore experienced since its independence in 1965. The downward pull of the global recession on Singapore's BOP continued into 2009. Singapore's current account (both visible and invisible account) as well as financial account deteriorates affecting the overall BOP.

Paragraph 5

- Globalization has made countries' economies internationally interconnected. The effects of recession elsewhere on a country are both direct and indirect, eg. when US goes into a recession → import and invest less not only from Singapore but also from other countries such as China. Recession in US would lead to a fall in US import demand. This may cause a decrease in Chinese exports to US and a fall in Chinese export revenue (and hence national income). This will in turn lead to a decrease in Chinese demand for Singapore's exports which is significant since exports to China is 10% of Singapore's total export revenue. Fall in national income also result in a fall in Chinese investment to Singapore. Overall BOP may worsen.

Paragraph 6

- The widespread effects of a recession in US are significantly caused by global supply chain in today's manufacturing and trade patterns. Most goods in the US are now produced in different countries/ parts of the world before imported to a country – the reason why a recession in US would affect not only Singapore but more than just the country it imports goods from and this will indirectly affect Singapore's current account.

Accompanying the global supply chains is the significance of foreign direct investment and portfolio capital flows. Hence when US suffers a recession, American firms will also be investing less or placing less funds in Singapore, thus affecting our capital and financial account and thus our overall BOP.

Conclusion

- Singapore will be negatively affected by the US slowdown due to its small and open economy. In spite of this heightened potential vulnerability to capital reversals in the region, Singapore's vulnerability to a slowdown in the financial market and capital

outflows may be buffered by a consistent current account surplus, and a high sovereign rating of AAA.

(a)	Descriptors	Marks
L3	<ul style="list-style-type: none"> ▪ Causes cover factors affecting both current and capital account ▪ Explanation with sound conceptual clarity ▪ Clear linkage of factors to external recession in a different region/ part of the world (eg. recession in US affecting another country and therefore indirectly affecting Singapore) 	9-10
	<ul style="list-style-type: none"> ▪ Conceptually accurate explanation covering mainly current account only ▪ Makes links to external recession although elaboration may be lacking 	7-8
L2	<ul style="list-style-type: none"> ▪ Conceptually not sufficient, eg. key terms such as BOP deficit and recession used but not defined ▪ Linkage to recession in another part of the world minimal/incidentally mentioned 	5-6
L1	<ul style="list-style-type: none"> ▪ Very superficial answer ▪ Many conceptual inaccuracies 	1-4

Part b

Discuss the view that depreciating the exchange rate is a more appropriate policy in correcting a BOP deficit in Singapore than expenditure reducing policy. [15]

Introduction

Depreciation; Currency becomes cheaper in terms of foreign currencies → country's goods and services become cheaper in foreign currencies & its imports more expensive in the domestic currency. A currency may depreciate when demand for it is falling due to declining exports and inflows of capital and FDI are falling due to weakening economic performance. Explain the meaning of expenditure-reduction policy → These involve a general reduction in aggregate demand to achieve the goal of **reducing expenditures on imports**

Paragraph 1:

Thesis:

Exchange rate depreciation can be considered more appropriate than expenditure Reducing policy because it is caused by weakening economic fundamentals of a country and not a deliberate policy of reducing import.

- It is needed when a country is facing both BOP deficit and slow-down in economic growth. Depreciation has broader effects on both exports and FDI and foreign markets may be more receptive to a country's goods and services.
- While depreciation helps to make domestic production more competitive at home or overseas, this happens through market forces and not deliberate protection of home market.

- With depreciation, imports will be more expensive and exports will be cheaper. Assume M-L this will lead to an increase in export revenue and fall in import expenditure resulting in improvement in the trade account.
- Depreciation of Exchange rate can affect investment. This is because in the event of depreciation, the costs of setting up operations would be lower, ceteris paribus. On the other hand, at any given time a weaker currency would again enhance competitiveness for exports and hence attract more investors, ceteris paribus. This will improve the capital account and hence the BOP.
- Exchange rate depreciation is market-led, not the result of tampering of trade policy by the government. Other countries will be more receptive to weakening exchange rate than the use of tariffs and which are recognized as unfair trade practices. With depreciation it is harder for foreign governments to fault this expansionary policy.

Paragraph 2
Anti-thesis 1

However, depreciation becomes inappropriate when it has been caused by deliberate manipulation of the country's central bank to achieve healthy trade position and economic growth.

- Prolonged depreciation can be considered a protectionist approach as it would have involved continual central bank's intervention to weaken currency
- Depreciation should be just a short term market-led adjustment for country to improve BOP. It is not appropriate as a long term strategy because domestic producers will grow reliant on depreciation for competitiveness. Depreciation cannot replace the need for restructuring measures to improve competitiveness such as upgrading of labour skills and technology.
- Depreciation causes rising domestic inflation through increase in (X-M) a component of AD and this will eventually weaken the country's trade position and economic condition.
 - Depreciation will cause rising cost-driven domestic inflation if country is import-reliant for food, raw materials and even industrial components. This import reliance will make it difficult for country to achieve the Marshall-Lerner condition (for sum of price elasticity of demand for import and export demand exceeds one).
 - Rising domestic inflation due to depreciation poses similar welfare effects as tariffs and NTBs which will cause rising domestic business costs and cost of living due to higher import prices.
 - Rising domestic inflation will weaken the effect of depreciation in correcting BOP deficit. For countries with highly price inelastic demand, the deficit may even worsen.
 - FDI may also be discouraged with a weak currency as the profits they earn will have lower value and the capital account may also deteriorate.

Paragraph 3
Anti-thesis 2

Expenditure reducing policy may be more appropriate than depreciating the exchange rate .

- Expenditure-reduction policies may include contractionary fiscal or monetary policies that reduce aggregate demand, which would reduce expenditure on imports. In Singapore contractionary Fiscal policy will be used.
- **Contractionary fiscal policy** → e.g. a reduction in government expenditure and/or a rise in taxes to reduce aggregate demand.
 - ➔ Expenditure on imports could be reduced, with a long-term view of eradicating the deficit BOP.
 - ➔ Contractionary fiscal policy will lower AD, and will also lower domestic inflation → improvement in competitiveness of exports, hence also reducing trade/ current account deficit.
- Expenditure reducing results in a fall in AD and therefore a fall in GPL. This results in price stability which in turn attracts FDI and therefore improve financial account.

Paragraph 4

Evaluation → The effectiveness of fiscal policy depends on:

- The extent of conflict between external and internal objectives:
 - i. As the BOP deficit improves, the deflationary policy could slow down the country's economic growth and increase unemployment.
 - ii. If the BOP deficit is due to inflation caused by high domestic goods prices, then the contractionary policy could solve both problems at the same time.
- The proportion of consumption attributed to import expenditures → the higher the proportion, the more imports will fall and thus reduce the deficit.
- The economic slowdown due to the contractionary policy could be worse and longer than expected: higher unemployment would result, and the economy should brace itself for a recession, if the downturn is prolonged.

Synthesis

- While both policies offer some potential for correcting BOP deficit, each has limitations and cannot be considered to be a sound way for dealing with chronic deficits which require structural supply-side measures for improving country's competitiveness for foreign demand and foreign investment.
- Being market-led, exchange rate depreciation can be considered more appropriate than expenditure reducing policy. However, prolonged depreciation due to central bank's manipulation becomes a deliberate protectionist policy too and cannot be considered a more appropriate policy
- Expenditure-reducing policies may be risky for economies that are already facing a downturn, as it may worsen the gloomy conditions further. A better policy could be to re-structure the economy, and target improving productivity and quality of goods. This can ensure an improvement in exports as well as future growth prospects and potential.

Knowledge, Analysis and Application		
L3	<ul style="list-style-type: none"> • Candidates provide a comprehensive analysis of exchange rate policy and expenditure-reducing alternative measure and their limitations. • Candidates use AD/AD framework well in analysing the effects of those policies. 	9-11
L2	<ul style="list-style-type: none"> • Candidates adequately analyse the exchange rate measures to correct the BOP deficit as well as expenditure reducing policy, but analysis is not 	6-8

	<p><i>developed or did not use AD/AS framework in the analysis.</i></p> <ul style="list-style-type: none"> • <i>Candidates offer both policies, but ideas are less coherent</i> • <i>Candidates give an unbalanced view/analysis with respect to exchange rate policy and expenditure reducing strategies.</i> 	
L1	<ul style="list-style-type: none"> • <i>Insufficient or incoherent analyses of the measures to reduce deficit BOP.</i> • <i>Conceptual error in analyses.</i> 	1-5
Evaluation		
E2	<ul style="list-style-type: none"> • <i>For an evaluative assessment based on sound economic analysis.</i> 	3-4
E1	<ul style="list-style-type: none"> • <i>Evaluation without justification.</i> 	1-2

