Name:		Index Number:		Class:	

DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics 9732/1

Paper 1 Case Study **19 September 2011**

2 hour 15 minutes

Additional Materials:
Writing Papers

READ THESE INSTRUCTIONS FIRST

Write your name and class in the spaces provided on the answer paper.

Answer **all** questions.

Write your answers on the separate answer paper provided.

If you use more than one sheet of paper**,** fasten the sheets together.

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

This document consists of **8** printed pages including this cover page.

[Turn over

Answer **all** questions.

Question 1 **Economics of Nuclear Power**

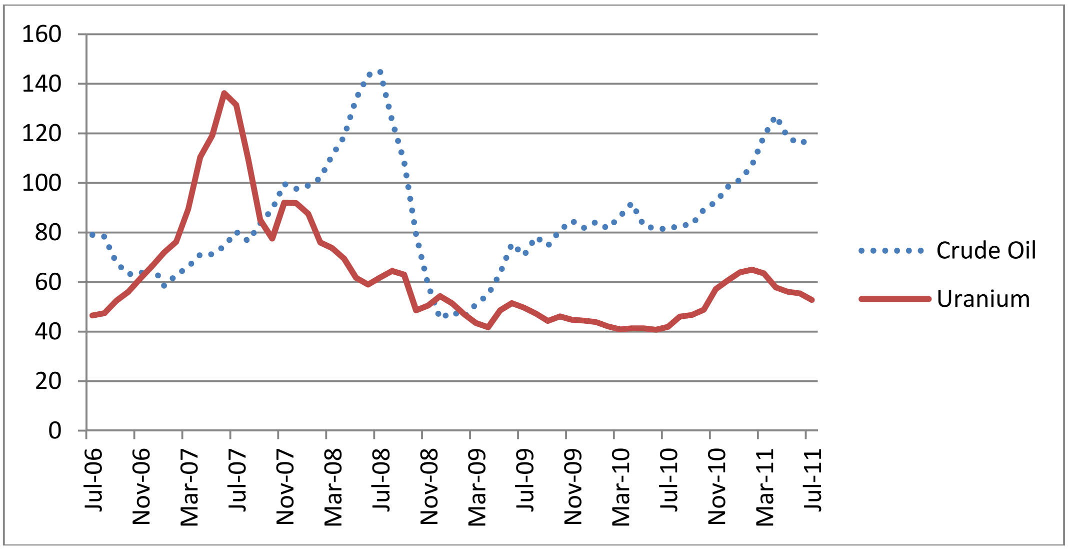
Extract 1: Economics of New Plant Construction

Nuclear power reactors are expensive to build but relatively cheap to operate. The capital costs are a much larger proportion of the total than for other technologies, and that fuel costs are a relatively small fraction. This means that while initial costs are high, the cost of nuclear energy does not fluctuate with uranium prices in the way that electricity from fossil fuels does as gas, oil or coal prices go up and down. Their economic competitiveness thus depends on keeping construction to schedule to keep financing costs down, and then operating them at reasonably high capacity over many years.

In contrast, gas-fired power plants are very cheap and quick to build, but relatively very expensive to operate due to the cost of their fuel. With rising gas prices, and the high cost of moving coal long distances, nuclear plants are becoming more competitive with both gas and coal.

Source: World Nuclear Association Report, BBC News

Figure 1: Price of Crude Oil (US$ per barrel) and Uranium (US$ per pound) from Jul 2006 to Jul 2011



* Uranium is the fuel used in nuclear power reactors

Source: International Monetary Fund

Extract 2: The Carolinas Nuclear Cluster (CNC)

The Carolinas Nuclear Cluster (CNC) is a collaboration of 47 companies, universities, technical colleges, and nonprofits that advance economic development in North Carolina and South Carolina by strengthening and expanding the region’s nuclear energy industry. It offers firms proximity to key suppliers and customers and the opportunities for like-minded industries to collaborate.

With new clean-energy needs, a scarcity of fossil fuels, and growing public support – both at home and around the world – the nuclear industry is experiencing a sort of global resurgence. And the Carolinas, with its strong nuclear cluster, top-flight engineering programmes offered by its universities and wealth of global suppliers, are positioned to play a central role in that rebirth.

Six new plants are currently in the works across the Carolinas alone, meaning the greatest immediate potential exists in the areas of plant construction and maintenance. More importantly to the economy of the Carolinas, utilities companies such as SCE&G are looking specifically to local suppliers to fill their needs.

www.innoventurecommunity.com, www.gcbusinessjournal.com, May 2010

Extract 3: Nuclear power as Singapore's new energy source

The Economic Strategies Committee's (ESC), looking at ways to ensure Singapore's economic competitiveness and energy security, while addressing environmental-sustainability issues, made the following recommendations:

1. diversify energy sources to include nuclear energy, coal and imported electricity, and possibly harness renewable energy generated in neighbouring countries,
2. conduct a study on the possibility of a carbon-pricing scheme to price energy to reflect real costs
3. further promote energy efficiency for buildings, industry and homes, and support clean and efficient technologies in transportation

Unlike gas and coal that are prone supply interruptions, a key advantage of nuclear power is that the cost of generating it is less vulnerable to fluctuations in fuel costs. Nuclear power plants also do not release greenhouse gases that contribute to global warming. However, safety is a major concern, especially given our high urban density. Nuclear power stations produce radioactive waste and could release radioactive material if there was an accident.

In the long run, with the infrastructure in place to transmit electricity between countries, it opens the energy market to greater competition between local and regional suppliers and makes the market more efficient.

Source: My Paper, 5 Feb 2010

Extract 4: The Cost of Oil Subsidies

Across the developing world, governments are subsidising energy so as to shield the poor from the high prices. They worry that eliminating subsidies might lead to inflation at a time when prices are rising broadly. But these subsidies are misguided and mainly benefit the well-off, who own big cars and fly in jets, as well as energy-intensive industries, which are not usually those that create most jobs. They are expensive, sucking in public money that might be better used on, say, health care or education.

Source: 1 Aug 2008, The New York Times

Questions

(a) Compare the trends in prices of oil and uranium from July 2008 to July 2011. [2]

(b) **(i)** Distinguish between fixed and variable costs in nuclear power production. [2]

(ii) Electricity generating companies (gencos) have to compete to sell electricity, a homogeneous good, to the state utilities company which will then distribute it to the end users.

Explain why "nuclear plants are becoming more competitive with both gas and coal." [4]

(c) Explain how government failure may arise from the oil subsidies. [4]

(d) To what extent does the profit of a firm such as SCE&G depend on whether it is located within the industry cluster? [8]

(e) Discuss whether moving towards nuclear energy is the most appropriate amongst the recommendations outlined in Extract 3 to help Singapore achieve the goals set out by the Economic Strategies Committee. [10]

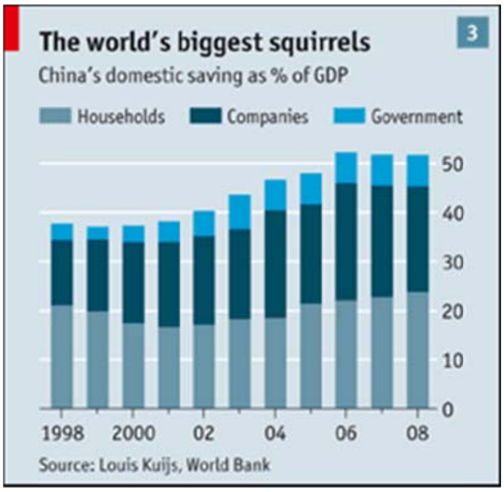
[Total 30m]

Question 2 **The Global Economy: Crisis and Aftermath**

Indicators of the Chinese Economy

Figure 2:
Private consumption, investment and exports (% of GDP)

Figure 3:
Domestic Saving (% of GDP)



Source: The Economist, Jul 2009

Table 1: Chinese Balance of Payments Accounts (in $100 million US Dollars)

Item	2008	2009	2010
I. Current Account	4,124	2,611	3,054
II. Capital and Financial Account	463	1,808	2,260

Source: State Administration for Foreign Exchange

Extract 5: In Recession, China Solidifies Its Lead in Global Trade

With the global recession making consumers and businesses more price-conscious, China is winning a larger piece of a shrinking pie. Although world trade declined this year because of the recession, consumers are demanding lower-priced goods and Beijing, determined to keep its export machine humming, is finding a way to deliver. The country's factories are aggressively reducing prices — allowing China to gain ground in old markets and make inroads in new ones.

But equally important are government policies that support this country's export sector — from Beijing keeping its currency weak against the US dollar to its determination to subsidise exporters through tax credits and billions of dollars in low-interest loans from state-run banks.

Adapted from: The New York Times, 14th September 2009

Extract 6: China is Urged to Rebalance its Economy

The country's leaders are looking to rebalance the economy by shifting away from investment and export-driven growth towards an economy where domestic consumption plays a bigger part.

China began an economic expansion of unprecedented pace driven by investment and exports. But consumption growth, in particular, could not keep pace with the capacity created by rapid investment. As a result, much of the capacity was directed towards producing goods for the export sector and this has meant rising trade surpluses. The concern is that as the global economy enters into recession and competition from countries like Viet Nam intensifies, Chinese firms would find it much more difficult to sell their products abroad without deep price cuts. The continued expansion of capacity would then lead to price declines that reduce profits and undermine investor confidence.

To rebalance its growth, China needs to improve the provision of key social services, especially education, health care, and pensions. Reducing the uncertainties surrounding their provision will substantially diminish the strong precautionary saving motive and give households the confidence to raise their consumption.

The government also needs to implement a series of financial reforms. Its undeveloped financial system has made it hard for households and businesses to borrow. Firms have instead had to rely on internal savings for investment, and consumers have done the same for almost all large purchases—education, health care, pensions, housing, and durable goods. Financial reforms to grant firms greater access to loans and more avenues to raise funds would reduce the incentives of them holding large savings. Better access to personal loans and private insurance would also diminish household saving and boost consumption.

Finally, China needs to allow its exchange rate to rise. This would lift consumers' real purchasing power, discourage excessive investment in manufacturing and help to reduce the trade surplus further. It would also alleviate the risk of a protectionist backlash abroad.

Source: The Economist, Jul 2009; Aziz J, Dunaway S. China's Rebalancing Act. IMF, 2007

Extract 7: The Great Financial Crisis

If China is a nation of savers, then America would be a nation of spenders. For decades, the United States' economic growth has been led by consumer spending. Its citizens went on a seemingly unstoppable spending binge, fuelling the global economy as they bought ever bigger houses and filled them with ever more stuff. Between 1980 and 2007, household saving rate fell while household indebtedness rose. As Americans spent more than they produced, the country's current-account balance went into a deficit. When property prices collapsed between 2007 and 2008, banks scaled back lending by tightening the conditions required to obtain loans, thus reducing the availability of credit to firms and consumers. This led to a credit crunch where the availability of credit shrank independently of interest rates. The American economy was thus plunged into its deepest recession in decades.

When the US economy slowed in early 2008, the US government implemented various economic stimulus measures. This included a $787 billion stimulus bill in February 2009 that had provisions for direct spending on infrastructure, education, healthcare and an expansion of social welfare services such as unemployment benefits. The federal budget deficit tripled to a record $1.4 trillion for the 2009 fiscal year. Economists worry that the deficits could place upward pressure on interest rates in future years as the government has to offer higher rates to attract investors to purchase it debts due to its worsening credit worthiness.

Adapted from: The Economist, www.economist.com, 23 Jul 2009; Associate Press, 7 October 2009 and The New York Times, December 15, 2010 & OECD, 2008: The Current Financial Crisis: Causes and Policy Issues by Adrian Blundell-Wignall, Paul Atkinson and Se Hoon Lee.

Table 2: Selected Macroeconomic Indicators of the US Economy (2007-2009)

	2007	**2008**	**2009**
	In Percentage Terms		
Annual Rate of Growth of Real Private Consumption Expenditure	2.4	-0.3	-1.2
Annual Rate of Growth of Real Government Expenditure	1.3	2.5	1.9
Annual Rate of Real Gross Fixed Capital Formation	7.8	-5.0	-15.4
Unemployment Rate	4.6	5.8	9.3
Government Budget Balance (as a percentage of GDP)	-2.9	-6.3	-11.3
Public Debt (as a percentage of GDP)	62.0	71.0	84.3

Source: Organisation for Economic Co-operation and Development Outlook No. 89

Questions

(a) Compare the trend in China's household domestic savings as a percentage of GDP with that of its companies between 1998 and 2008. [2]

(b) With an aid of a diagram, explain how you would expect the value of the Chinese Yuan to change between 2008 and 2010 in the absence government intervention. [4]

(c) Explain how the US budget deficits could place an upward pressure on US interest rates in future years. [2]

(d) Discuss how the credit crunch of 2008 and following events were likely to have affected the material standard of living of America in 2009 and beyond. [8]

(e) Using economic theory, suggest reasons why China was able to "solidify its lead in global trade" during the global financial crisis. [4]

(f) Assess the policy options available to the Chinese government to rebalance its economy. [10]

[Total: 30 m]

DUNMAN HIGH SCHOOL
Preliminary Examination 2011

COVER SHEET – 9732/1 (CASE STUDY)

ECONOMICS
Paper 1

Higher 2

19 September 2011

INSTRUCTIONS TO CANDIDATES:
1. Please ensure that you have submitted all your answers and attach this cover page as the first page of your submission.
2. Do not use staples, paper clips, highlighters, glue or correction fluid.

Name		Class	Year 6C___

	Marks
Qn. 1	

DUNMAN HIGH SCHOOL
Preliminary Examination 2011

COVER SHEET – 9732/1 (CASE STUDY)

ECONOMICS | **Higher 2**
Paper 1

19 September 2011

INSTRUCTIONS TO CANDIDATES:
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Name		**Class**	**Year 6C___**

	Marks
Qn. 2	

Name:		Index Number:		Class:	

DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics 9732/2

Paper 2 Essay Questions

12 September 2011

2 hour 15 minutes

Additional Materials:Writing Papers

READ THESE INSTRUCTIONS FIRST

Write your name and Civics Class in the spaces provided on the answer paper.

Answer three questions in total, of which **one** must be from Section A, **one** from Section B and **one** from **either** Section A or Section B.

Write your answers on the separate writing paper provided.

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.

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

At the end of the examination, fasten all your work securely into two separate bundles for Section A and Section B.

Check the boxes of the questions attempted below:

Section A			Section B		
Q1	Q2	Q3	Q4	Q5	Q6

This document consists of **3** printed pages including this cover page.

[Turn over

Answer **three** questions in total.

Section A

One or two of your three chosen questions must be from this section

1. Households today pay on average just half the amount they were paying in early 2008 for their broadband internet connection. On the other hand, food prices have risen by 18% over the same period.

(a) Explain the likely effects of the above price changes on households' expenditure. [10]

(b) In response to the hike in food prices, some governments have released grains and frozen meat from their stockpile.

To what extent does the success of such a policy depend on the price elasticities of demand and supply? [15]

2. The three giants in the local fast-food business are McDonald's, Kentucky Fried Chicken (KFC) and Burger King; McDonald's has over 100 outlets as the market leader. Arnold's Fried Chicken, a locally grown firm, has recently opened its third outlet.

(a) Explain how firms in the fast-food business can discriminate between buyers by charging different prices for the same product. [10]

(b) Discuss the extent to which the decisions of businesses like KFC and Arnold's depend on the actions of its competitors. [15]

3. The bottom 30% of working families in Singapore has now experienced stagnating real household incomes for eight to ten years. If wages continue to stagnate, there is a limit to poverty alleviation through working longer and harder, or driving the unemployment rate lower.

(a) Explain the case for government intervention in the market for vocational training. [10]

(b) Discuss whether you agree that employment creation is no longer the best method to alleviate poverty in Singapore. [15]

Section B

One or two of your three chosen questions must be from this section.

4. Discuss whether supply side policies are best for achieving low inflation in the Singapore economy. [25]

5. Whenever the government announces a rising trade deficit, the media routinely declare it "bad news" that the trade gap has "worsened" – no matter how good the accompanying economic news may be on inflation, employment, and growth.

- Cato Institute

(a) Explain how a rising trade deficit could impact the circular flow of income. [10]

(b) Discuss whether a government should actively pursue policies to correct a trade deficit. [15]

6. Singapore's trade with major trading partners such as Malaysia, [the European Union], China, US, Indonesia, Japan and Hong Kong increased in 2010 due to improved global economic conditions.

- Singstat, 14 March 2011

(a) Explain whether Singapore's trade patterns agree with the predictions of economic theory. [12]

(b) Discuss the extent to which globalisation has benefitted small and open economies more than large and less open ones. [13]

DUNMAN HIGH SCHOOL

Preliminary Examination 2011

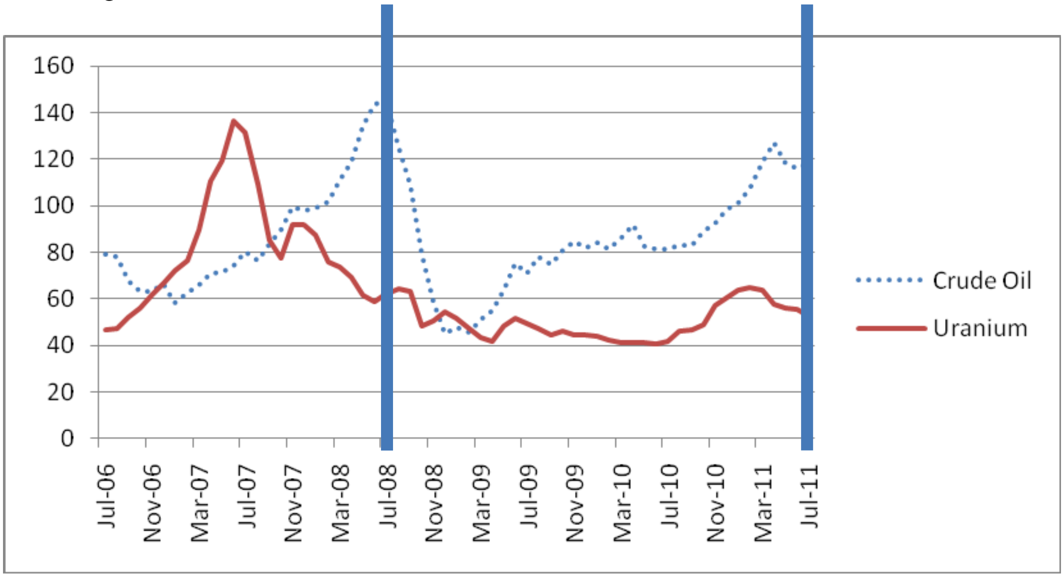
Economics 9732

Answer and Mark Schemes

Case Study Question 1 Economics of Nuclear Power

(a) Compare the trends in prices of oil and uranium from July 2008 to July 2011. [2]

From Figure 1



- Similarity:
  - o Both oil and uranium prices ended up lower in July 2011 as compared to July 2008.
  - o Both oil and uranium prices reached their troughs at around the same time period in February to March 2009.
  - o Both oil and uranium prices hit their second peak at around March 2011.
- Difference:
  - o However, oil price is clearly on a upward trend (from about US$45 per barrel to almost US$120 per barrel) after the sharp fall from July 2008 to February 2009; however uranium price has stayed almost constant at around US$40 to US$60 per pound.

Mark Allocation:

✓ **1m for similarity**
✓ **1m for difference**
✓ **0m if no comparative word used**

(b) (i) Distinguish between fixed and variable costs in nuclear power production. [2]

From Extract 1 and parts of Extract 2

- Fixed costs refer to costs incurred independent of output level. *This is usually, but not constrained to, costs incurred at the start-up phase for a firm in terms of capital out-lay, rental etc.*
  - o Nuclear power reactor construction
- Variable costs refer to costs incurred due to increases in output level.
  - o Uranium
  - o Maintenance of nuclear power plant

Mark Allocation:

- ✓ **1m <u>each</u> for fixed and variable cost definition and application**
- ✓ **Cap at 1m if application with no/inaccurate definition**
- ✓ **0m if no application**

(ii) Electricity generating companies (gencos) have to compete to sell electricity, a homogeneous good, to the state utilities company which will then distribute it to the end users.

Explain why "nuclear plants are becoming more competitive with both gas and coal." [4]

<u>From preamble</u>

- Need to infer that nuclear plants refer to electricity generating companies rather than utilities distribution company
- Need to make use of the fact that electricity is a homogeneous good, where gas, coal or nuclear energy plants are just different possible factors of production to produce electricity

<u>From Extract 1</u>

- "The capital costs (of nuclear plants) are a much larger proportion of the total than for other technologies." → high fixed cost, low variable cost for nuclear plants
- "This means that while initial costs are high, the cost of nuclear energy does not fluctuate with uranium prices in the way that electricity from fossil fuels does as gas, oil or coal prices go up and down." → variable cost also not strongly correlated with price of key raw material, uranium (as compared to gas and coal); i.e. can make references to Figure 1 where fluctuating oil prices likely to affect variable cost of gas and coal much more than fluctuating (mild) uranium prices on variable cost of nuclear
- "Their **<u>economic competitiveness</u>** thus depends on keeping construction to schedule to keep financing costs down, and then operating them at reasonably high capacity over many years." → again, managing the fixed cost most important for nuclear plants
- "In contrast, gas-fired power plants are very cheap and quick to build, but relatively very expensive to operate due to the cost of their fuel. With rising gas prices, and the high cost of moving coal long distances, **<u>nuclear plants are becoming more competitive with both gas and coal.</u>**" → strongest indication that competitiveness is due to differences in variable cost, and the correlation of variable cost with raw material prices

Mark Allocation:

- ✓ **1m for making the link that lower variable cost for nuclear energy generation means lower marginal cost, and hence competitiveness is due to ability to charge a lower price while producing at a greater output level**
- ✓ **2m for using cost/revenue curves as economic framework**
- ✓ **1m for explaining how managing the fixed cost better can help to lower average cost for nuclear energy generation**
- ✓ **1m for any demand factors explained (acceptable in theory but not applied to context of Extract 1, and question (b) part (i))**

(c) Explain how government failure may arise from the oil subsidies. [4]

From Extract 4

- "They worry that eliminating subsidies might lead to inflation at a time when prices are rising broadly" →possible trade-off between government objectives
- "But these subsidies are misguided and mainly benefit the well-off, who own big cars and fly in jets, as well as energy-intensive industries, which are not usually those that create most jobs" →ineffective / inappropriate government policies
- "They are expensive, sucking in public money that might be better used on, say, health care or education" →high opportunity costs of government expenditure

Mark Allocation:

- ✓ **1m for defining government failure; that the a net loss results from government intervention in the form of oil subsidies, i.e. costs (explicit and implicit) outweighs benefits including all foreseeable external costs and benefits**
- ✓ **3m for stating and explaining government failure based on extract-**
  - o **While subsidies given to producers increase SRAS, this induces AD to increase in general and not just benefitting the lowest income groups, and may even be inequitable given that energy usage is greatest for high income groups;**
  - o **At the same time the high opportunity costs incurred come in the form of foregone expenditure on health care or education which help to reduce under-consumption due to the existence of positive externalities**
  - o **This is compared to the benefit of reducing inflation rates through the increase in SRAS, and alleviating some of the inability of lower income groups in energy consumption due to unsubsidised high prices**
- ✓ **1m for using generic explanations of government failure with no application from case material**

(d) To what extent does the profit of a firm such as SCE&G depend on whether it is located within the industry cluster? [8]

Looking for evidence from case material

From Extract 1

- "Nuclear power reactors are expensive to build but relatively cheap to operate" →potential internal EOS

From Extract 2

- "It offers firms proximity to key suppliers and customers and the opportunities for like-minded industries to collaborate" →potential external EOS
- "With new clean-energy needs, a scarcity of fossil fuels, and growing public support – both at home and around the world – the nuclear industry is

experiencing a sort of global resurgence." →shift in demand towards nuclear energy
- "And the Carolinas, with its strong nuclear cluster, top-flight engineering programmes offered by its universities and wealth of global suppliers, are positioned to play a central role in that rebirth" →more external EOS
- "Six new plants are currently in the works across the Carolinas alone, meaning the greatest immediate potential exists in the areas of plant construction and maintenance." →even more external EOS
- "More importantly to the economy of the Carolinas, **utilities companies such as SCE&G** are looking specifically to local suppliers to fill their needs" →competition from other utilities companies, which could point towards demand factor

Possible Answer Outline

Thesis
1. The profit of SCE&G is dependent on location in the cluster due to cost reductions from external economies of scale reaped, such as economies of concentration.
2. The location in the cluster can also bring about increases in revenue from greater demand for energy supplied by the cluster due to greater credibility altering the taste and preferences of consumers in the cluster's favour.
3. Other points that can be linked to cost or revenue as a direct result of location in cluster.
   a. Costs may increase due to external dis-economies of scale.
   b. Costs may increase because proximity to customers rather than suppliers matter more.
   c. Demand may decrease and become more price inelastic due to intense competition within the cluster.

Antithesis
4. The profit of SCE&G may, however, be affected by other factors independent of location.
   a. Market structure in which SCE&G operates.
   b. Ability to reap internal EOS.
   c. Price of uranium which affects marginal cost of product (albeit not a major component), is not dependent on location within cluster.

Evaluation
5. Deciding on an extent based on context.
6. Yes, it depends to a large extent because
   a. Market structure in which SCE&G operates.
7. No, it depends only to a small extent because
   a. Not much external EOS to be reaped (e.g. firms may not share R&D results)

Mark Allocation:

L3: 6-7	Scope / Depth of answer: ✓ Both revenue (demand) and cost factors affecting profit levels ✓ Use of economic framework, i.e. cost/revenue analysis Cap at 6m if there is no use of relevant diagrams to illustrate explanation

L2: 4-5	Answer is lacking in some aspect: ✓ Contains either revenue (demand) or cost factors affecting profit levels, but with use of economic framework, i.e. cost/revenue analysis ✓ Contains both revenue (demand) and cost factors affecting profit levels, but limited / no use of economic framework, i.e. cost/revenue analysis ✓ Or limited / no reference to case material Cap at 5m if there is insufficient scope (demand / revenue factors not discussed)
L1: 1-3	Answer lacks both scope and depth
E: 1m	Evaluative judgement using clear economic framework to decide the extent to which the profit level depends on location within the cluster, i.e. comparison between dependent and independent factors

(e) Discuss whether moving towards nuclear energy is the most appropriate amongst the recommendations outlined in Extract 3 to help Singapore achieve the goals set out by the Economic Strategies Committee. [10]

From Extract 3

- "The Economic Strategies Committee's (ESC), looking at ways to ensure Singapore's **economic competitiveness** and **energy security**, while addressing **environmental- sustainability** issues" →goals
- "1) diversify energy sources to include nuclear energy, coal and imported electricity, and possibly harness renewable energy generated in neighbouring countries, 2) conduct a study on the possibility of a carbon-pricing scheme to price energy to reflect real costs, 3) further promote energy efficiency for buildings, industry and homes, and support clean and efficient technologies in transportation" →recommendations
- "…key advantage of nuclear power is that the cost of generating it is less vulnerable to fluctuations in fuel costs. Nuclear power plants also do not release greenhouse gases that contribute to global warming" →pros for moving towards nuclear energy
- "…safety is a major concern, especially given our high urban density. Nuclear power stations produce radioactive waste and could release radioactive material if there was an accident" →cons for moving towards nuclear energy
- "with the infrastructure in place to transmit electricity between countries, it opens the energy market to greater competition between local and regional suppliers and makes the market more efficient" →other changing conditions relevant to energy market

Suggested answer

- Moving towards nuclear energy is appropriate for economic competitiveness
  - o Thesis: If moving towards nuclear energy could reduce the unit cost of production since energy use is a key factor of production in Singapore's economy → SRAS increase → should firms pass on cost savings GPL falls and NY increases due to increase in induced AD → good for economic competitiveness due to fall in inflation rate and positive actual economic growth

- o Antithesis (limitations): However in the beginning there will be a large capital outlay that may lead to demand-pull inflation led by construction sector; there may be degree of uncertainty that could adversely affect investor confidence as they hold off investment decisions until they are certain of nuclear energy as a viable alternative in Singapore

  o Antithesis (other recommendations): The promotion of energy efficiency and efficient technologies in transportation can help to bring down unit cost of production (increased productive efficiency across industries), leading to similar SRAS increase ➔ may be as appropriate as moving towards nuclear energy

- Moving towards nuclear energy is appropriate for energy security
  - o Thesis: Moving towards nuclear energy means Singapore will diversify the source of energy for economy as well as improve self-sufficiency in terms of energy consumption ➔ improves energy security so that Singapore economy becomes less vulnerable to negative supply-shocks in energy sources from which Singapore imports
  - o Antithesis (limitations): Safety as a major concern due to Singapore's urban density
  - o Antithesis (other recommendations): May choose to diversify into other energy sources like coal, imported electricity and harness renewable energy generated in neighbouring countries
- Moving towards nuclear energy is appropriate for environmental-sustainability:
  - o Thesis: Moving towards nuclear energy means the negative externality in terms of carbon emissions from conventional energy sources will be reduced due to decreased consumption / production ➔ the switch to nuclear energy means the demand for conventional energy (i.e. Marginal Private Benefit) falls, leading to Q_p falling closer to or even matching Q_s
  - o Antithesis (limitations): Safety as a major concern due to Singapore's urban density; radioactive waste, if not handled properly, could itself become a huge negative externality
  - o Antithesis (other recommendations): Carbon pricing, if done with accurate estimation of marginal external cost as a result of carbon emissions, could force economic agents to internalise the negative externality sufficiently such that Q_p and Q_s coincide in the market for conventional energy sources

Mark Allocation:

L3: 7-8	Scope / Depth of answer: ✓ Three aspects of recommendations discussed including moving towards nuclear energy ✓ Linkage of ESC goals to governmental goals (macro and/or micro goals) ✓ Use of relevant economic framework and diagrams ✓ Contains reference (may be implicit) to relevant case material
L2: 4-6	Answer is lacking in some aspect:

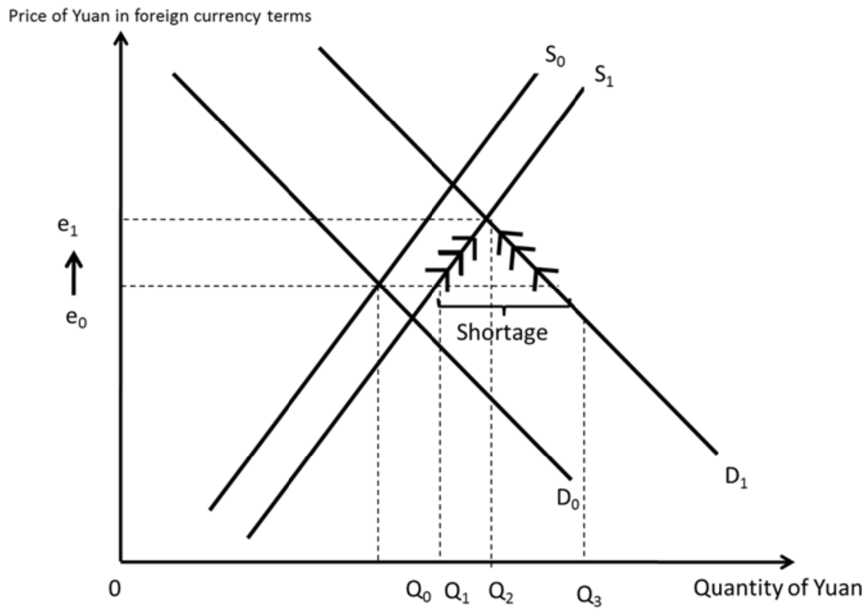
	✓ Only two aspects of recommendations discussed but clear linkage of ESC goals to governmental goals ✓ Three aspects of recommendations discussed including moving towards nuclear energy, but not clear linkage of ESC goals to governmental goals ✓ Limited or no reference to case material
L1: 1-3	Answer contains no economic framework
E: 2	Evaluative judgement of which is most appropriate recommendation using clear economic framework which includes: ✓ Defining what “appropriate” means ✓ Weighing in clear relation to three goals of economic competitiveness, energy security and environmental-sustainability May still award evaluation marks even if answer lacks scope of number of recommendations discussed (to avoid double penalization)

[Total: 30 m]

Case Study Question 2 The Global Economy: Crisis and Aftermath

(a)	Compare the trend in China's household domestic savings as a percentage of GDP with that of its companies between 1998 and 2008. • **Both**increased overall. [1m] • Companies' savings as a percentage of GDP increased **more** than that of households. [1m] Note: No marks to be awarded if no comparative word is used. No marks awarded if student examined the trend in absolute level of saving rather than saving as a % of GDP.	[2]
(b)	With an aid of a diagram, explain how you would expect the value of the Chinese Yuanto change between 2008 and 2010 in the absence government intervention. ▪ BOP surplus has increased between 2008 and 2010: ▪ Demand for Chinese Yuan has increased o More foreigners need Yuan for to purchase imports from China and also, to invest in China. [1m] ▪ Supply of Yuan has also increased as Chinese need Yuan to autonomously purchase imports from, and make investments to, abroad. However, increase in demand for Yuan outweighs increase in supply (hence increasing surplus). [1m] ▪ Well-explained diagram: 2m o Demand for Yuan shifts from D0 to D1 and supply of Yuan shifts from S0 to S1. o At the original exchange rate level e0, a shortage Q1Q3 develops. o Foreigners will bid up the price of yuan. o In the process, the Chinese will supply more quantities of Yuan as they import more from and make more investments abroad as their currency strengthens. The market eventually reaches a new equilibrium point where quantity demanded and supplied of Yuan is once again equivalent, at Q2. o At this point, the shortage is eliminated and the Yuan clears at the new exchange rate e1, which shows an appreciation.	[4]

Foreign Exchange Market for Yuan



(c) Explain how the US budget deficits could place an upward pressure on US interest rates in future years. [2]

- Supply of credit falls and lenders are less willing and able to supply credit to the US government due to its worsening credit worthiness. [1]
- Holding demand for credit constant, interest rates will rise. [1]

Also accept:

- Demand for credit increases as government has to borrow to fund its deficit. Holding supply of credit constant, interest rates will rise.

(d) Discuss how the credit crunch of 2008 and proceeding events were likely to have affected the material standard of living of America in 2009 and beyond. [8]

Approach:

- Explain how credit crunch reduces the availability of loans. This causes I to fall. C also falls via fall in consumer confidence. Thus AD falls and NY falls (exacerbated by multiplier effect).
- Paint a picture of material SOL in 2009: Material SOL is falling
  - T: Negative growth economic growth led to falling income and purchasing power thus a fall in material SOL.
  - T: Rising unemployment rates means that more workers have no access to income.
  - AT: Mitigated by rising government expenditure on social welfare spending.

	• Paint a picture of material SOL in future: Material SOL might worsen: o T: Drastic fall in real gross fixed capital formation could lead to a worsening of future SOL as productive capacity falls, assuming that net investments become negative. o AT: Government spending thru stimulus bill on education raises quality of labour; on infrastructure raises quality and quantity of capital. These lead to growing productivity which would raise potential for growth, which improves future SOL. <table><tr><td>L3: 6-7</td><td>An answer in this range needs to (i) clearly explain how credit crunch affects GDP in 2009 using economic framework and also (ii) discuss non-material effects.</td></tr><tr><td>L2: 4-5</td><td>Explains how current and future SOL is affected with good reference to data. • If only current or future SOL is discussed but not both, Max 4m.</td></tr><tr><td>L1: 1-3</td><td>Explains how current/ future SOL is affected without use of data.</td></tr><tr><td>E: 1m</td><td>Evaluative judgement using clear economic framework.</td></tr></table>	
(e)	Using economic theory, suggest reasons why China was able to “solidify its lead in global trade” during the global financial crisis. • YED and increase in demand for inferior goods o During the global economic recession, incomes of most countries fell. o As China produced many goods that are inferior in nature (negative income elasticity of demand), demand for those goods rose. o Ceteris paribus, China was able to increase net exports. • Government policies o Government introduced policies to help firms reduce their unit cost of production e.g. tax credits and low-interest loans → allows firms to cut the prices of their output without suffering losses. o Buyers tend to be ‘more price-conscious’ during economic downturns, i.e. demand becomes more price elastic as consumers now accept that many goods are not actually necessities which they cannot do without. o The price cut, given price elastic demand → more than proportionate increase in quantity demanded → increase in TRX o Ceteris paribus, China was able to increase net exports. • For these reasons, China was able to solidify its lead in global trade during the period.	[4]

(f) Assess the policy options available to the Chinese government to rebalance its economy. [10]

Gist: Rebalancing is defined as the shifting of the engine of growth from investments and exports to domestic consumption.

[Basically question is primarily testing on determinants on C, I, G and X]

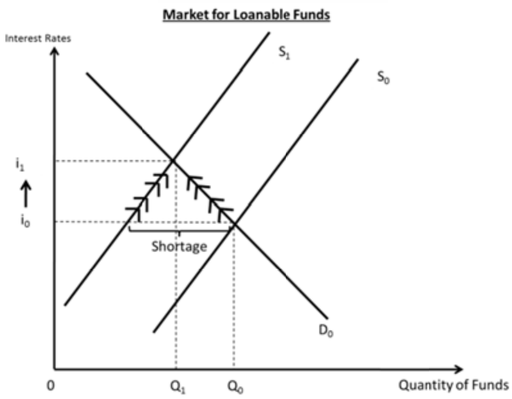
2 strategies:

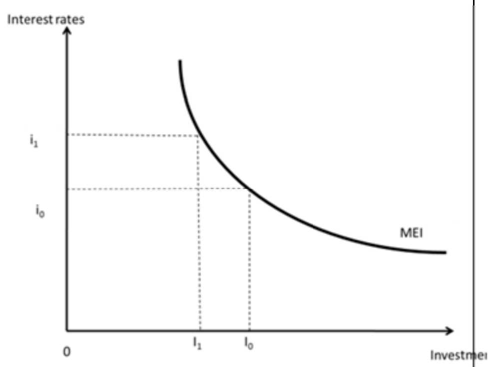
1. Increase Cd and G more than increase in I and X.
2. Reduce I and X relative to Cd and G.

- Fiscal policy:

Thesis

- o Increase G, eg, "improve the provision of key social services, especially education, health care, and pensions" in order to reduce precautionary saving.
- o As precautionary savings decrease, consumers will increase autonomous expenditure and boost domestic consumption (Cd).
- o This will also reduce the supply of loanable funds, thus increasing interest rates and discouraging investments.





- ▪ Holding demand for loanable funds constant, a decrease in household saving will reduce the supply of loanable funds from S0 to S1 in the diagram for loanable funds. A shortage of funds develops at the original interest rate level, causing interest rates to be bid up. This increase it from i0 to i1.
- ▪ An increase in interest rates will reduce expected net rate of returns faced by firms.
- ▪ This reduces I from I0 to I1, as shown in the MEI diagram above.

- o The policy would thus boost G and Id whilst reducing Id, hence allowing rebalancing to take place effectively.

Anti-thesis

- o Government budget limited.

- Also, it takes long time for consumer attitudes to change, if even at all. Hence, policy may be ineffective in the short run.
- Side effects: If fall in investments severe, this could lead to a fall in AD and hence a reduction in economic growth and an increase in unemployment.
  - Candidate may use AD-AS diagram to illustrate point. No need for elaborate development as this is not the central point of the question.

- Financial Sector Reforms:

  Thesis
  - Financial sector reforms would enable consumers to borrow and hence increase their ability to increase consumption.
  - Might encourage firms catering to domestic markets to expand. In the LR, this will lead to a fall in X and encourage import substitution, thus increasing Cd.

  Anti-thesis
  - This policy may inadvertently increase I.
  - As firms' savings fall, I may increase even further.
  - May also take a long time to take effect, given the time lags-decision and implementation lags, that characterise financial sector reforms.

- Exchange rate policy:

Thesis
  - Undervaluation of Yuan effectively a major export subsidy that distorts profit incentives for firms. Removal would make certain exports less profitable thus reducing I.
  - Would also reduce X.

  Anti-thesis
  - However, may not be effective because China is likely to have CA, hence, even with appreciation of Yuan I and X may not fall significantly.
    - Also, may cause infant industries to decline, meaning that potential expansion of productive capacity and actual growth may not be achieved.
  - Also, exchange rate appreciation may have negative consequences for the Chinese economy, including slower economic growth, rising unemployment and worsening BOP.
    - Candidate may use AD-AS diagram to illustrate point. No need for elaborate development as this is not the central point of the question.

Evaluation

- Hence, policy options that encourage rebalancing through removal of distortionary government intervention most preferred, ie, exchange rate appreciation. Allows China to benefit from free trade whilst also rebalancing the economy for more sustained growth.
- Fiscal policy also has merits as it progressively raises SOL and promotes sustainable domestic sector driven growth. The fact that it raises G and Cd simultaneously whilst also reducing Id might accelerate the rate of rebalancing, and is hence a highly

	effective policy. • Financial sector reforms suitable policy for rebalancing only for the consumer sector. Firm sector reforms, if it takes place, will likely be more suited for meeting other economic objectives.	

L3: 7-8	Well-developed answer that clearly explains whether policies are effective or ineffective in achieving economic rebalancing and also considers side effects using AD-AS framework.
L2: 4-6	Under-developed answer but one that clearly explains whether policies are effective or ineffective in achieving economic rebalancing. Higher grade answers may consider side effects of policies but does so without using an economic framework (AD-AS)
L1: 1-3	Undeveloped answer or one that touches only on economic performance but not rebalancing.
E: 2	Evaluative judgement using clear economic framework.

[Total: 30 m]

Essay Question 1

Households today pay on average just half the amount they were paying in early 2008 for their broadband internet connection. On the other hand, food prices have risen by 18% over the same period.

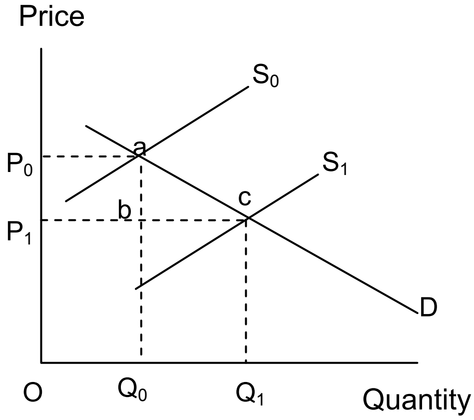
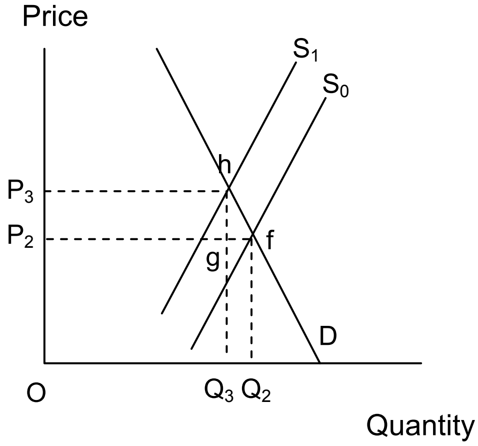
a. Explain the likely effects of the above price changes on households' expenditure. [10]

b. To stabilise food prices, several governments have released grains and frozen meat from their stockpiles. To what extent does the success of this policy depend on the price elasticities of demand and supply? [15]

Suggested Answer

<u>Part (a)</u>

	Internet broadband connection	Food
Recognise the differences in PED between the 2 gds	Demand for internet broadband connection is likely to be price elastic. Broadband internet connection is a non-necessity, part of their discretionary spending after they have satisfied their basic needs →Qd is likely to be responsive to price changes (Students may also argue that PED depends on the country / type of household in question. Demand for bandwidth may be price inelastic for high Y countries and households that enjoy online gaming, where it is seen as a necessity → total expenditure may fall with falling prices)	Demand for food is likely to be price inelastic. Food as a necessity is required for survival, not something that individuals can do without even as its price rises →Qd is likely to be unresponsive to price changes
Effect of the price change on hhs' expenditure (economic intuition) (graphs)	Give price elastic demand, a reduction in the price brings about an increase in expenditure. A reduction in its price, ceteris paribus, brings about a larger than proportionate increase in Qd→reduction in expenditure from lower per unit spending(P_1 P_0ab) more than compensated by increase in spending from increased units bought (Q_0bc Q_1) → increase total expenditure	Give price inelastic demand, an increase in the price brings about an increase in expenditure. An increase in its price, ceteris paribus, brings about a smaller than proportionate reduction in Qd → increase in expenditure from higher spending per unit (P_2 P_3hg) more than offsets the decrease in expenditure from from cutback in units bought (Q_3gfQ_2) →increase total expenditure

	Internet broadband connection	Food
Effect of the price change on hhs' expenditure		

Assumptions:

i. The price changes are driven by ss changes

ii. No substitution between the 2 goods

Part (b)

1. Explain how the policy is intended to work to help stabilise / moderate increase in food prices.

   The policy to release grains and frozen meat from the state stockpiles increases the market supply, pushing prices down.
   Release supply from the government's stockpile → surplus forms at current price → downward pressure on prices as firms cut prices to rid the surplus → as price falls, quantity demanded rises while quantity supplied falls → price will continue to fall until the market eventually clears where quantity demanded exactly balances quantity supplied
   Graph + accompanying explanation

2. Thesis: success of policy depends on PED and PES

a. Relevance of PED

   For any given increase in ss, the extent by which prices fall depends on PED.
   Demand for food items tend to be price inelastic (more so for grains which are seen as staple than meat). With demand for grains being more price inelastic, prices will have to fall more to induce a large enough increase in quantity demanded to clear the market of the surplus created by the release of supply from the government's stockpile. The converse is true of meat.
   Graph + accompanying explanation

b. Relevance of PES

   For any given demand curve and increase in supply, the extent by which prices fall depends on PES.
   Supply of meat is likely to be more price inelastic compared to supply of grains. When the government releases frozen meat from its stockpile, a surplus of meat (frozen and fresh) is formed at the original price. For the farmers, the need for refrigeration makes it costly for them to store meat. To continue to hold on to their stocks of animals involves costs on a daily basis. For these reasons, farmers are more prepared to accept lower prices for meat products in the face of a surplus. In contrast, it is cheaper to store grains. When there is a surplus, farmers would more readily store grains hoping to sell at higher prices in the future than to accept lower prices at the current point in time. Quantity supplied of grains will therefore fall by a larger extent in response to any given fall in price as compared to meat.
   Graph + accompanying explanation

3. Antithesis: success of policy does not just depend on PED / PES

   Above analysis assumes other factors constant.

   In reality, the policy is likely to result in unintended consequences and second-round effects which will affect its success in stabilising prices.

a. Holding down the price of the good in the country relative to other countries may attract buyers from other (neighbouring) countries

   Without any policy to restrict foreigners from buying up the supplies in the domestic market or to stop domestic firms from exporting the grains and frozen meat to foreign markets to take advantage of the price differential → arbitrage will reduce the domestic supply, counter-balancing the govt's efforts to increase domestic supply by releasing grains and frozen meat from its stockpile → reduce effectiveness of policy

   (Graph + accompanying explanation)

b. An important determinant of success: expectations

   Releasing of supply from stockpile → may help to calm fears of further price increases → reduce hoarding → fall in dd, increase in ss by private sellers → help to further moderate price increase

   (Graph + accompanying explanation)

4. Evaluation:

   Success of policy of releasing ss from stockpile depends very much on

a. how much the government is able to release from its stockpile. The larger the size of the stockpile, the stronger the ammunition the government has to fight the price increase. For example, even when the PED of meat is more elastic, the policy can still be effective in bringing down prices if the government can release enough frozen meat from its stockpile, i.e. if the supply increases by a large enough amount, there can still be a substantial reduction in prices. (Graph + accompanying explanation)

b. whether the government is able to stem arbitrage e.g. effective enforcement of export bans

Mark Scheme

Part (a)

Knowledge, Application, Understanding and Analysis	
L3 7-10	For an answer which • displays depth of economic analysis for most part of the essay • applies accurately to the given context • analyses the effects on both markets
L2 4-6	For an answer which • contains some economic analysis though not consistently applied throughout • is largely theoretical with limited application to the given context OR • applies sound economic analysis but lacks scope – analysed only one of the goods [cap at 5m]
L1 1-3	For an answer which • is largely irrelevant with no indication that the meaning of the question has been properly grasp e.g. no application of the PED concept or no links to consumer expenditure • is largely descriptive and/or contains gross conceptual mistakes

Part (b)

Knowledge, Application, Understanding and Analysis	
L3 9-11	For an answer which • displays depth of economic analysis for most part of the essay • makes effective use of diagrams and other tools of economic analysis • applies accurately to the given context • analyses both thesis and antithesis arguments • (at the lower end of the mark range) may contain some inaccuracies e.g. explains correctly the relevance of PED but not PES
L2 6-8	For an answer which • presents both sides of the arguments but • is not consistently analytical throughout, limited in use of the tools of economic analysis such as diagrams • is largely theoretical with limited application to the given context OR • applies sound economic analysis but lacks balance
L1 1-5	For an answer which • is largely irrelevant with no indication that the meaning of the question has been properly grasp
Evaluation	
E2 3-4	For a reasoned judgement
E1 1-2	For an unexplained judgement

Essay Question 2

The three giants in the local fast-food business are McDonald's, Kentucky Fried Chicken (KFC) and Burger King; McDonald's has over 100 outlets as the market leader. Arnold's Fried Chicken, a locally grown firm, has recently opened its third outlet.

(a) Explain how firms in the fast-food business can discriminate between buyers by charging different prices for the same product. [10]

(b) Discuss the extent to which the decisions of businesses like KFC and Arnold's depend on the actions of its competitors. [15]

Enduring Understanding

1. Firms need to meet certain prerequisites before they are able to engage in price discrimination
2. The interdependence of firm actions depend on the degree of direct competition between firms; the closer the direct competition, the stronger the interdependence between firms

Suggested Answer Outline

Part A

P1) Scope of essay- firms must meet certain prerequisites before they are able to engage in price discrimination; **must contain exemplification specific to fast-food industry**

- o Definition of price discrimination
- o Prerequisites to price discrimination
- o How fast-food firms can engage in 2^{nd} degree price discrimination*or* 3^{rd} degree price discrimination

Part B

P2) Scope of essay- recognition that market structure characteristics have implications on conduct of firms, focusing in particular on mutual interdependence or independent price-output decision-making based on the degree of direct competition between firms, co-existing in the single oligopolistic market structure

- o Classification of KFC and Arnold's into oligopolistic competition; where KFC exists as one of the "giants" with significant market influence while Arnold's is one of the many small firms in the peripheral market
- o Decisions of KFC are interdependent with actions of close rivals like McDonald's
- o Decisions of KFC and Arnold's are independent
- o However Arnold's may exhibit strategic behaviour with another small fast-food firm that is in direct competition (either market segment or geographical proximity)
- o Evaluation needs to clearly discuss the "extent to which" mutual interdependence is exhibited; which is not very much for Arnold's but much more prominent for KFC

Suggested Answer with Elaboration

(a) Explain how firms in the fast-food business can discriminate between buyers by charging different prices for the same product. [10]

Part A

P1) Firms in the fast-food industry can engage in price discrimination – which refers to a pricing strategy whereby a firm charges different prices for the same product for reasons not associated with differences in cost of production.

- o This is the result of fast-food firms fulfilling the conditions for engaging in price discrimination, which includes:
  - 1) price-setting ability;
  - 2) segregation of markets and prevention of resale;
  - 3) differences in price-elasticity of demand (PED) in these different markets.
- o These conditions need to be met because:
  - 1) firms need to be able to set different prices without losing market share completely, with their market power derived from product differentiation or high barriers to entry or both→ fast-food firms have price setting ability given that their products are often weakly differentiated, but at the same time with certain large firms like McDonald's and KFC who have strong following in consumer groups;
  - 2) firms need to be able to identify different market groups and segregate consumers into the respective groups, while at the same time preventing resale and arbitrage→ fast-food firms are able to identify different market groups by the degree of preference for fast food (in general, teenagers vs. older adults) and while they are unable to prevent resale and arbitrage, the good provided (fast-food) is easily perishable and due to hygiene reasons unlikely to have second-hand buyers;
  - 3) firms can maximise profits by charging consumers with higher PED a lower price to increase total revenue (TR) and charging consumers with lower PED a higher price to increase TR→ will be exemplified in latter part of essay.

P2) Specifically, fast-food firms can engage in 2nddegree price discrimination which refers to charging consumers different per-unit prices based on the amount of quantity they consumer <u>*or*</u> the provision of different price options for what is essentially the same product but allowing consumers to reveal their ability and willingness to pay, and hence consumers end up paying different prices for the same product through this self-selection process; **need to emphasise that cost differences are zero or negligible**.

- o Based on conventional definition
  - 6-, 9-, 20-piece nuggets (where per unit prices of nuggets fall with higher quantities purchased)
  - Canadian Pizza 2-for-1
  - Whole chicken vs. Two half chicken
- o Based on revised definition
  - Discount coupons*
  - Lunch-time discount*

<u>*OR*</u>

P3) In addition, fast-food firms can engage in 3rd degree price discrimination by dividing consumers into different groups based on observed characteristics regarding differences in price-elasticity of demand, and charging these different groups varying prices, but the same price for all consumers within the same group *or* where the firms have more complete information regarding consumers and are able to clearly segregate them into different consumer groups and charge them different prices based on these observed characteristics regarding differences in price-elasticity of demand; **need to emphasise that cost differences are zero or negligible**.

- Based on conventional definition
  - Discount coupons*
  - Lunch-time discount*
  - Student meals
- Based on revised definition
  - Student meals

(b) Discuss the extent to which the decisions of businesses like KFC and Arnold's depend on the actions of its competitors. [15]

Part B

P4) As one of the three giants in the Singapore fast-food industry, KFC is likely to have significant market share and may exhibit strategic behaviour in an oligopoly; Arnold's, on the other hand, is a small, locally-owned fast-food business with very limited market share and may instead exhibit non-strategic behaviour (i.e. independent) as part of a very small firm with negligible market influence albeit still in an oligopoly market structure.

- o Barriers to entry (BTEs)
  - ▪ To compete with a firm like KFC the BTEs may be significant given KFC's brand power, ability to negotiate with shopping centre property developers to place their restaurants at highly-visible and high-volume shop spaces, highly vertically-integrated production processes which shield KFC from fluctuating food supply quantities and/or price.
  - ▪ On the other hand, a firm like Arnold's has a smaller market base with limited brand power, restaurants are located in less densely-populated residential towns which will come with lower rents but much lower visibility and crowd volume.
- o Importantly, it is crucial to first establish the respective level of influence KFC and Arnold's have in the oligopoly, in order to then determine their likely conduct – regarding the extent to which their decisions depend on the actions of their competitors.

P5) For a large firm in an oligopoly, KFC's decisions would probably depend on the actions of its competitors as a key feature of oligopolistic markets is that of mutual interdependence between the few large firms that dominate the market.

- o Pricing decisions in competitive oligopolistic markets
  - ▪ Price rigidity due to kinked demand curve analysis, where products are weakly differentiated and hence highly substitutable → the point of price rigidity is the result of inaction due to fear of repercussions on total revenue when rival firms respond accordingly to price changes<u>in order to maintain / maximise profits</u>
    - • May also include any analysis regarding price discrimination also reflecting strategic behaviour
  - ▪ Price wars to drive out competitors or deter new entrants → the decision to start a price war depends on relative costs of production (both marginal cost and average total cost) for static analysis and relative wealth of firms as a result of past accumulation of supernormal profits for dynamic analysis<u>in order to maintain / maximise profits in the long run</u>
- o Pricing decisions in collusive oligopolistic markets
  - ▪ Agreed upon price or output is based on a mutually beneficial outcome → the decision is based on rival firms' tacit or explicit agreement<u>in order to maintain / maximise profits</u>
- o Non-price strategies in competitive oligopolistic markets
  - ▪ Intensive marketing and/or R&D → the medium and intensity of marketing based on medium and intensity chosen by rival firms; R&D is into areas where rival firms have not ventured into / perfected<u>in order to maintain / maximise profits in the long run</u>
- o Cost strategies in competitive oligopolistic markets
  - ▪ Reduction of average and/or marginal costs to serve as basis for survival in oligopoly <u>in order to maintain / maximise profits in the long run</u>
    - • Minimise or eliminate X-inefficiency

- Further improving productive efficiency / reducing MC via R&D into cost-cutting technology and/or improving productivity

P6) Decisions made by a small firm like Arnold's, albeit in an oligopoly, may turn out not to be mutually interdependent with rival firms' actions.**Take into consideration implications on profits.**

- o Pricing decisions for small firm in oligopoly
  - Arnold's will take a passive stance towards pricing strategies implemented by the larger firms like KFC and McDonald's, and try to work Arnold's own pricing strategy around them → large firms' pricing strategies affect Arnold's, but not the other way round, i.e. Arnold's is dependent but not mutually interdependent
  - Differentiated products, albeit weakly, serves as basis for limited degree of market power within the scope of its immediate target audience in a niche area (could be due to geographical vicinity, specific segments of population based on eating preferences, race, gender etc). However, the barriers to entry for this market segment are sufficiently low such that any short-run supernormal profits earned will be competed away by new entrants into the market → no ability to engage in price competition in the long run
- o Non-price strategies for small firm in oligopoly
  - Given that each single firm has no or negligible influence on the market, a firm like Arnold's will likely focus on its own small-scale marketing and R&D efforts, seeking only to expand or maintain market share for their niche target audience → firms do not necessarily observe rivals' actions
- o Cost strategies for small firm in oligopoly
  - May still be able to afford investment into cost-cutting measures, though intense competition likely to incentivise firm to remain X-efficient and productive efficient

P7) However even small firms in an oligopoly, when in close geographical proximity with other small firms or for both parties to be deemed direct competitors, may exhibit mutual interdependent behaviour as they seek to survive in the industry.

- o Mutual interdependence in this scenario
  - Given the weakly differentiated products between two MPC firms in close geographical proximity, or have products deemed to be very close substitutes by consumers, firms will begin to exhibit price rigidity a la oligopolistic competitive behaviour; also non-price strategies as explained above in P5

P8) It is probably true that KFC operates with the actions of rival firms like McDonald's in mind given similar price plans (including discounts, price discrimination), competing locations in shopping malls, cross-competition into one another's niche markets, competition in marketing platforms (TV ads, newspaper ads); on the other hand, Arnold's have price plans that are fairly independent of the general fast-food market and have very low-level marketing and R&D efforts, though they do provide delivery services within limited geographical vicinity of their restaurants in a bid to compete more effectively with Arnold's most immediate competitors.

Mark Scheme

Part A

L3 8-10	Scope of essay: ▪ Answer should contain clear and accurate definition of price discrimination including explanation of the prerequisites to price discrimination; it should also include well-explained and well-exemplified 2nd or 3rd degree price discrimination Depth of explanation: ▪ Answer should contain well-explained diagrams where applicable ▪ Answer should state the clearly the prerequisites to price discrimination and an explanation for why these prerequisites are necessary with exemplification to fast-food industry ▪ Answer should contain clear definitions, explanation and exemplification of 2nd or 3rd degree price discrimination; **along with necessary diagram(s)** ▪ Answer may contain very few minor misconceptions
L2 5-7	Scope of essay: ▪ Answer lacks either the scope of the depth of explanation Cap at 7m ▪ No diagrams Cap at 6m ▪ Well-explained and well-exemplified prerequisites to price discrimination, but no mention of the type(s) of price discrimination that can be engaged Cap at 5m ▪ Well-explained and well-exemplified type(s) of price discrimination that can be engaged, but no mention of the prerequisites to price discrimination
L1 1-4	Scope of essay: ▪ Answer contains explanations with no application to fast-food context; again with more credit given to explanation of prerequisites to price discrimination as compared to type(s) of price discrimination that can be engaged Depth of explanation: ▪ Answer contains unexplained diagrams ▪ Answer contains unexplained statements ▪ Answer contains limited or poor exemplification ▪ Answer contains major misconceptions

Part B

L3 9-11	Scope of essay: ▪ Answer should contain explanations of why the firms KFC and Arnold's fit into a particular type of market structure; while they behave differently due to the significant differences in their market share in the fast-food industry ▪ Answer should contain a discussion of whether KFC and Arnold's exhibit strategic (mutual interdependence) or non-strategic behaviour Depth of explanation: ▪ Answer should contain well-explained diagrams where applicable ▪ Answer should contain balanced arguments: o decisions of firms are mutually interdependent with actions of competitors o decisions of firms are not strategic in nature ▪ Answer should contain relevant exemplification in Singapore fast-food industry context ▪ Answer may contain very few minor misconceptions
L2 6-8	Scope of essay: ▪ Answer contains mainly underdeveloped explanations of why the firms KFC and Arnold's fit into oligopoly market structure ▪ Answer narrowly focuses around just oligopolistic firm behaviour and mutual interdependence, and does not consider possibility of Arnold's exhibiting non-strategic behaviour Depth of explanation: ▪ Answer contains some attempts at explaining diagrams drawn ▪ Answer contains unbalanced arguments: o decisions of firms do depend on actions of competitors<u>*or*</u> o decisions of firms do not depend on actions of competitors ▪ Answer contains limited, poor or irrelevant exemplification to Singapore fast-food industry context ▪ Answer may contain some minor misconceptions
L1 1-5	Scope of essay: ▪ Answer contains very weak explanations with no exemplification of policies in Singapore fast-food industry context Depth of explanation: ▪ Answer contains unexplained diagrams ▪ Answer contains unexplained statements ▪ Answer contains limited or poor exemplification ▪ Answer contains major misconceptions
E2 3-4	Well-reasoned evaluation using economic analysis, of whether decisions made by KFC and Arnold's are dependent on actions of competitors as well as the extent of mutual interdependence (or independence)
E1 1-2	Descriptive or unexplained evaluation

Essay Question 3

The bottom 30% of working families in Singapore has now experienced stagnating real household incomes for eight to ten years. If wages continue to stagnate, there is a limit to poverty alleviation through working longer and harder, or driving the unemployment rate lower.

(a) Explain the case for government intervention in the market for vocational training. [10]

(b) Discuss whether you agree that employment creation is no longer the best method to alleviate poverty in Singapore. [15]

Enduring Understanding

1. The justification for government intervention (i.e. case for government intervention) comes in the form of the achievement of government's economic objectives →if intervention in the market for vocational training helps to achieve an economic objective, then there is a case for intervention
2. Wage stagnation occurs when economic expansion relies more on increasing the quantity of factors rather than the quality of factors

Suggested Answer Outline

Part A

- Scope of essay- objectives that government can achieve by intervening in the market for vocational training → governments should help to increase the consumption / production in the vocational training market
    - Efficiency (reducing allocative inefficiency due to existence of positive externality, occupational immobility of labour)
    - More equitable income distribution (mitigating widening income gap)
    - Potential growth (improving quality of factors)
    - Employment (reducing structural unemployment)

Part B

- Scope of essay- policies that government can implement to alleviate poverty
    - Employment creation (increasing employment)
        - Short-term
            - <u>Direct creation of jobs</u> (Fiscal policies that create jobs by increasing aggregate demand)
                - Expansion of civil sector
                - Increased construction of infrastructure
            - <u>Creation of jobs through market incentives</u>(Fiscal policies with supply-side effects (or SR supply-side policies) that create jobs by inducing increases in aggregate demand)
                - Wage subsidies
                - Corporate tax rebates
                - Decrease in Central Provident Fund (CPF) contributions by employers etc.
                - Encouraging entrepreneurship effort
        - Long-term
            - <u>Putting workers into existing jobs</u>(Supply-side policies)
                - Retraining programmes
                - Job redesigning programmes
                - Job-matching agencies
        - Others

- Creation of jobs for Singaporeans through labour market protection (Other supply-side policies)
    - o Hike in foreign worker levy
    - o Hike in minimum wage for approval of foreign employment pass etc.

o Policies to mitigate poverty instead of employment creation
  - Minimum wage
  - Increase the progressivity of direct income tax structure and increase the tax rate for highest income earners
  - Direct income transfer payments to lowest income groups
  - Subsidies for food and basic necessities
  - Minimum wage
  - Subsidies for education, healthcare, housing and other social security expenditure

Suggested Answer with Elaboration

(a) Explain the case for government intervention in the market for vocational training. [10]

Part A

Government intervention in the market for vocational training can be justified only if it helps them to achieve government goals.

P1) There may be under-consumption in the market for vocational training due to the positive externality that exists in the market; hence there may be a case for government intervention to improve allocative efficiency.

- Positive externality refers to the existence of external benefits that can be enjoyed by third parties uninvolved in the consumption of vocational training.
- This leads to a divergence of marginal social benefit (MSB) and marginal private benefit (MPB) due to positive marginal external benefit (MEB); at the same time assuming that marginal social cost (MSC) equals marginal private cost (MPC).
- As such, rational economic agents will only consider MPB (in terms of increased employment and higher wages due to improved skills and productivity) and MPC (in terms of explicit cost of signing up for training, and opportunity costs) of the consumption of vocational training, in arriving at the decision to consume at MPB = MPC =Q_p, which is the private efficiency level of output.
- In doing so, they ignore the MEB (in terms of the increased attractiveness of Singapore as a destination for investment by firms which in turn creates further employment.
- There is an under-consumption given that the socially optimal level of output is given to be MSB = MSC = Q_s is greater than Q_p; at Q_p the society is forgoing the net social benefit that can be enjoyed given that the additional social benefit is greater additional social cost incurred when increasing consumption level from $Q_p$to Q_s.
- Hence, the under-consumption leads to deadweight loss and allocative inefficiency results.
- Government intervention is justified to reduce allocative inefficiency.

P2) There may be an unequal distribution of income due to occupational immobility persistent for the lowest income groups, which can be rectified by the government in encouraging more vocational training for the lowest income groups especially.

P3) By encouraging more vocational training, the government can also help to achieve more potential growth and/or reduce structural unemployment.

(b) Discuss whether you agree that employment creation is no longer the best method to alleviate poverty in Singapore. [15]

Part B

P4) While there may only be a small proportion of population living under absolute poverty, there is still a sizeable proportion of population experiencing relative poverty with about 20-30% of households in Singapore earning below what is deemed the minimum standard of living. Employment creation, if defined as any government effort to increase employment for especially the lowest income groups, may be broad enough to be considered the best, but not the only method, to alleviate poverty in Singapore by increasing the real disposable income for the lowest income groups.

P5) The government may be able to alleviate poverty through employment creation by increasing the size of the civil sector, directly increasing the number of employment opportunities for the cyclically unemployed and hence alleviate poverty.

- o Explanation of policy mechanism
  - Increasing G hence increasing AD
  - *Inventory explanation* leading to increase in NY
  - Will alleviate poverty if there is increase in income levels and/or employment rates for lowest income groups
- o Limitations
  - Crowding out effect in factor market
  - Multiplier size
  - Strain on fiscal budget / opportunity cost
  - Reduced productive efficiency due to more labour factors used even though there is no initial demand for such services (i.e. more input, same amount of output)

P6) Employment creation can also come in the form of fiscal policies with supply-side effects such as wage subsidies, in order to increase employment opportunities similarly for the cyclically unemployed to alleviate poverty.

- o Explanation of policy mechanism
  - Providing wage subsidies (or any subsidies that reduces unit cost of production) to firms to reduce unit cost of production given that labour cost is a significant factor of production
  - Increases SRAS, lowers GPL, induces increase in AD, increases production and hiring of factor inputs including labour, increase in NY
  - Will alleviate poverty if there is increase in income levels and/or employment rates for lowest income groups
- o Limitations
  - Firms may not fully pass on cost savings in wages to consumers, and instead use subsidy for other purposes; may end up worsening income inequality (and make poverty alleviation even more difficult)
  - Jobs created may not create employment for Singaporeans, or the right kind of employment to cater to the low-skill workers
  - May reduce efficiency of firms if done frequently enough
  - Strain on fiscal budget / opportunity cost

P7) Employment creation may also encompass a long-term dimension, whereby supply-side policies such as retraining to reduce occupational immobility will help to reduce structural unemployment and alleviate poverty.

- o Explanation of policy mechanism
  - Retraining improves the quality of labour, increases productive capacity, increases LRAS

        - Will alleviate poverty if the reduction of structural unemployment leads to increase in income levels and/or employment rates for lowest income groups; increase in productivity also increases Marginal Revenue Product (increase in marginal physical product of labour, holding price of output per unit constant) of labour, hence increasing wages
    - Limitations
        - Long gestation period
        - Workers may not be willing / have the capacity to undergo retraining
        - May come at very high costs

P8) However, even without employment creation, there are other possible means to achieve poverty alleviation.

- *May pick any policy that does not result in employment creation for explanation*
    - Transfer payments are still an integral part of the government approach to poverty alleviation to ensure that the lowest income groups receive some governmental support to maintain a basic standard of living
    - As a preventive measure, efforts to reduce skill deficits / differentials in the economy in a positive manner will do well to reduce both absolute as well as relative poverty, usually done via improvement in social security (healthcare, education, housing)

P9) <u>On balance</u>, employment creation can be effective, in both the short-term and long-term, in alleviating poverty via the reduction of both cyclical and structural unemployment. However, there will be segments of the population who are either not willing to accept or not susceptible due to a lack of skills to efforts by the government to alleviate poverty through employment creation. Hence, a degree of transfer payments as part of a welfare system is still necessary to alleviate poverty in the short term; in the long term preventive measures to reduce the likelihood of a skills deficit or huge skill differentials from occurring in the first place may be more appropriate.

Mark Scheme
Part A

L3
8-10
	Scope of essay:
	▪ Answer should contain well-explained and well-exemplified economic objectives of government that can be met by increasing the consumption / production of vocational training; of which both efficiency and equity must be explained, with additional credit given for explanation of positive externality given the analytical rigour that can be displayed
	
	Depth of explanation:
	▪ Answer should contain well-explained diagrams where applicable
	▪ Answer should state the clearly the economic objectives that can be achieved, and
	  o explain how increasing the consumption / production of vocational training can help to achieve these economic objectives <u>or</u>
	  o explain how the lack of vocational training could be detrimental to the achievement of these economic objectives
	▪ Answer should contain relevant exemplification
	▪ Answer may contain very few minor misconceptions
	
	Cap at 8m
	▪ If answer only contains government objective to achieve efficiency and equity with no mention of macroeconomic goals

L2
5-7
	Scope of essay:
	▪ Answer contains only adequate explanations with some exemplification of economic objectives of government that can be met by increasing the consumption / production of vocational training <u>or</u>
	▪ Answer narrowly focuses around only either efficiency + macroeconomic goal or equity + macroeconomic goal
	
	Depth of explanation:
	▪ Answer contains some attempts at explaining diagrams drawn
	▪ Answer contains clearly stated economic objectives, and adequate explanations of the following:
	  o how increasing the consumption / production of vocational training can help to achieve these economic objectives <u>or</u>
	  o how the lack of vocational training could be detrimental to the achievement of these economic objectives
	▪ Answer contains limited or poor exemplification
	▪ Answer may contain some minor misconceptions

L1 1-4	Scope of essay: ▪ Answer contains very weak explanations with limited or no exemplification of economic objectives of government that can be met by increasing the consumption / production of vocational training Depth of explanation: ▪ Answer contains unexplained diagrams ▪ Answer contains unexplained statements ▪ Answer contains limited or poor exemplification ▪ Answer contains major misconceptions

Part B

L3 9-11	Scope of essay: ▪ Answer should contain at least <u>three</u>(due to "best method" comparison) well-discussed (mechanism of policy, limitations of policy) and well-exemplified policies that can alleviate poverty in the Singapore context, <u>including</u> employment creation as a policy ▪ Answer should contain a discussion of <u>both</u> short-term and long-term policies Depth of explanation: ▪ Answer should contain well-explained diagrams where applicable ▪ Answer should contain balanced arguments: o explain how the policy can help alleviate poverty o explain the limitations of the policy ▪ Answer should contain relevant exemplification in Singapore context ▪ Answer may contain very few minor misconceptions
L2 6-8	Scope of essay: ▪ Answer contains only adequately-discussed policies that can alleviate poverty, with some exemplification ▪ Answer narrowly focuses around eithershort-term or long-term policies, but not both Depth of explanation: ▪ Answer contains some attempts at explaining diagrams drawn ▪ Answer contains unbalanced arguments: o explanation of either how policy can alleviate poverty *or* limitations of policy <u>*or*</u> o weak explanation for both policy mechanism and limitations ▪ Answer contains limited, poor or irrelevant exemplification to Singapore context ▪ Answer may contain some minor misconceptions
L1 1-5	Scope of essay: ▪ Answer contains very weak explanations with limited or no exemplification of policies in Singapore context Depth of explanation: ▪ Answer contains unexplained diagrams ▪ Answer contains unexplained statements ▪ Answer contains limited or poor exemplification ▪ Answer contains major misconceptions
E2 3-4	Well-reasoned evaluation using economic analysis, of whether employment creation is still / no longer the best method to alleviate poverty in Singapore
E1 1-2	Descriptive or unexplained evaluation

Essay Q4

Discuss whether supply side policies are best for achieving low inflation in the Singapore economy. [25]

Suggested Answer Scheme

Scope requirements: Market and interventionist supply-side policies; short and long run; alternative policies linked clearly to inflation.

Introduction:

- Introduce low inflation as 2-3% inflation for the Singapore economy.
- Define what's best:
  - o Context as small and open economy: Much inflation is imported- Tools needed to deal with imported inflation.
  - o Economy is operating near or at full employment: Demand pull inflation is a significant problem- Tools needed to expand productive capacity.
  - o Need to also consider time period and trade-offs.

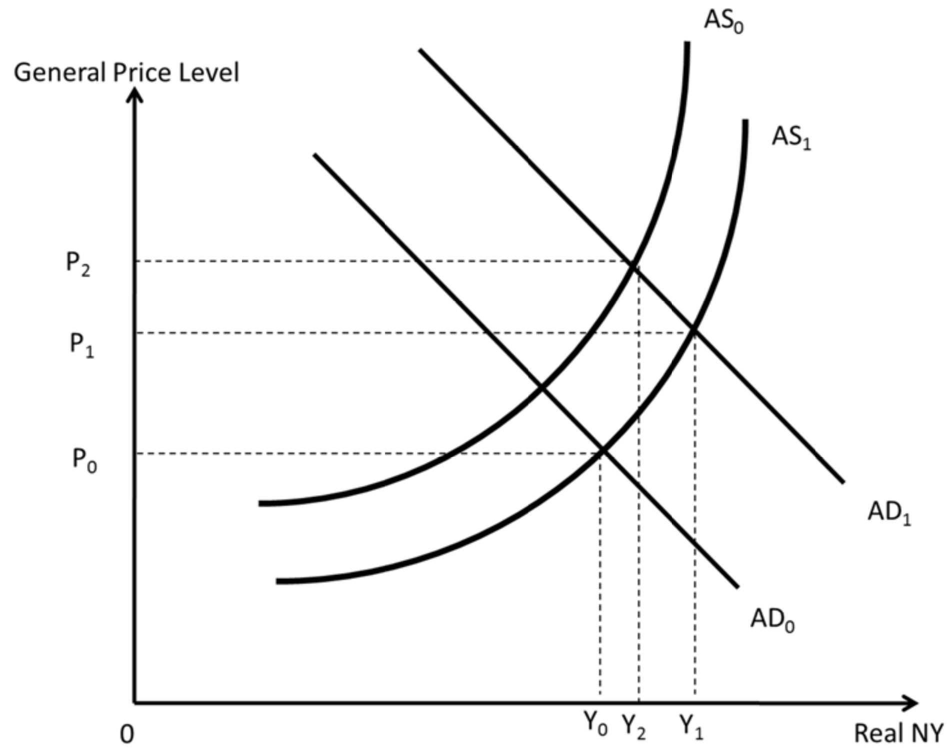
Theses:

1. Supply side policies are effective in helping Singapore achieve low inflation:
   a. Interventionist supply-side policies to upgrade quality of human capital, eg, Continuing Education and Training programmes, enhance the quality of human capital which increases productivity and decreases unit COP, thus mitigating cost-push inflation. Such programmes also raise productive capacity, creating more capacity for growth which reduces both cost push and demand pull inflation..
   b. Market-oriented supply side policies in the product markets, which reduce barriers to entry, including firm dominance, are effective as they promote competition and encourage productive and dynamic efficiency, which lowers unit cost of production thus mitigating cost push inflation:
      i. Policy detail 1: Promotion of entrepreneurship through Spring Singapore.
      ii. Policy detail 2: Attracting FDI: Further enhances competition within domestic market to drive efficiency gains. At the same time, FDI promotes fixed capital formation thus enabling capital deepening and widening, which boosts productivity and increases productive capacity whilst, at the same time, lowering unit COP.
   c. Market oriented supply side policies such as the buffer labour policy and income tax cuts, can also be used to reduce unit COP and increase productive capacity.
      i. Buffer labour policy allows foreign workers and talents into Singapore. This helps to increase the supply of both skilled and unskilled labour, thus mitigating rising wages in the face of rising demand for labour and managing, in the process, wage push inflation. Increase in quantity of skilled and unskilled labour helps increase productive capacity.
         - *Accept market diagram for labour*
      ii. Income tax cuts may also be effective as they encourage workers to seek work, thus lowering wage push inflation: Income tax cuts increases the disposable income of workers thus promoting their participation in labour force, which mitigates wage push inflation as it

increases supply of labour and limits wage increases. Further, an increase in labour force participation rate helps increase quantity of labour thus boosting productive capacity.

The effect of CET market oriented supply side policies aimed at reducing BTEs, and labour force oriented supply side policies will help mitigate inflation in Singapore as follow:

- These policies reduce unit COP whilst also increasing the productive capacity of the Singapore economy. These cause AS to increase from AS0 to AS1.
- For a given increase in AD, from AD0 to AD1, demand pull inflation has been mitigated as general prices have risen from P0 to only P1 instead of P2.
- Also, if economy is experiencing cost push inflation, falling unit COP aising from these policies would help mitigate cost push inflation.
- These explain how supply side policies can help Singapore achieve low inflation.



- At the same time, supply side policies allow for other economic goals to be achieved concurrently. With an increase in AS from AS0 to AS1, NY increases from Y0 to Y2 instead of Y1 when AD increases.
    - Such economic growth is in line with what the Singapore governments hopes to achieve.
    - As the economy grows, firms also hire more FOPs, including labour. This reduces demand deficient unemployment CP.
    - This mitigation of rising GPL, CP, would allow us to maintain or even improve the price competitiveness of our exports thus boosting our BOP current account.

2. Such supply side policies thus allows the Singapore economy to achieve low inflation without significant trade-offs in terms of other macroeconomic objectives foregone.

Antitheses:

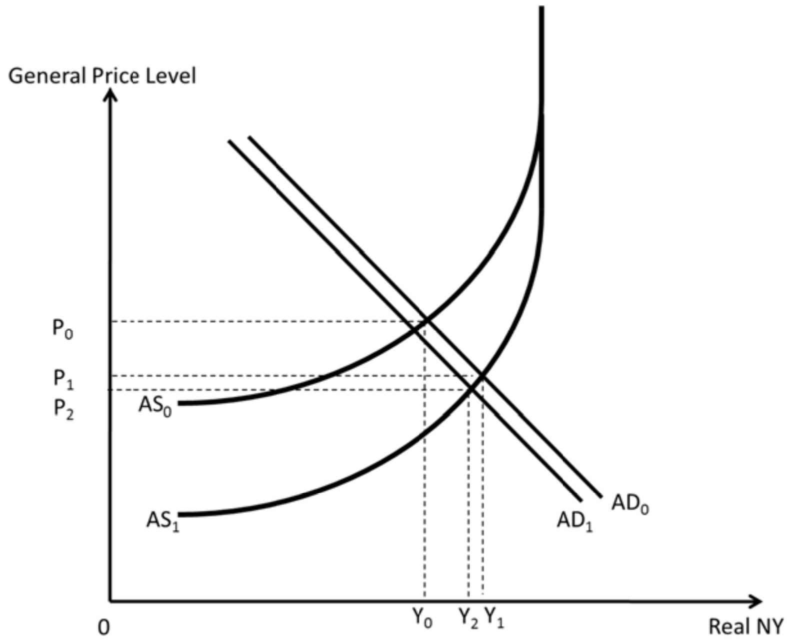
2. Supply side policies may not help Singapore achieve low inflation in an appropriate manner:

    a. Time is needed for such supply side policies to take effect- Workers need time to train and industries need time to become more competitive.
    b. Further, supply side policies may not be effective as their benefits may not materialise.
        i. The success of CET depends on workers' aptitude and attitude.
        ii. Also, firms may collude or strengthen entry barriers through product differentiation and securing of key inputs and distribution channels.
        iii. Additionally, tax cuts may not be effective encouraging labour force participation rates. Singapore already has amongst the lowest tax rates in the world- little scope to cut taxes further. Also, a reduction in income tax could worsen budget balance and limit the government's ability to spend on much needed merit and public goods.

3. Appreciating exchange rate will help achieve low inflation better.

    Given Singapore's small and open nature, import cost push inflation is likely the key source of inflation in the Singapore economy.

    a. An appreciating exchange rate will help limit cost push inflation. This is because with appreciation, prices of imported goods and services, both final and intermediate, will become less costly in SGD terms. This reduces unit COP and increases AS from AS0 to AS1 as shown below:



b. This helps reduce GPL from P0 to P1, thus helping alleviate import cost push inflation. At the same time, Singapore exports will become more expensive in foreign currency terms. Given the price elastic nature of Singapore's highly substitutable exports, export demand will fall, causing an autonomous fall in export revenue which, in turn, decreases AD from AD0 to AD1.This will also help mitigate demand pull inflation by further reducing GPL from P1 to P2.

c. However, reduction in exports may slow down economic growth by multiple times the initial fall in autonomous exports to a factor of 1/mpw. In the figure above, economic growth has been reduced from Y0 to Y1 to Y0 to Y2. Further, BOP CA is likely to worsen due to falling export revenue arising from the SGD appreciation. Hence, the use of exchange rate policies to achieve low inflation is costly for Singapore in terms of other macroeconomic policy conflict.

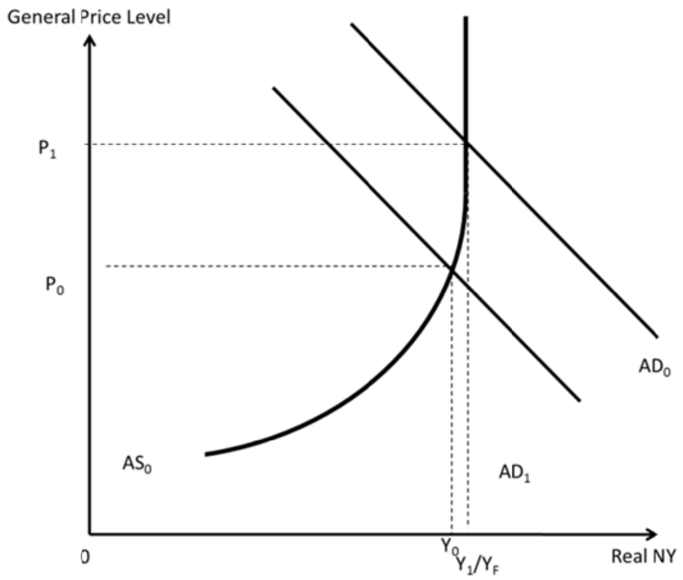
- However, it should be noted that an exchange rate appreciation may not lead to a significant fall in AD because it would help reduce unit COP. As unit COP falls, domestic exports become more price competitive and hence increases.
- Further, Singapore is particularly susceptible to imported inflation due to its small and open nature. Exchange rate policy is thus a highly effective tool in helping Singapore achieve low inflation.

4. Contractionary fiscal policy can help Singapore achieve low inflation:

Demand pull inflation is a major source of concern in Singapore as the economy is frequently operating near full capacity. This is especially so when the Singapore economy finds itself at the peak of the business cycle. In such instances, any increase in AD will cause significant inflation in the Singapore economy.

a. When faced with such inflation, the Singapore government can mitigate demand pull inflation to achieve low inflation by reducing G and increasing T.

i. Government can reduce G by postponing large government projects eg, infrastructure spending such as MRT line expansion and HDB upgrading to reduce G.
ii. Raising personal income and corporate taxes will help decrease disposable income and thus reduce Cd and Id respectively.
iii. These cause a contraction of AD and thus mitigates demand pull inflation.



In the figure above contractionary fiscal policy will help reduce AD from AD0 to AD1, thus lowering GPL from P1 to P0, hence mitigating demand pull inflation.

b. However, this is difficult to achieve given that much of Singapore's government spending is on public and merit goods which are considered necessities, such as healthcare and education.

c. Further, the Singapore government is unlikely to raise taxes as it is keen on attracting both foreign talent and FDI.

d. There are also negative side effects of using contractionary fiscal policy to mitigate demand pull inflation:
   - In the diagram above, the use of contractionary fiscal policy causes a fall in real NY from Y1 to Y0, thus causing negative economic growth. While this is mitigated when the economy is operating at full employment, it is difficult for the government to achieve fiscal marksmanship- the contraction in AD might be too excessive.
   - As NY falls, unemployment also rises.

e. Additionally, it is important to note that fiscal policy in Singapore has much supply-side effects. A reduction in G might actually cause a fall in productive capacity as government spending on important merit goods, such as CET and social overhead infrastructure spending (infrastructure), may fall. This causes a fall in AS and worsens inflation, thus causing Singapore to become less able to achieve low inflation.

5. Evaluation

a. Supply side policies indeed the best policy to achieve low inflation on two counts: First, it is highly effective in helping Singapore achieve low inflation. Second, it achieves low inflation without much trade off in terms of other macroeconomic objectives foregone.

b. However, it is not robust enough to deal with all inflationary situations faced by the Singapore economy: First, the time lags and the uncertainty surrounding its effectiveness means that other faster-acting policies with more certain outcomes, such as fiscal and monetary policy, should be considered.

c. Given that much of our inflation is imported, monetary policy is the next best policy to help Singapore achieve low inflation. Exchange rate appreciation is also particularly relevant in the context of a negative supply shocks causing stagflation in the Singapore economy.

d. Contractionary fiscal policy is probably the least best policy to help Singapore achieve low inflation as it conflicts with other important macroeconomic aims. It is only appropriate when the economy is clearly operating at the full employment level of output.

e. However, given the strengths and limitations of each policy, and also the diverse sources of inflation in the Singapore economy, a mix of policies should be used in order to help Singapore achieve low inflation.

Mark Scheme

L3 (15-21m)	For a well-developed answer that uses the AD-AS and other economic frameworks to explain and illustrate how supply side policies and other economic policies may or may not be appropriate in achieving low inflation. The highest L3 marks (19-21) may only be achieved by answers that • discussa range of market oriented and interventionist supply-side policies. • makes clear distinction between lowering GPL and moderating the rate of increase in GPL to achieve low inflation
L2 (10-14m)	For an under-developed answer that explains and illustrates how supply side policies and other economic policies may or may not be appropriate in achieving low inflation. Cap at • 10m - for a one-sided discussion. • 12m - where discussions are restricted to SR supply-side policies (cost-cutting measures) • 14m - for discussions that limit to 2 (correct) policies including ss-side policies
L1 (1-9m)	For an undeveloped answer that attempts to link economic policies to low inflation. Low L1 (Max 5): For an answer that merely shows knowledge of supply side policies and/or low inflation.
E2 (3-4m)	Economic judgement with justification using clear economic framework. Candidates need to present their own opinion backed up by economic theories.
E1 (1-2m)	Economic judgement with justification but lacking in economic reasoning. A mere presentation of personal opinions without substantiation using economic theories.

Essay Question 5

Whenever the government announces a rising deficit, the media routinely declare the "bad news" that the trade gap has "worsened" – no matter how good the accompanying economic news may be on inflation, employment, and growth.

a. Explain how a rising trade deficit could impact the circular flow of income. [10]

b. Discuss whether a government should actively pursue policies to correct a trade deficit. [15]

Suggested Answer

Part (a)

Part (a)

1. Explain what rising trade deficit means
   - difference between TE_M and TR_X increase in the trade in merchandise goods

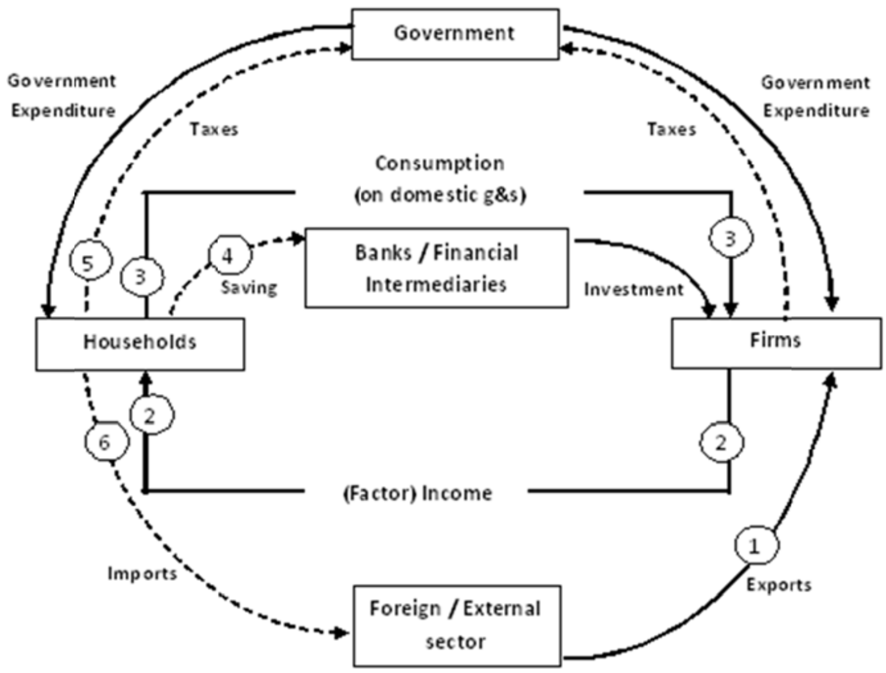
2. Explain the effect of an increase in trade deficit on the circular flow

   The circular flow is simply a representation of how income and expenditure moves from one sector of the economy to another.

   M represents withdrawal out of the circular flow as it siphons off spending that could have been directed at domestically g&s which could have then have gone off to create income for the households.

   X represents injection into the circular flow as it represents foreign spending on domestically produced g&s which goes to create income for the domestic households.

   An increase in trade deficit increases withdrawals relative to injections, creating a net withdrawal from the circular flow.



For simplicity, suppose that

- rising trade deficit is due to decreasing TR_Xarising from falling X dd (holding TE_M constant)
- TR_X falls by \$100m
- constant MPC_d = 0.6, i.e. consumption increases (decreases) by \$0.60 when NY increases (decreases) by \$1
- constant MPW = MPS + MPT + MPM = 0.4, i.e. total withdrawals increases (decreases) by \$0.40 when NY increases (decreases) by \$1

Explain how the fall in TR_X works its way through the circular flow via the multiplier effect:

- When TR_X declines by \$100m, cp → firms' revenue falls by \$100m (arrow 1)The decrease in AD → unplanned investment, firms cut back production to restore inventories to optimal level → decrease in demand for fops as derived dd→ factor income paid out declines by \$100m (arrow 2)
- Following the decline in households' income of \$100m, the purchasing power of households fall, causing a fall in induced consumption. This consumption however does not fall by the full extent of the fall in income. Given MPC_d of 0.6, induced consumption falls by only \$60m (arrow 3) with the rest of the shortfall (\$40m) coming from cut backs in savings, taxes and imports (arrows 4, 5 and 6 respectively)
- The decrease in induced consumption of \$60m → further decrease in revenue of firms (arrow 3) Another round of decrease in AD → further cutback in production and less factor income disbursed (arrow 2)
- The falling income of \$60m leads to yet more contraction in consumption (\$36m), savings, taxes and imports (\$24m) (arrows 3, 4, 5 and 6 respectively)
- Each subsequent round of contraction in C_d gets smaller as the leakages at each round (cutback in S, T and M) help cushion the extent by which C_d has to fall to balance the income and spending of hhs.
- The process continues until the total fall in W = initial fall in J = \$100m → new equilibrium achieved at a lower level of Y

- $\Delta Y = (-\$100m) + (-\$60m) + (-\$36m) + \ldots$

  Multiplier, k = $\dfrac{1}{1-MPC_d} = 2.5$

  $\Delta Y = k\,\Delta J = 2.5 \times (-\$100m) = -\$250m$

  An increase in trade deficit (due to a decrease in TR_X) of \$100m, working through the multiplier process, will cause NY to fall by \$250m.

Alternative approaches:

1. Explain how an increase in trade deficit through an increase in M (at the expense of C_d), works through the k process to bring about contraction in NY.
2. Use the step diagram to explain the multiplier effect following the initial decrease in TR_X.

Part (b)

1. Introduction

Whether a government should actively pursue policies to correct a trade deficit depends on

a. underlying cause of trade deficit

e.g. if for economic development (e.g import capital equipment, construction materials) → build up export potential → EG + correcting the deficit in the LR

e.g. sign of improving economy: increase rate of economic growth and rising employment → increase spending on imports hence increase in trade deficit

b. duration of deficit

If chronic, this will pose problems on financing and debt

c. size of the deficit as a % of GDP

2. Thesis: govt should actively pursue policies to correct trade deficit

If the trade deficit is due to non-productive spending, persistent or large as a percentage of GDP, government needs to step in to correct.

Explain the debilitating effects of trade deficit on the economy

a. On growth and employment

Rising trade deficit, cp → fall in AD → contraction in NY and increase UN [already been elaborated in part (a) hence need not go into detail]

<AD/AS diagram + accompanying explanation>

- This could be due to
  - falling external demand but domestic demand not rising (or not rising enough) to cushion the fall → cyclical UN

  OR
  - loss of export competitiveness with workers lacking in relevant skills to move into other industries (factor immobility) → structural UN
- If not addressed, extended period of UN → erosion of skills → reduce employability of the laid-off workers even when growth is restored. For the economy, the loss of human capital limits the growth of its productivity and hence the extent by which SOL can improve over time.

b. ER problems

If the rising trade deficit gives rise to BOP deficit → $TR_X < TE_M$ → dd for country's currency < ss of country's currency in the forex market at the current ER → surplus puts a downward pressure on ER

<diagram + accompanying explanation>

For countries operating a fixed ER system

- This calls for the C/B to use the country's reserves to buy up domestic currency to prop up the ER value. <relate to diagram>
  If BOP deficit is persistent → depletion of reserves, misalignment of official exchange rate with market exchange rate → speculative pressures with speculators expecting the C/B to either (i) give up the peg when it no long has the reserves to continue to support its value in the forex market, or (ii) impose exchange control to stem the outflow of funds → hot money outflows to countries whose currencies are deemed to be stable → increase BOP deficit further via its effect on K&F/A → further downward pressure on ER → brings forward the devaluation

For countries operating a floating ER

- The excess ss of domestic currency → ER depreciation <relate to diagram>

Either way,

- ER depreciation → increase in price of imports in domestic currency terms → for countries with high reliance on imports for raw materials and intermediate goods, unit COP rise → inflationary risk
- For countries with large external debt, ER depreciation will increase the debt burden (loans denominated in foreign currency terms now costs more to repay in domestic currency) → fall in SOL which may be explained by (1) possible closure of firms and banks which are unable to repay the loans, culminate in financial crisis, many years of lost output; (2) debt repayment requires country to cut back on consumption, divert more resources to produce goods for exports to earn the foreign exchange to repay debt

c. Deficit-financing problems

Trade deficit may have to be financed by external borrowing (e.g. from other governments or from the IMF). Many of these loans come with strings attached. Not only does this represent a loss of sovereignty but the terms and conditions that come with the loans may not be in the best interests of the economy. The IMF for instance has come under much criticism for its handling of the AFC.

The repayment of these loans (with interest) also reduces the SOL of future generations, i.e. just like budget deficits, trade deficits represent an inter-temporal redistribution of income. The current generation enjoys high SOL with its profligacy, spending on imports and financing their spending with loans which have to be repaid by future generations.

3. Antithesis: govt should not (need not) actively pursue policies to correct trade deficit

a. On growth, employment and SOL

- SR: trade deficits mean higher material SOL
  Greater imports, reduced X → more g&s available domestically for consumption → satisfaction of more wants, higher utility derived

- For countries with large domestic expenditure, trade deficit may do little to dent AD → able to continue to enjoy strong growth, low unemployment.

Experience of the UK and US in the pre-GFC seem to support this. Both countries have been experiencing persistent current account deficits yet they have also enjoyed one of the longest sustained periods of growth and falling unemployment, supported by the strong growth in C (includes both C_d and M)

b. On ER and deficit-financing

- For countries operating a free float, trade deficit, cp → ER depreciation

  ER depreciation is not necessarily a bad thing: automatic correction of the deficit (explanation + ML condition)(may also explain the J-curve effect for evaluation)

- Trade deficits need not create problems for BOP if the surplus in the other accounts is enough to offset the deficit in the visible trade balance → overall BOP need not be in deficit.

  BUT… is it so simple a case that as long as the overall BOP is balanced the composition of the individual accounts do not matter?

  A net inflow in the K&F/A means that foreigners are taking ownership of more of the country's assets (fixed capital, equity or debts). In the long run, there will be greater streams of income outflows, worsening the C/A balance in the future

  C/B may have to raise i/r to attract the capital inflow → higher cost of borrowing → decrease I → decrease AD in the SR, decrease rate of capital accumulation in the LR → falling actual and potential growth → implication on SOL?

4. Evaluation:

Whether a government should actively pursue policies to correct a trade deficit depends on:

a. prevailing economic conditions: It might not be possible for the government to achieve all macroeconomic goals simultaneously → need to prioritise

e.g. when economy is in recession, the most pressing concern is to restore growth and create jobs and for economies with large domestic sector, this means to carry out expansionary FP and MP by cutting i/r even if it means increase trade deficit e.g. fiscal & monetary stimulus → increase employment, increase Y which may increase spending on M → increase trade deficit

e.g. when the economy is facing high inflation, the government may allow the trade deficit to increase to moderate the increase in AD and slow down the price increase

b. economic characteristics of the country

e.g. country's CA may lie in the services sector → C/A need not be in deficit even if trade balance is in deficit

Mark Scheme

Part (a)

Knowledge, Application, Understanding and Analysis	
L3 7-10	For an answer which • explains how the increase in trade deficit affects the relevant components of the circular flow of income (including the k effect and how the process settles at a new equilibrium) • uses the circular flow diagram and numerical analysis effectively • consistently rigorous Cap at 7m if • answer contains either numerical illustration or the circular flow diagram (explained)
L2 4-6	For an answer which lacks scope e.g. (1) made use of the circular flow diagram to explain the first round effect of the increase in trade deficit but fails to recognise the subsequent rounds or (2) explains the adjustment and multiplier effect without showing any recognition of how this relates to the circular flow of income Cap at L2 if • neither a numerical illustration nor the circular flow diagram • explains the effect of a trade deficit rather than an increase in trade deficit
L1 1-3	For an answer which • is largely irrelevant with no indication that the meaning of the question has been properly grasp e.g. (1) draws the circular flow diagram with no attempt to relate to increase trade deficit or (2) uses AD-AS analysis to explain the effect of trade deficit on equilibrium NY with no mention of the relevant components of circular flow • is largely descriptive and/or contains gross conceptual mistakes

Part (b)

Knowledge, Application, Understanding and Analysis	
L3 9-11	For an answer which • displays depth of economic analysis for most part of the essay • makes effective use of diagrams and other tools of economic analysis • analyses both thesis and antithesis arguments • (at the lower end of the mark range) may contain some inaccuracies
L2 6-8	For an answer which • presents both sides of the arguments but • is not consistently analytical throughout, limited in use of the tools of economic analysis such as diagrams OR • applies sound economic analysis but lacks balance
L1 1-5	For an answer which • is largely irrelevant, no indication that the meaning of the question has been fully grasped e.g. explains and evaluates alternative policies to close trade gap • more descriptive than analytical
Evaluation	
E2 3-4	For a reasoned judgement
E1 1-2	For an unexplained judgement

Essay Question 6

Singapore's trade with major trading partners such as Malaysia, [the European Union], China, US, Indonesia, Japan and Hong Kong increased in 2010 due to improved global economic conditions.

-Singstat, 14 March 2011

a. Explain whether Singapore's trade patterns agree with the predictions of economic theory. [12]

b. Discuss the extent to which globalisation has benefitted small and open economies more than large and less open ones. [13]

Suggested Answer Scheme

Part (a)

Explain whether Singapore's trade patterns agree with the predictions of economic theory.

1. Introduction:
    a. Explain theory of comparative advantage as follow:A country has a comparative advantage in the production of a good if it can produce the good at <u>a lower opportunity cost</u> than its trading partner. The law of Comparative Advantage states that if countries specialise in the products in which they have comparative advantage, then trade will be mutually beneficial to all countries.

<u>Thesis</u>

2. Singapore's patterns of trade agree with the predictions of economic theory.
    a. Singapore is endowed with capital and high-skilled labour.
    b. Therefore Singapore produces capital and human capital intensive goods such integrated circuits, electronic hard disk drives, personal computers, financial services and pharmaceutical drugs with lower opportunity costs relative to other countries and thus possesses a comparative advantage in producing these goods and services. According to theory, Singapore should be specialising in their production and export.This is true as we largely export such goods to our trading partners such as the US, and Indonesia.
    c. Explain that according to the theory of CA, Singapore should import land and low-skilled labour intensive G&S such as food, textiles, iron and steel from countries such as China and Malaysia who are endowed with land and low-skilledlabour and thus possess a comparative advantage in producing them as they incur relatively lower opportunity costs in doing so. This is largely true as a large amount of imports into Singapore comprises such goods and services.

<u>Anti-thesis</u>

3. Singapore's patterns of trade do not agree with the predictions of economic theory because the assumptions of CA do not hold:

    a. Theory of CA assumes no transport costs.
        i. In reality, there are transport costs and they are significant especially if they have to be air-flown, have special transportation requirements or are bulky to transport. Hence, Singapore may import goods and services from neighbouring countries, despite them not having comparative advantage in producing certain goods and services.

   ii. China for example produces vegetables at a lower opportunity costs, given by lower prices, than Malaysia. However, most of Singapore's vegetable imports are from Malaysia.

b. Theory of CA assumes no trade barriers. In reality, many countries impose trade barriers on Singapore made goods and services. Hence, despite Singapore having CA in producing certain goods and services, the after tariff price may be relatively higher and hence Singapore goods and services become less price competitive in the global market.
   i. Singapore's pattern of trade is also determined by the FTAs that it has signed with its partners, such as ASEAN, China and US. Such FTAs, which reduce protectionist measures such as tariffs and quotas, decreases prices of imports in and increases exports in foreign currency terms between FTA member states, hence allowing trade creation and divergence.
   ii. Hence, Singapore trades more actively (in larger volumes) with countries that it has signed FTAs with, such as the US, ASEAN, China and Japan. This is because Singapore obtains preferential tariff rates when exporting to these countries. Hence, despite Singapore having less comparative advantage in producing a certain good, such as textiles, its relatively lower tariff rate when exporting to an FTA partner country means that its textiles will have CA relative to to a country who may produce textiles at a lower opportunity cost, but which becomes less price competitive in the US market because higher tariffs are imposed on them by the US viz Singapore. Hence, Singapore may also export goods and services that it does not have CA in.

c. Theory of CA assumes perfect mobility of resources within the country; immobility between different countries:
   i. Without mobility of resources between countries, Singapore would not be able to produce labour intensive G&S with CA. However, mobility of labour between countries means that Singapore can actually allow foreign labour onto its shores and change its factor endowments such that it can produce certain goods and services, such as oil rigs and ship repairs, with comparative advantage. These, in turn, are presently significant amongst Singapore's exports.

d. Theory of CA assumes Constant Unit COP:
   i. The theory assumes constant returns to scale. In reality, diminishing returns will set in beyond a certain level of output, raising the unit costs of production. This in turn will lead to the disappearance of the Singapore's comparative advantage in certain goods and services. This explains why Singapore does not specialise completely in areas where it has CA but will produce some of the same types of goods that it imports, for example, telecommunications equipment.

4. Singapore's patterns of trade do not agree with the predictions of economic theory because of strategic goods.

   a. Goods such as weapons, for example, are produced in Singapore rather than imported from countries with CA in producing weapons, such as Israel and the US, because they are considered strategic in nature and are essential for national defence.

5. Singapore's patterns of trade do not agree with the predictions of economic theory because of intra-industry trade driven by demand for a variety of goods and services.
    a. Singapore also imports goods that it has CA in, for example, pharmaceuticals and personal computers from USA and Europe. Such intra-industry trade occurs as consumers prefer a variety of goods given their differing taste and preferences.Eg, although Singapore produces heart stents with CA, some consumers prefer the branded stents made by the US and French pharmaceutical giants.

Part (b)

Discuss whether globalisation has benefitted small and open economies like Singapore more than large and open economies like the USA. [13]

Scope requirements: Handles all 3 facets of globalization. Touches on micro and macro goals.

1. Introduction:
    - o Define globalization as the free movement of goods and services, labour, capital and technology.
    - o State that Singapore is a relatively small economy with domestic markets that are limited in size and is an open economy where trade to GDP ratio exceeds 300%, amongst the highest in the world.
    - o State that other economies, such as the US and Indonesia, have large domestic markets and are less open as trade to GDP ratio is much lower, at about 28 and 53% respectively.
    - o Explain that globalization benefits economies when they help the countries achieve their micro and macroeconomic goals:
        - o Economic growth, low inflation, full employment, healthy BOP position, efficiency, equity, stability

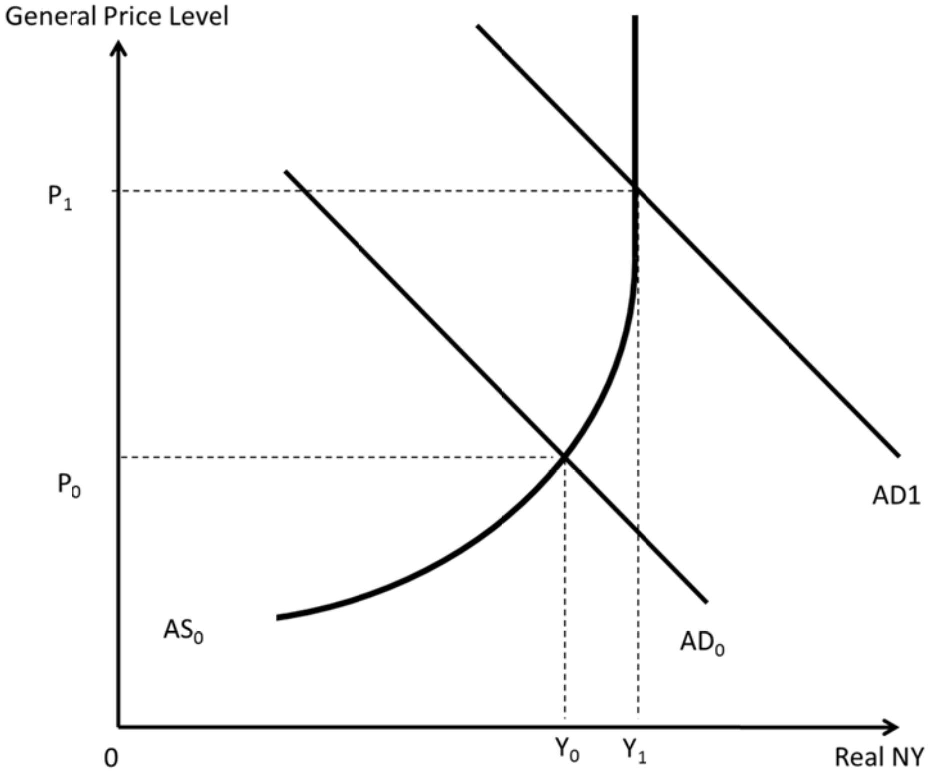
Theses: Small and open economies such as Singapore benefit more than large and less open economies:

- o Small and open economies have larger dependence on external demand in the form of exports to drive economic growth:

- o Globalisation, with the free movement of trade, helps expand markets for small and open economies, thus helping raise exports for economic growth.

- ▪ With more markets open to them, export *demand* increases. This increases AD and brings about economic growth, fall in unemployment and BOP CA improvements. **[Illustrate using AD-AS model].**

- o An increase in exports would increase AD from AD0 to AD1 as shown in the diagram below. At the existing GPL P0, a shortage develops as firms exporting to foreign markets, such as those producing electronic valves and hard-disk drives, draw down their inventory stocks in order to meet the shortage. They thus face unplanned disinvestments. In the next production cycle, they will increase production, hiring in the process more FOPs, including labour, thus increasing employment. Holding labour force constant, this reduces the unemployment rate. As output increases, real national income increases from Y0 to Y1, indicating actual economic growth. At Y1, national income would have changed by multiple times the initial increase in autonomous exports, to a factor of 1/marginal propensity to withdraw which is the strength of the income multiplier. This occurs because households, whose incomes increase when autonomous exports increase, will spend some of their increased incomes on domestically produced goods and services, generating more income for other households. This occurs until total withdrawals in the Singapore economy becomes equivalent to the initial increase in exports.



- Small economies thus benefit more than large and open ones as globalization helps them overcome their limited domestic market size to grow their economies. In the process, reduce demand deficient unemployment. BOP CA improves, ceteris paribus, because exports increase. This helps Singapore achieve a healthy BOP.

- Expansion of demand for G&S by catering to world market also helps firms located in small and open economies to reap IEOS for better productive efficiency [may illustrate as a movement towards MES using LRAC curve]. This compares to firms in countries with large domestic demand where IEOS can be reaped without export demand, hence benefitting less from the increase in trade associated with globalization.

o Small and open economies also benefit more than large and less open economies from the freer trade in goods and services as follow:

o Smaller economies like Singapore have smaller domestic markets which generally lack the breadth and depth of those found in large economies like the US. Without freer trade, residents in Singapore necessarily consume a smaller variety of goods and services than their US counterparts. With trade however, they are likely to be able to increase the variety of goods and services consumed more significantly and thus enjoy a larger improvement in SOL.

- o Small and open economies also benefit more than large and less open economies from the freer movement of capital arising from globalisation:

- o Smaller economies have smaller domestic markets which lack depth and breadth. They hence benefit more from the free movement of capital as they are more reliant on foreign companies for technological transfer, since their technology base is likely limited due to the small size of their economy, perhaps because of smaller firm numbers and smaller firm sizes (which limits the size of accumulated profits that can be used for R&D).

- ▪ With technological transfer, productivity in small and open economies like Singapore is raised → raises potential growth and lowers unit COP → non-inflationary economic growth and falling unemployment.

- o Smaller countries would also benefit more significantly from FDI as small size of economy also implies limited capital available domestically. Eg, Singapore has a much smaller capital base than the US or Indonesia. FDI inflows help increase domestic fixed capital formation → promotes capital widening and deepening →raises productivity → raises potential growth and lowers unit COP → non-inflationary economic growth and falling unemployment.

- o FDI Improves BOP Financial and Capital Accounts.

- o Small and open economies also benefit more than large and less open economies from the freer movement of labour arising from globalization:

- o Small labour force limits potential for economic growth, a problem that is faced by larger economies to a smaller extent.

- ▪ Free movement of labour resulting from globalisation, both high skilled and low skilled, augments the quantity and quality of labourthus helping overcome constraints. This compares to large countries where larger pool of talent already ensures a larger productive capacity.

- ▪ As labour force increases through high and low skilled immigration, increase in quantity and quality of labour force raises productive capacity → raises potential growth and lowers unit COP → brings about non-inflationary economic growth and falling unemployment.

Anti-thesis: Small and open economies may be more vulnerable to negative effects of globalisation than large and less open economies:

- o High level of integration increases vulnerability of smaller and more open economiesby exposing them more significantly to external demand conditions- exacerbates economic problems:

- o Xd and FDI as a proportion of AD is much higher for smaller and more open economies → economy becomes more vulnerable to external environment → economic activity becomes more volatile due to influence of trading partners’ economic situations on domestic economy → smaller and more open economies less stable than large and less open ones, who depend more on domestic demand for economic growth.

- o Free movement of labour arising from globalisation has significant impact inequity on the domestic economy, especially on wages.

- Influx of foreign workers increases supply of workers than reducing wages. This is especially important because foreign workers tend to form a larger proportion of workers in small and open economies such as Hong Kong and Singapore. Wages of low skilled workers may become especially depressed because influx of foreign low-skilled worker, in the Singapore example, increase supply more than demand, causing wages to decrease.

- Skilled workers, on the other hand, find their wages increasing as the growth in demand for them outstrips supply.

- This worsens inequity more significantly for small and open economies who are more reliant on foreign workers.

o Remittance of wages by foreign workers may also worsen BOP CA through outflows via the income balance/ invisible balance in the current account.

o Larger dependence on FDI flows may worsen BOP CA of small and open economies more significantly:

o Repatriation of profits may worsen BOP CA through outflows via the income balance/ invisible balance in the current account.

- Might be a problem for countries managing their exchange rates as this reduces the size of trade surpluses and thus reduces the rate of accumulation of foreign reserves → less ability to manage exchange rates thus worsening economic instability.

- Currency might depreciate. For small and open economies that are highly reliant on imports, this may lead to import cost push inflation as depreciation makes foreign intermediate and final goods and services more expensive in domestic currency terms. [Support using AD-AS diagram].

Anti-thesis: Large and less open economies may benefit more than small and open economies:

Domestic firms are larger and likely more productive efficient due to IEOS. Free movement of goods and services makes available more export markets to them. Their firms are more able to penetrate markets of small and open economies more effectively for greater profit, which when remitted improves BOPCA. Eg, Many MNCs are from countries that are large and less open as the large domestic market enables their expansion.

Evaluation:

- Small and open economies have more to gain because globalisation can help them circumvent the limitations imposed by their small domestic markets in achieving their macroeconomic objectives. This is because globalisation enables them to trade with the world, attract foreign workers and FDI. Such limitations are faced by large and less open economies to a smaller extent.
- Given the problems brought about by globalisation, small open economies need to be able to mitigate its costs in order to ensure that they benefit:
  - o Need to assert greater control over their external environment – through exchange rate policies. This requires them to build up sizeable reserves to manage their exchange rate for better stability.

- o Signing FTAs with a larger number of countries to reduce the risk of external fluctuations.

Mark Scheme

Part (a)

L3 (9-12m)	For a well-developed answer that explains and illustrates how Singapore's trade with its trading partners may or may not conform to the theory of comparative advantage: • Makes clear references to the theory of CA, using the "opportunity costs" nomenclature judiciously. • Accounts for both exports and imports • Explains a *range* of reasons why Singapore's pattern of trade may not conform to the predictions of CA. • Answer is clearly applied in the context of Singapore. • Only minor misconceptions are made.
L2 (6-8m)	For an under-developed answer that explains and illustrates how Singapore's trade with its trading partners may or may not conform to the theory of comparative advantage. • Max 6 for a one-sided answer.
L1 (1-5m)	For an undeveloped answer demonstrates some knowledge of comparative advantage. • Answer contains severe misconceptions. • Answer is not applied to the context of Singapore. • Max 2 marks if theory of CA not used.

Part (b)

L3 (7-9m)	For a well-developed answer that explains and illustrates the benefits and costs of globalisation to small and open and large and **compares them** with less open economies **using clear economic frameworks**. • Answer contains a range of arguments spanning all 3 facets of globalisation: Free movement of (i) goods and services (ii) labour (iii) capital and technology. • Contains only minor misconceptions.
L2 (5-6m)	For an under-developed answer that explains and illustrates the benefits and costs of globalisation to small and open and large and less open economies. • Max 5m if answer does not compare the benefits accruable to small and open economies viz big and less open economies. • Max 5m for an unbalanced answer. • Max 5m for an answer that touches only on the trade facet of globalisation. • Max 5m if no clear economic framework is presented.
L1 (1-4m)	For an undeveloped answer that merely shows knowledge of globalisation and/or its benefits and costs. • Answer contains severe misconceptions.
E2 (3-4m)	Economic judgement with justification using clear economic framework. Candidates need to present their own opinion backed up by economic theories.
E1 (1-2m)	Economic judgement with justification but lacking in economic reasoning. A mere presentation of personal opinions without substantiation using economic theories.