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DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

ECONOMICS

(Higher 2)

Paper 1

9757/01

19 September 2018

2 hours 15 minutes

Additional Materials:
Writing Papers

READ THESE INSTRUCTIONS FIRST

Answer **all** questions.

Write your name and class on all pieces of work handed in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

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

At the end of the examination, submit your answers to the two questions as two separate bundles.

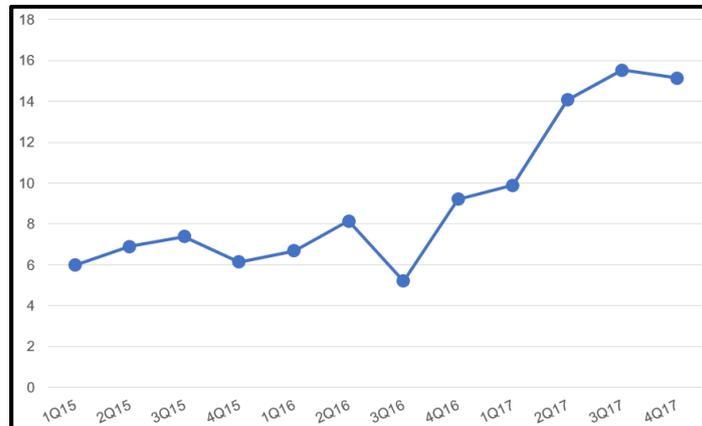
This document consists of **7** printed pages including this cover page.

[Turn over

Answer **all** questions.

Question 1: Vietnam and Samsung Electronics

Figure 1: Samsung Electronics' Total Operating Profits



Source: Samsung Newsroom

Extract 1: Samsung Electronics divestment and acquisition moves

Samsung Electronics' printer business will disappear in history. The company's decision to sell its printing solution business division to U.S. based HP Inc., a printer and personal computer manufacturer, is part of its efforts to concentrate on its core business areas.

In November the same year, Samsung Electronics announced a deal to buy U.S. car infotainment and audio company Harman. The deal could make Samsung a mainstay in the automotive electronics market, as it looks to diversify revenue. The market for automotive electronics is projected to grow to over \$100 billion by 2025, according to Samsung. By acquiring Harman, Samsung should be able to gain solid footing in the automotive component business since Harman already has a large and established clientele network. Furthermore, analysts say Samsung has diversified its businesses from computer chips, flat screens and mobile phones to secure stability in its revenue streams.

Sources: Samsung Newsroom, 12 September 2016 and Forbes, 16 November 2016

Extract 2: China anti-trust regulator questions Samsung about chip price fixing

China's anti-trust regulator decided to have a talk with Samsung after receiving a slew of complaints from phone makers about price hikes in its memory chips, sources told the 21st Century Business Herald on Thursday.

The National Development and Reform Commission (NDRC), China's anti-trust body for price-related enforcement, has interviewed Samsung about the company's sixth consecutive quarterly hike in memory chip prices, but whether an anti-trust investigation will be initiated is still unknown.

A scarcity in memory chips, widely used in phones and computers, has caused prices to jump since last year. As one of the world's largest chipmakers, Samsung's DRAM chips account for 48 percent of the global DRAM chip market, while its NAND Flash memory account for 35.4 percent of that chip's market.

Source: CGTN, 23 December 2017

Extract 3: Spotlight on Vietnam

The government of Vietnam has committed to creating favourable conditions for all investors and businesses. Other than infrastructure development with a focus on improving transportation systems, the government is also making an effort to increase education at the tertiary level and targeting at skills upgrading. By and large, the labour force in Vietnam is cost-competitive, educated and increasingly skilled. This offers greater value and serves as an ideal production base for companies thinking of shifting or diversifying out of larger economies such as China.

Consumer expenditure has been increasing steadily in Vietnam, in particular due to rising incomes amid strengthening economic activity. As such, Vietnamese consumers are increasingly purchasing fashionable and quality products from overseas to improve their living standards. Foreign brands and suppliers are increasingly distributing medium-priced and value-for-money products to tap this emerging demand, including a wide range of imported goods due to lack of local products with comparable characters.

Sources: HKTDC 9 May 2017 and PricewaterhouseCoopers, October 2017

Extract 4: Samsung and LG lead Vietnamese economy

The Vietnamese government provides various benefits to foreign companies that invest in Vietnam, such as the exemption from corporation income taxes.

South Korean electronics companies, such as Samsung and LG, are leading the Vietnamese economy with large-scale investment and recruitment. Currently, Samsung Electronics and its affiliates employs 160,000 workers in Vietnam. Samsung is the largest major investor in Vietnam, a low-cost manufacturing centre for products that include its signature SMART televisions. Samsung Electronics, which also produces home appliances and cell phones in Vietnam, exported US\$44 billion over the same period, accounting for 22.7 percent of Vietnam's total exports.

However, Nguyen Duc Thanh, head of the Vietnam Institute for Economics and Policy Research, said that Vietnam is too dependent on foreign firms such as Samsung Electronics. This is dangerous because technology is ever changing.

Furthermore, according to the 2016 World Economic Forum, the efficiency of technology transfer from foreign invested enterprises in Vietnam is surprisingly low. Although these electronics and computer manufacturing sectors are considered 'high technology industries', the works implemented in Vietnam are simply assembling components which is the lowest value in the global production chain.

Sources: Vietnam Net, 2 March & 4 October 2017 and Business Korea, 13 December 2017

Extract 5: Samsung workers on the line, foreign firms are destroying Vietnam's environment

In a study on the experiences of women working at two Samsung factories in Vietnam, a new report documents health and workplace violations by the electronics industry giant. The workers' experiences of fainting or dizziness, miscarriages, standing for eight-to-twelve hours, and alternating day/night shift work are documented in a report released by Research Centre for Gender, Family and Environment in Development (CGFED) and IPEN.

Foreign investment in metal plants, textile factories, mines and ship construction is driving the Vietnamese economy, but they are incredibly energy-intensive industries and the economic growth is inevitably taking its toll on the country's eco-systems and draining the nation's natural resources. The government needs to stop viewing potential environmental damage as an afterthought. There is a need for government to preserve environmental integrity as part of its plans to promote economic growth.

Source: IPEN, 4 December 2017

Questions

- (a)** Describe the trend in Samsung Electronics' operating profits. [2]
- (b)**
 - (i)** Explain the type of integration when HP bought over Samsung's printer business. [2]
 - (ii)** Using the concept of opportunity cost, explain the economic case for Samsung's divestment. [2]
- (c)** Define scarcity. Based on your understanding of scarcity, do you agree that it is the 'scarcity in memory chips' that has caused its 'prices to jump' (Extract 2)? [2]
- (d)** Using the data provided, discuss the effectiveness of the possible strategies taken by Samsung Electronics to maximise profits. [10]
- (e)** Account for the increase in foreign investment into Vietnam. [4]
- (f)** Assess whether the benefits of increasing foreign investment outweigh the costs for Vietnam. [8]

[Total: 30]

Question 2: Economies Face Protectionism

Extract 6: Coming and going

Figure 2: Trade Balance

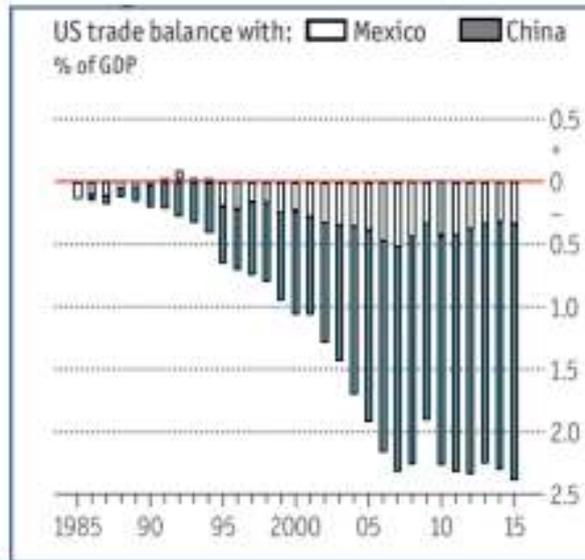
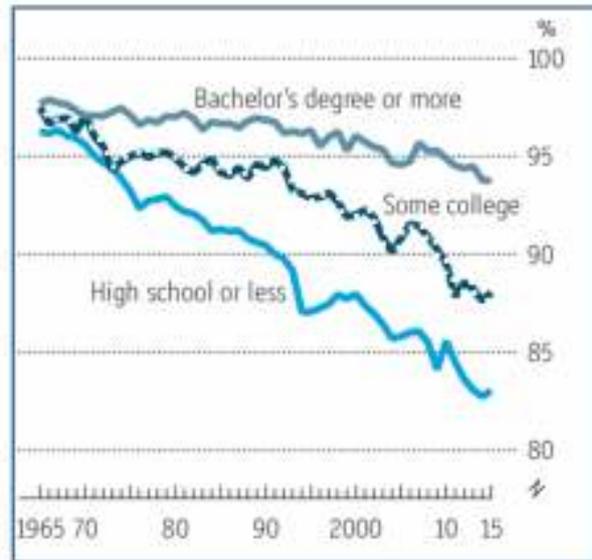


Figure 3: US Labour force participation rate of males aged 25 -54



Between 1999 and 2011 America lost almost 6 million manufacturing jobs in net terms. At least one-fifth of the drop in factory jobs during that period was the direct result of competition from China. Moreover, the American workers who had lost those jobs neither found new ones close by nor searched for work farther afield. They either swelled the ranks of the unemployed or, more often, left the workforce.

It is important to note, however, that America's growing inability to bounce back from losing manufacturing jobs predates the rise of China as an exporting power. A report published by the Council of Economic Advisers charts the long-term decline in prime-aged men in America's workforce. It shows that in the mid-1960s almost all men aged between 25 and 54 were either in work or looking for a job, but that in the past half-century the participation rate for this group has dropped below 90%. In every recession the rate falls more sharply, and when the economy picks up again it fails to make up all the lost ground.

A steady drop in the share of prime-age men in the workforce going back half a century cannot be pinned on America signing free-trade agreements or China's emergence as an exporter of manufactures, both of which happened fairly recently. Factory jobs peaked in the 1970s, but manufacturing output has continued to increase. Thanks to advances in technology, fewer workers are needed to produce the same quantity of goods. But since trade with lower-cost countries and technological change have similar effects on labour-intensive production in the rich world, it is hard to disentangle their effects.

Advocates of free trade know that over time the gains from it come from greater efficiency, not from more jobs, the number of which is largely determined by demography and the strength of aggregate demand. An in-depth study found that import competition from China led to a decline in jobs and made life harder for low-tech firms in affected industries. But it also forced surviving firms to become more innovative: R&D spending, patent creation and the use of information technology all increased, as did total factor productivity. Taken together, these are large and permanent benefits.

Source: *The Economist*, 29 September 2016

Extract 7: Protectionism may be rising, but in China it never went away

Protectionism encompasses many policies, tariffs being only one. Other forms of protectionism include direct subsidy, exchange rate controls and administrative barriers of one kind and another, etc. The use of currency manipulation has been identified by the US as a breach of China's commitment "to end price controls for the purposes of protecting domestic industries" when the latter joined the World Trade Organization (WTO) in 2001. For years it was a deliberate policy for the Chinese government to accumulate US Dollars and suppress the exchange rate for the Chinese Yuan (RMB), resulting in exactly the price distortions China had committed to eliminate. With the extended period of currency manipulation, and the sheer administrative resistance exporters face when trying to get their products into China, we now face a world of highly unbalanced trade, and rising mistrust.

Source: Forbes, 12 October 2016

Extract 8: Dumping and tub-thumping

Chinese steel production has expanded hugely. The drive behind that stellar increase has been China's double-digit economic growth over the past decades. That led to ever more domestic demand for steel and the government invested heavily in the industry during the boom years. But that demand has been severely hit by the current slowdown, leaving China with more steel than it needs. Chinese steel is therefore sold on the international market at extremely low prices - critics say it's sold at a loss.

Last year China exported over 100m tonnes of steel — more than the entire output of all America's mills. Only 3% of that went to America, but American steelmakers squealed all the same and in March the government announced plans to impose an anti-dumping tariff on steel imports from China (and a handful of other countries) of up to 266%.

Competition is not the only concern of those who argue for anti-dumping measures. In Britain, where rock-bottom global steel prices now threaten Tata Steel, the owner of the country's biggest surviving mill, proponents of tariffs argue that it is important to preserve domestic steelmaking to ensure supplies for the defence industry, among others. But it is hard to see how the use of French steel in British submarines harms Britain's security. For manufacturers of all sorts, most notably carmakers, cheap steel is a boon.

Weighing against these shaky benefits are a heap of costs. Economic analyses suggest that temporary anti-dumping tariffs are actually more damaging than run-of-the-mill protectionism. Anti-dumping rules, like other trade barriers, cause economic harm by shrinking markets and excluding efficient producers, thereby raising prices for consumers. But anti-dumping measures do additional harm, because big global firms know how to game them. Should their rivals attempt to cut prices to gain market share, they file anti-dumping petitions against them. That encourages everyone to keep margins plump, in effect creating an unspoken cartel. Such tacit collusion inhibits innovation and creative destruction, and holds back growth.

Cheap exports from China reflect overcapacity that has developed as the Chinese economy has slowed. The resulting "dumping" is not proof that China is on the verge of vanquishing all rivals, but rather a reflection of its manufacturers' weakness. That weakness is now being exported. Cheap exports depress prices in foreign markets, most of which are already experiencing worryingly low inflation. Central banks have little room to respond using conventional tools: interest rates are already at historic lows.

Sources: The Economist, 9 April 2016 and BBC News, 25 April 2016

Questions

- (a) With reference to Figure 2, compare US-China trade balance with US-Mexico trade balance. [2]
- (b) (i) Explain what is meant by labour force participation rate and employment rate. [2]
- (ii) Explain why there is a long-term decline in prime-aged men participation rate in America's workforce. [4]
- (c) Explain one type of administrative trade barrier (Extract 7). [2]
- (d) (i)
$$\text{Terms of Trade (ToT)} = \frac{\text{Index of average export prices}}{\text{Index of average import prices}} \times 100$$
- Would suppressing the exchange rate for the RMB (Extract 7) lead to an improvement or deterioration in China's terms of trade? Explain. [2]
- (ii) To what extent would suppressing the exchange rate for the RMB help China deal with the overcapacity problem in its steel industry? [8]
- (e) In view of the problems created by dumping, discuss whether the use of anti-dumping measures can be justified. [10]

[Total: 30]

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DUNMAN HIGH SCHOOL
Preliminary Examination
Year 6

Economics

9757/2

Paper 2 Essay Questions

12 September 2018

2 hours 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 three separate bundles, one for each question.

Please indicate all questions attempted in the boxes below.

Section A			Section B		
Q1	Q2	Q3	Q4	Q5	Q6

This document consists of **4** printed pages including this cover page.

[Turn over

Suggested answer for CSQ1

- (a) **Describe the trend in Samsung Electronics' operating profit.** [2]

Overall increase [1m], with refinement [1m]

- (b) (i) **Explain the type of integration when HP bought over Samsung's printers business.** [2]

Since HP is also producing printer which is in the same stage of production as Samsung's printer business, this acquisition is known as horizontal integration.

- (ii) **Using the concept of opportunity cost, explain the economic case for Samsung's divestment.** [2]

Define opportunity cost. Opportunity cost refers to the net benefit that could be derived from the next best alternative foregone as a result of a decision made.

Opportunity cost → potential profits Samsung has forgone if Samsung keeps its printer business.

Benefits → potential profits earned from reallocating the resources to other business segments/ventures eg automotive

Samsung's decision to divest implies the potential benefits outweigh the opportunity cost

- (c) **Define scarcity. Based on your understanding of scarcity, do you agree that it is the "scarcity in memory chips" that has caused its "prices to jump" (Extract 2)?** [2]

1m for definition: Scarcity is the situation of limited resources in relation to unlimited wants.

1m for recognising that it is not scarcity but shortage that cause the price increase.

- (d) **Using the data provided, discuss the effectiveness of the possible strategies taken by Samsung Electronics to maximise profits.** [10]

Divestment

- Samsung to concentrate on its core business areas → increase in specialisation → achieve productive efficiency → cost savings
- [limitation] unable to reap as much iEOS → some costs are spread across different business segments eg higher mgmt costs, advertising

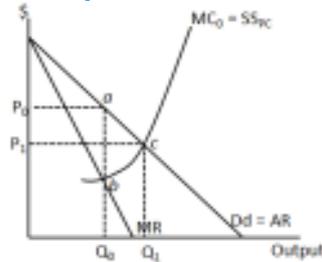
Diversification

- create new source of revenue / minimise risk
- reduce the fall in overall demand → when one business segment is experiencing a fall or slowdown in revenue → this can be compensated by those business segments which are experiencing strong growth & revenue (*evidence: automotive electronics is projected to grow to over \$100 billion by 2025*)
- [limitation] increase red-tape or lower flexibility

Price fixing or collusion

- Oligopolistic firms, dominated by a few large firms (nothing about market share)

- Explicit collusion → a cartel aims to increase overall profits by restricting total output of all members to a level that will jointly maximise the combined profits for all its members. This entails individual firms being assigned a pre-agreed quota to be adhered to
- PC firm sets price at P_1 while monopoly sets price at P_0 . Oligopolistic firms charge in between P_1 and P_0 . When firms collude, they behave like a monopoly and charge at price closer to P_0 , output closer to Q_0 . At the agreed quota and price → max profits
- [limitation] illegal and tendency to cheat



Offshore outsourcing

- Tap on the VN's comparative advantage → cost-competitive manufacturing centre → reduce cost → shift MC & AC → increase profits
- [limitation] lack of control

Evaluation

L1 (1-4m)	<ul style="list-style-type: none"> • Smattering of points that shows little understanding of case material or question • Some conceptual errors and underdeveloped explanation of strategies presented • Absence of links to the intent of question • Only one option presented, limiting the ability to evaluate
L2 (4-7m)	<ul style="list-style-type: none"> • Well-elaborated analysis of effectiveness of the possible strategies taken by Samsung Electronics to maximise profits without considering the limitations (max. 4m) • Well referenced to extract information • Well-labelled and explained diagram(s)
E-1m	<ul style="list-style-type: none"> • An unexplained conclusion / judgment or mere repetition of points discussed
E (2-3m)	<ul style="list-style-type: none"> • A well-elaborated evaluation, with justifications and with reference to the case material.

(e) Account for the increase in foreign investment into Vietnam. [4]

committed to creating favourable conditions for all investors and businesses. Other than infrastructure development with a focus on improving transportation systems, the government is also making an effort to increase education at the tertiary level and targeting at skills upgrading. By and large, the labour force in Vietnam is cost-competitive, educated and increasingly skilled.

- ⇒ Better transportation systems reduce transportation costs
- ⇒ Higher skilled workers increase productive efficiency
- ⇒ Overall reduces MC & AC

"including the exemption from corporation income taxes for four years.

- ⇒ Reduces AC

Ceteris paribus → fall in AC → higher expected rate of returns → increase I

(f) Assess whether the benefits of increasing foreign investment outweighs the costs for Vietnam. [8]**Benefits**

- higher actual and potential growth
- lower demand-deficient unemployment
- improve BOP position

Costs

- Labour exploitation → actual improvement in SOL less than what data on real GDP per capita may suggest
- Inflation in SR
- Potential instability → heavily dependent on foreign investment which tend to be footloose → outflows in search of more cost competitive location → undermine future growth

Evaluation

L2 4 – 6	<ul style="list-style-type: none"> • Balanced analysis of both the benefits and costs of increasing FI • Well explained and clearly labelled diagram • One-sided, rigorous answer that considers only the benefits or costs of increasing FI (max 4m)
L1 1 – 3	<ul style="list-style-type: none"> • One-sided answer that considers only the benefits or costs of increasing FI • Lack of economic analysis; mere statements without explanation • No clear links to macroeconomic objectives
E 1-2	A well-elaborated evaluation, with justifications and with reference to the case material.

Suggested answer for CSQ 2

- (a) With reference to Figure 2, compare US-China trade balance with US-Mexico trade balance. [2]

Similarity: Deficit trade balance - 1m

Difference: Increase trade deficit with China; trade deficit with Mexico fluctuate around 0.5% - 1m

No mark will be awarded for describing the trend (overall + refinement)

- (b) (i) Explain what is meant by labour force participation rate and employment rate. [2]

Labour Force Participation Rate is the ratio of the labour force to the total working-age population - 2m

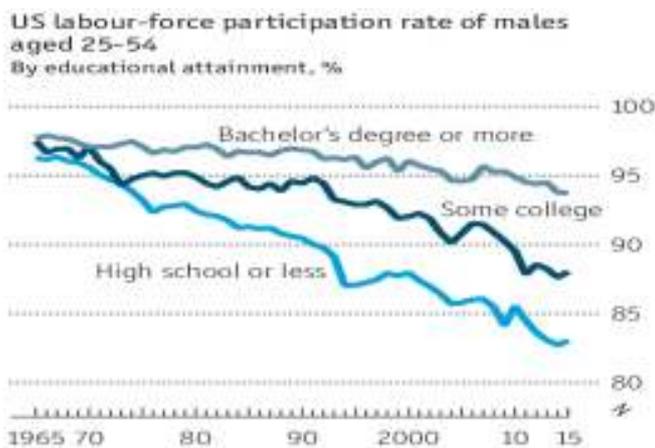
$$\text{Labour Force Participation Rate} = \frac{\text{labour force}}{\text{working - age population}} \times 100\%$$

Employment Rate is a measure of the percentage of the population of legal working age who are employed – 2 m

$$\text{Employment Rate} = \frac{\text{Number employed}}{\text{Working - age population}} \times 100\%$$

No mark will be awarded for formulae without explanation

- (ii) Explain why there is a long-term decline in prime-aged men participation rate in America's workforce. [4]



Trade => cannot compete with the low cost producing countries such as China and Mexico => loss labour intensive jobs, especially in manufacturing sectors => buy imports rather than produce locally OR job off-shoring

Technology=>advances in technology, fewer workers are needed to produce the same quantity of goods. May not find employment in other sector: structural unemployment

Higher education level => more employment opportunities, especially in capital intensive sectors

Any 2 factors, 2m each

(c) **With reference to Extract 7, explain one type of administrative trade barrier.** [2]

- *Technical specifications and standards*, which discriminate in favour of home producers e.g. safety and hygiene regulations on food and pharmaceutical products.

OR

- *Administrative regulations* regarding import procedures which may be so bureaucratic as to seriously delay and therefore reduce the volume of imports which are seen as a threat to domestic producers

(d) **Terms of Trade (ToT) = $\frac{\text{Index of average export prices}}{\text{Index of average import prices}} \times 100$**

Does suppressing the exchange rate for the RMB (Extract 7) lead to an improvement or deterioration in China's terms of trade? Explain. [2]

If Chinese Yuan falls in value, then we would expect to see an increase in the price of imports. (You would need to pay more in Chinese Yuan to buy the same quantity of foreign goods.) The domestic price of exports should remain unchanged, though the foreign currency price should fall. (US should be able to buy Chinese goods with less USD)

Therefore, after a currency manipulation - devaluation, to see a deterioration in the terms of trade.

(ii) **To what extent would suppressing the exchange rate for the RMB help China deal with the overcapacity problem in its steel industry?** [8]

Overcapacity Problem – production > China local consumption, export steel at low prices

- Accept firm analysis or market analysis (assume PC)
- to maximise profit => MR=MC, where MC is increasing

- T1: reduce X price → increase steel export revenue => expand China export market (increase demand for steel)
- AT1: Retaliation / anti-dumping tariffs => US view low prices of steel as dumping thus imposing anti-dumping tariffs
- AT2: Economies outside China have to contend with their own economic problems “worryingly low inflation” → reluctance to buy, including steel from China

Evaluation: Judgement

Without government intervention, a depreciation of RMB is unlikely to help China to deal with the overcapacity problem in steel industry.

Knowledge, Application, Understanding, Analysis

L1	Answers are largely descriptive or contain errors in the explanation on how depreciation of RMB dealt with the overcapacity in steel One sided answer No use of relevant framework, including diagram and answers are largely theoretical with limited or no reference to case material	1 – 3
L2	Answers provide correct identification and explanation on how depreciation of RMB help to deal with the overcapacity in steel Reference to case material is clearly applied. Use of relevant economic analysis via the firm framework	4 - 6
E	<i>Evaluative comment that makes a stand on the extent to which profits might change</i>	1-2

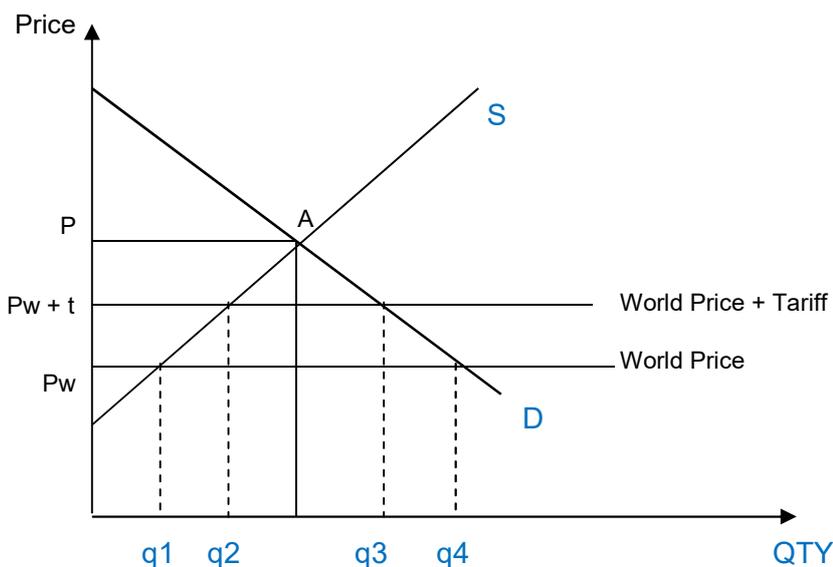
(e) **In view of the problems created by dumping, discuss whether the use of anti-dumping measures can be justified.** [10]

Introduction

- US is facing both a trade deficit (exports revenue < Imports expenditure) and rising unemployment => believe other countries are practicing unfair trade -- dumping (eg selling steel below MC), thus government chooses to intervene => using anti-dumping measures such as tariff

Body

- T1: anti-dumping measures can be justified => reduce trade imbalance, reduce unemployment, increase growth



- How a tariff may help to solve a balance of trade deficit import falls from q1-q4 to q2-q3. Ceteris paribus condition, export revenue did not change, a fall in import expenditure = improve US trade balance
- US Steel firms rise in domestic quantity supplied from q1 to q2, thus demand for labour increase (derived demand)

increasing the employment (prevent a further rise in unemployment) in US steel industry. With an increase in consumption & investment, explain how this lead to a growth in RNY in US.

Antithesis=> not justified

- AT1: Even with a fall in import expenditure for steel, import expenditure for other products might increase. From the case, other countries might retaliate => fall in exports revenue
- AT2: Inefficiencies → possible micro & macro impact (explain deadweight loss areas in the above diagram)
Against the CA theory
- AT3: Rising costs for downstream industries → possible macro impact. . Such as cars in US will be more expensive => higher COP as steel is an important FOP

Evaluation & synthesis – judgement & economic justification

<i>Knowledge, Application, Understanding, Analysis</i>		
<i>L1</i>	Answers are largely descriptive or contain errors in the explanation of how anti-dumping measures are justified One-sided answer No use of relevant framework (tariff & AD/AS), including diagram and answers are largely theoretical with limited or no reference to case material	<i>1 – 4</i>
<i>L2</i>	Answers provide correct identification and explanation of how anti- dumping measures are justified Reference to case material is clearly applied. Use of relevant economic analysis via the firm framework	<i>5 -7</i>
<i>E</i>	<i>Judgement</i> <i>Evaluative comment that makes a stand on the extent to which profits might change</i>	<i>1</i> <i>2-3</i>

Answer **three** questions in total.

Section A

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

1. More health-conscious consumers and increasing middle class population in developing nations mean the world cannot get enough of fish. Aquaculture — which includes fish farms — now supplies 42 percent of the world's fish production. And that number keeps increasing each year.
 - (a) Explain how income elasticity of demand and price elasticity of supply can assist in understanding the effect of income increase on the sales volume of fresh and canned fish. [10]
 - (b) Discuss the likely combined impact of these changes on the revenue earned from fresh and canned fish. [15]

2. (a) Plummeting oil and jet fuel prices have led to falling plane ticket prices. Some of the best bargains are for air fares to popular US travel destinations like Chicago, New York, Los Angeles, and San Francisco, cities where competition is stiff.

Source: The Straits Times

mes, 1 February 2016

The time of year to fly matters. The days of the week you fly matter, too. Here's an example (found on a price comparison website):

New York-Paris

- Fly Saturday/Sunday: \$548
- Fly Monday/Tuesday: \$470

Source: USA Today, 2 March 2017

Explain why passing on cost savings by reducing airfares and setting different airfares for different days are both considered profit-maximising decisions for an airline. [10]

- (b) In view of the rapid changes in technology, discuss the extent to which the price a firm sets is dependent on its market share. [15]

3. MediShield Life took effect from 1 November 2015 and replaced MediShield, the previous Government basic health insurance plan in Singapore. There are some notable differences between MediShield and MediShield Life.

MediShield	MediShield Life
<ul style="list-style-type: none"> • Option to opt-out of the scheme • Pre-existing conditions not covered 	<ul style="list-style-type: none"> • Compulsory for all • Pre-existing conditions covered

People can boost MediShield Life with an Integrated Shield Plan (optional). Integrated Shield Plans (IP) were once offered with full riders, where patients do not have to pay a single cent on their medical bills. But with effect from 1 April 2019, people can only buy IPs with co-pay riders (co-payment), where they have to pay at least 5% of the hospitalisation bill while the insurer pays the rest.

Information failure is the main reason for government intervention, including the above policy changes, in the healthcare market and health insurance market. Discuss. [25]

Section B

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

4. In a monetary policy move at the end of 2016, the US Federal Reserve Bank, the country's central bank raised the interest rate citing a stronger economic growth and rising employment. Here in Asia, currencies have generally been weakening against the US dollar as money has flown out of Asia and into the dollar.

Sources: BBC News, 15 & 16 December 2016

- (a) By considering the economic goals and availability of relevant information, explain how the US Federal Reserve may have arrived at the decision to raise interest rate. [10]
- (b) Discuss the factors the governments in the Asian countries would have to consider when deciding on the policies to counter the adverse effects posed by the US interest rate increase. [15]
5. A stronger fiscal budget supports jobs and growth and instils confidence in an economy. Strengthening the nation's finances is key to a government's economic plan.
- (a) Explain how economic shocks and uncertainties affect a country's exchange rate. [10]
- (b) Governments should always work towards reducing the fiscal budget deficit despite economic shocks and uncertainties. Discuss. [15]
6. After years of surging foreign manpower growth, Singapore government moved to tighten the tap in 2009 as part of efforts to reduce reliance on low-skilled labour. The aim is to spur companies to invest in raising productivity so that wages and economic growth can go up in a sustainable way. But calls for more flexible manpower policies are re-emerging - specifically with the aim of bringing in highly-skilled talent to help companies go digital.

Source: The Business Times, 5 February 2018

- (a) Explain why a government aims to achieve sustainable and inclusive growth. [10]
- (b) Discuss the extent to which a tightening of the foreign manpower growth would impact Singapore's real gross domestic product. [15]

Question 1

More health-conscious consumers and increasing middle class population in developing nations mean the world cannot get enough of fish. Aquaculture — which includes fish farms — now supplies 42 percent of the world's fish production. And that number keeps increasing each year.

(a) Explain how income elasticity of demand and price elasticity of supply can assist in understanding the effect of income increase on the sales volume of fresh and canned fish. [10]

(b) Discuss the likely combined impact of these changes on the revenue earned from fresh and canned fish. [15]

Suggested answer for part (a)

<p>Introduction:</p> <ul style="list-style-type: none"> Market equilibrium price and qty are determined by the intersection of demand and supply YED and PES will affect the direction and magnitude of change in output given an increase in income 	
<p>Explain how YED affects the demand for fresh and canned fish given an increase in Y</p> <p>Define Income elasticity of demand The income elasticity of demand (YED) is a measure of the responsiveness of demand to changes in income, ceteris paribus.</p> <p>Define Price Elasticity of Supply (PES) a measure of the responsiveness of the quantity supplied of a good to changes in its price, ceteris paribus. The PES measures firms' degree of responsiveness to changes in price.</p>	
<p>Market for fresh Fish</p>	<p>Market for canned fish</p>
<ul style="list-style-type: none"> Definition: A normal good is a good whose demand rises as consumer's income rises, ceteris paribus Reasoning <ul style="list-style-type: none"> Consumers, seeking to maximise their utility, will increase their demand for normal goods when their higher incomes give them greater purchasing power 	<ul style="list-style-type: none"> Definition: An inferior good is one whose demand changes in the opposite direction as the change in income, ceteris paribus. Reasoning <ul style="list-style-type: none"> While rising incomes give them greater purchasing power, consumers' willingness to purchase inferior goods fall eg canned fish as they are now able to switch to goods that are able to give them higher

<ul style="list-style-type: none"> ○ Fresh fish is likely to be considered as a normal good, i.e. YED is positive ● As such, at the same original price, the quantity demanded of food at each at every price level tends to increase less than proportionately to the increase in income, magnitude of YED is between 0 and 1 ● Demand for fresh fish increase from D1 to D2 <p>Accept also:</p> <p>For coastal communities – fish tends to be part of their staple diet – YED likely to be low but positive (likely <1)</p> <p>For others (e.g. city dwellers, farming communities) – fish tends to be more of a luxury good compared to chicken or pork – YED likely to be high (possibly even >1)</p> <p style="text-align: center;">-----</p> <p>Looking at the 1st case:</p> <ul style="list-style-type: none"> ● With the low but positive YED ($0 < YED < 1$), an increase in Y → smaller than proportionate increase in Qd at the given price → should bring about small increase in sales volume ● The low PES (possibly < 1) would further limit the overall increase in sales volume <p><u>Reasoning:</u> increase in dd, holding ss constant → shortage at original price → upward pressure on price → but given low PES, the increase in price brings about only a smaller than proportionate increase in Q_s</p> <p>Looking at the 2nd case:</p> <ul style="list-style-type: none"> ● Given YED >1, an increase in Y → more than proportionate increase in Qd at the given price → should bring about large increase in sales volume <p>BUT</p> <ul style="list-style-type: none"> ● overall increase in sales volume is moderated by the low PES, possibly < 1 	<p>levels of utility such as fresh fish since it is deemed as more tasty</p> <ul style="list-style-type: none"> ○ Canned fish is likely to be considered as an inferior good ie YED is negative (YED < 0). ○ Demand for canned fish will fall as income rises as shown by a shift in D3 to D4. <p>Negative YED + High PES</p> <ul style="list-style-type: none"> ● Given negative YED, an increase in Y → decrease in Qd at the given price → decrease in sales volume ● The higher PES (possibly > 1) would mean that the decrease in sales volume would be large
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Level	Marks	Descriptors
L3	8-10	<ul style="list-style-type: none"> • Good exemplifications • Uses a good economics framework with well explained diagrams • Points raised are well-elaborated & based on the different relevant elasticities concepts
L2	5-7	<ul style="list-style-type: none"> • Points raised lack elaboration/ exemplification • Explain the different elasticities concepts but did not link to how the different elasticities concepts will affect the equilibrium quantity of fresh and canned fish
L1	1-4	<ul style="list-style-type: none"> • Attempted analysis is limited • Conceptual misunderstandings of the different elasticities concepts tested are evident • lack of understanding on the question requirements.

Suggested answer for part (b)

<p>Market for fresh fish</p> <p>[insert diagram]</p>	<p>Market for canned fish</p> <p>[insert diagram]</p>
<p>Changes in demand</p> <ul style="list-style-type: none"> • Rising income → normal good • Increase in taste and preference towards fresh fish as consumers become more health-conscious → fresh fish provides a good source of protein <p>Overall → demand for fresh fish increases</p> <p><i>Demand for fresh fish is said to be fairly price elastic → price of fresh price takes up a large proportion of income → means when a given change in the price of fresh fish results in a more than proportionate change in quantity demanded in the opposite direction, ceteris paribus.</i></p> <p>Changes in supply</p> <ul style="list-style-type: none"> • Increase in supply due to aquaculture <p>Increase in DD and SS → reinforce each other and output increase</p> <p>however, changes in price depends on the relative magnitude of change</p> <p>Increase in DD from D1 to D2 > increase in SS from Si1 to Si2 (reasoning) → detailed MAP → increase in price & output (from P1 to P2 and Q1 to Q2) → TR increase</p> <p>As fish production continue to increase,</p>	<p>Changes in demand</p> <p>Rising income → DD ↓</p> <p><i>Demand is more price inelastic as compared to fresh fish as price of canned food takes up a smaller proportion of income → means when a given change in the price of fresh fish results in a less than proportionate change in quantity demanded in the opposite direction, ceteris paribus.</i></p> <p>In SR</p> <p>Fall in supply → Fresh fish being the COP → price of fresh fish increases → MC increases → so supply of canned fish falls from S3 to S4 → fall in DD > fall in ss (reasoning) → MAP → price and output both fall → TR fall</p> <p>In LR</p> <p>MC falls → supply of canned fish increases to S5 → price drop from P4 to P5 and output increases from Q4 to Q5 → fall in TR (P4deP5) greater than increase in TR (Q4efQ3) → TR falls</p>

<p>SS increases from S_{i2} to S_{i3} → fall in price from P_2 to P_3 and increase in output from Q_2 to Q_3 → fall in TR ($P_2 \Delta Q_2$) > increase in TR ($P_3 \Delta Q_3$) → overall, fall in TR</p>	
<p>APPROACH 2:</p> <p>For coastal communities who live near fishing ports, fish is cheaply and widely available → low YED & low PED</p> <ul style="list-style-type: none"> • <u>Demand change</u>: Increase in $Y + t \& p$ → increase dd → increase eqm $P \& Q$ → TR must increase • <u>Supply change</u>: Where dd is price inelastic, the increase in ss → price falls but Q_d increases only less than proportionately → TR falls • <u>Net effect on TR</u>: effect on TR indeterminate, depends on which effect dominates (students to suggest) <p>[Graph: simultaneous shifts, relevant reference to graph in text]</p> <p>For the other communities, fresh fish is NOT as cheaply and widely available given the higher cost of transport → high YED & high PED (rely on other sources of protein instead)</p> <ul style="list-style-type: none"> • <u>Demand change</u>: Increase in $Y + t \& p$ → increase dd → increase eqm $P \& Q$ → TR increase • <u>Supply change</u>: Where dd is price elastic, the increase in ss → price falls but Q_d increases more than proportionately → TR increase • <u>Net effect on TR</u>: TR must increase since both dd and ss factors cause TR to rise <p>[Graph: simultaneous shifts, relevant reference to graph in text]</p>	<p>APPROACH 2:</p> <ul style="list-style-type: none"> • <u>Demand change</u>: <ul style="list-style-type: none"> ○ increase in Y → decrease in dd given negative YED ○ $t \& p$ → increase dd ○ Overall dd change: dd likely to fall since given health consciousness of crs, they will turn to fresh fish (more nutritious) rather than canned fish → decrease in eqm $P \& Q$ → TR must fall • <u>Supply change</u>: Where dd is price inelastic, the increase in ss → price falls but Q_d increases only less than proportionately → TR falls • <u>Net effect on TR</u>: TR must decrease since both dd and ss factors cause TR to fall <p>[Graph: simultaneous shifts, relevant reference to graph in text]</p>

Level	Marks	Descriptors
L3	8-10	<ul style="list-style-type: none"> • Good discussion of how the above developments affect the fresh and canned fish market • Points raised are well-elaborated & based on economics concepts. • Good exemplifications • Uses a good economics framework with well explained diagrams
L2	5-7	<ul style="list-style-type: none"> • Attempted at discussing how the above developments affect the fresh and canned fish market and its total revenue differently • Points raised were insufficiently elaborated or lack economic analysis • There were attempts to exemplify
L1	1-4	<ul style="list-style-type: none"> • Attempted analysis is limited, conceptual misunderstandings are evident and there is lack of understanding of the question requirements.
E	1	For unexplained judgment without supporting analysis
E1	2-3	Evaluative assessment supported by economic analysis.
E2	4-5	Evaluative assessment supported by economic analysis and insightful comments.

Question 2

Plummeting oil and jet fuel prices have led to falling plane ticket prices. Some of the best bargains are for air fares to popular US travel destinations like Chicago, New York, Los Angeles, and San Francisco, cities where competition is stiff.

The Straits Times, February 1, 2016

The time of year to fly matters. The days of the week you fly matter, too. Here's an example (found on a price comparison website):

New York-Paris

- Fly Saturday/Sunday: \$548
- Fly Monday/Tuesday: \$470

USA Today, March 2, 2017

- (a) Explain why passing on cost savings by reducing airfares and setting different airfares for different days are both considered profit-maximising decisions for an airline. [10]
- (b) In view of the rapid changes in technology, discuss the extent to which the price a firm sets is dependent on its market share. [15]

Part (a)

Passing on cost savings by reducing airfares

Reduce MC → MC falls below MR → rational to increase o/p to capture positive marginal profit and for a price-setting, to sell more output, that means having to reduce price. Process continues until MC = MR for the last unit of o/p and marginal profit = 0 → profit maximised

(graph to illustrate)

Setting different airfares for different days

An example of 3rd degree PD: no difference in MC but difference in dd and MR → charge up to the point where MC = respective MR to maximise profit (graph to illustrate)

Accept alternative answer: Total cost of each flight is constant. To maximise profit, firm should charge revenue-maximising price. Different days, different dd conditions, hence different revenue-maximising price (max TR when MR = 0).

Knowledge, Understanding, Application & Analysis		
<p>Level 3 Knowledge, Application & Analysis</p> <ul style="list-style-type: none"> • Thorough knowledge • Application to relevant current situations • Clear analytic explanation 	<p>High L3 (9 -10 m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • given the time constraint, demonstrations of knowledge, understanding, application and analysis could not be improved significantly • shows thorough knowledge and an excellent ability to explain facts and theory in a precise, logical and reasoned manner (an analytic explanation) <p>-----</p> <p>Comments to markers <i>To be in high L3, answers must ALSO</i></p> <ul style="list-style-type: none"> • <i>explicit in explaining Situation 2 as possibly price discrimination and account for the difference in PED for weekend v.s. weekday travel</i>
	<p>Low L3 (8m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • demonstrates both scope and depth • exhibits conceptual accuracy • is well-exemplified using examples and/or diagram and with clear application to the context • answers the question directly, explicit link back to the question • reasoned (analytic) structure to the whole answer <p>-----</p> <p>Comments to markers <i>Answers must be consistently focused on the question set</i></p> <p><i>(i) both situations</i> <i>(ii) profit maximisation</i> <i>Answers must</i></p> <ul style="list-style-type: none"> • <i>include accurate diagrams for both situations</i> • <i>explain the adjustment process from one profit-maximising output to another profit-maximising output, marginalist principle of rational decision making well applied.</i>
<p>Level 2 Application but undeveloped explanation</p> <ul style="list-style-type: none"> • Undeveloped explanation of facts and theory • Clarification and application 	<p>High L2 (7 m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • shows depth of development but limited in scope or missing salient point(s), or • attempts to present a range of points without sufficient development of points, somewhat lacking in the rigour of analysis, • is relevant to question but the theory is incompletely explained • shows some ability at graphs but with incomplete explanation <p>-----</p> <p>Comments to markers</p> <ul style="list-style-type: none"> • <i>Analyse both situations</i> • <i>Accurate and rigorous analysis for one, some gaps in the other</i> • <i>Profit-maximisation decision making not made explicit</i>

	Low L2 (5-6 m)	For an answer that <ul style="list-style-type: none"> • is accurate but with undeveloped explanation of facts, theory and policy • largely theoretical, showing limited link to context or back to question • shows limited ability at recognising unstated assumptions, implications of a hypothesis or organisation of ideas <p>-----</p> <p>Comments to markers</p> <p><i>Depth or scope</i></p> <ul style="list-style-type: none"> • <i>One situation, analytical in approach</i> • <i>Both situations but both largely undeveloped</i>
Level 1 Undeveloped explanation <ul style="list-style-type: none"> • Identify the key theory without explanation • Outline a list of relevant factors 	High L1 (3 – 4 m)	For an answer that <ul style="list-style-type: none"> • shows some knowledge but inadequately explained and lacks economic analysis • shows that the meaning of the question is not properly grasped, i.e. is not answering the question • shows basic errors of theory, i.e. filled with multiple and serious conceptual errors
	Low L1 (1 – 2 m)	For an answer that <ul style="list-style-type: none"> • has only few valid points • is mostly irrelevant or inaccurate

Part (b)

Thesis

General case: the larger the market share,

- the larger the dd (and relatively more price elastic) → higher price
- the more able to reap $iEOS$ → potential to lower price

In the case of technological changes,

- the more the supernormal profits and reserves to (i) harness to new technology, (ii) introduce strategies to counter the disruptive effect of technology on profits. Effect on price depends on specific examples chosen by candidates.
e.g. Wal-mart able to rise to the challenge of Amazon
- the more tech firms are able to enjoy network economies → market dominance entrenched
e.g. Facebook as leader in social media, Amazon and Alibaba as leaders in e-commerce. While Facebook offers accounts to users free, Facebook, together with Google, control the bulk of online advertisement market. Plus, with the data they've gathered on the users, are able to target the advertising to the users for more effective advertising → ability to raise price

Antithesis

In the face of technological changes, prices may have little to do with the firm's market share

- Technology → lowering of BTE / introduce substitutes → firm may still retain the largest market share but of a shrinking market → pressure to lower price
e.g. cinema chains in the era of Netflix and other streaming services
- Technology → ease of making price comparisons (easy to search for information or even facilitated by price comparison websites) → pressure for both large and small firms to lower price

Evaluation

Depends on

- type of industry: R&D-intensive (e.g. pharma) → less prone to tech disruption → prices still very much determined by the market share
- gov policies – regulation of technology e.g. ride-hailing services, short leases (Airbnb)

Knowledge, Understanding, Application & Analysis		
<p>Level 3 Knowledge, Application & Analysis</p> <ul style="list-style-type: none"> • Thorough knowledge • Application to relevant current situations • Clear analytic explanation 	<p>High L3 (9 -10 m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • given the time constraint, demonstrations of knowledge, understanding, application and analysis could not be improved significantly • shows thorough knowledge and an excellent ability to explain facts and theory in a precise, logical and reasoned manner (an analytic explanation) <p>-----</p> <p>Comments to markers <i>Answers must be consistently focused on the question set</i></p> <ul style="list-style-type: none"> ○ <i>prices set</i> ○ <i>market share</i> ○ <i>technological changes</i>
	<p>Low L3 (8m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • demonstrates both scope and depth • exhibits conceptual accuracy • is well-exemplified using examples and/or diagram and with clear application to the context • answers the question directly, explicit link back to the question • reasoned (analytic) structure to the whole answer <p>-----</p> <p>Comments to markers <i>Answers</i></p> <ul style="list-style-type: none"> • <i>should, in the main, address all 3 aspects</i> • <i>include both thesis and antithesis arguments</i> • <i>include accurate diagrams</i> • <i>include real-world examples</i>
<p>Level 2 Application but undeveloped explanation</p> <ul style="list-style-type: none"> • Undeveloped explanation of facts and theory • Clarification and application 	<p>High L2 (7 m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • shows depth of development but limited in scope or missing salient point(s), or • attempts to present a range of points without sufficient development of points, somewhat lacking in the rigour of analysis, • is relevant to question but the theory is incompletely explained • shows some ability at graphs but with incomplete explanation <p>-----</p> <p>Comments to markers</p> <ul style="list-style-type: none"> • <i>should make some attempt to address the 3 aspects (address at least 2 aspects e.g. market share & price or technology and price)</i> • <i>include both thesis and antithesis arguments</i> • <i>include accurate diagrams</i> • <i>some attempt to include real-world examples</i>

	Low L2 (5-6 m)	<p>For an answer that</p> <ul style="list-style-type: none"> • is accurate but with undeveloped explanation of facts, theory and policy • largely theoretical, showing limited link to context or back to question • shows limited ability at recognising unstated assumptions, implications of a hypothesis or organisation of ideas <p>-----</p> <p>Comments to markers</p> <ul style="list-style-type: none"> • <i>Depth or scope</i> <ul style="list-style-type: none"> ○ <i>thesis or antithesis only, analytical in approach</i> ○ <i>two sides but both largely undeveloped</i> • <i>Little attempt to address all 3 aspects of the question</i>
<p>Level 1 Undeveloped explanation</p> <ul style="list-style-type: none"> • Identify the key theory without explanation • Outline a list of relevant factors 	High L1 (3 – 4 m)	<p>For an answer that</p> <ul style="list-style-type: none"> • shows some knowledge but inadequately explained and lacks economic analysis • shows that the meaning of the question is not properly grasped, i.e. is not answering the question • shows basic errors of theory, i.e. filled with multiple and serious conceptual errors
	Low L1 (1 – 2 m)	<p>For an answer that</p> <ul style="list-style-type: none"> • has only few valid points • is mostly irrelevant or inaccurate

Evaluation		
<p>Evaluation Level 3</p> <ul style="list-style-type: none"> • Well-reasoned judgements/decisions 	E3 (4 – 5 m)	<p>For an answer that</p> <ul style="list-style-type: none"> • critically evaluates alternative theories, contemporary issues, perspectives and policy choices • evaluates relevance of unstated assumptions • synthesises economic arguments to arrive at well-reasoned judgements and decisions that <ul style="list-style-type: none"> ○ weighs both sides of the argument to arrive at clear stand to answer the question ○ has a well-supported justification for the stand e.g. laying out the criteria for judging <p><i>Evaluation: to come to a conclusion on whether market share is still important in determining the price given the technological changes</i></p>
<p>Evaluation Level 2</p> <ul style="list-style-type: none"> • Largely unexplained judgements 	E2 (2 – 3 m)	<p>For an answer that</p> <ul style="list-style-type: none"> • attempts at evaluation or a summative conclusion • is relevant to the question but does not explain the judgement or base it on relevant analysis
<p>Evaluation Level 1</p> <ul style="list-style-type: none"> • An unsupported evaluative statement 	E1 (1 m)	<p>For an unsupported evaluation statement(s) that lacks explanation</p>

Question 3

MediShield Life took effect from 1 November 2015 and replaced MediShield, the previous Government basic health insurance plan in Singapore. There are some notable differences between MediShield and MediShield Life.

MediShield	MediShield Life
Option to opt-out of the scheme Pre-existing conditions not covered	Compulsory for all Pre-existing conditions covered

People can boost MediShield Life with an Integrated Shield Plan (optional). Integrated Shield Plans (IP) were once offered with full riders, where patients do not have to pay a single cent on their medical bills. But with effect from 1 April 2019, people can only buy IPs with co-pay riders (co-payment), where they have to pay at least 5% of the hospitalisation bill while the insurer pays the rest.

Information failure is the main reason for government intervention, including the above policy changes, in the healthcare market and health insurance market. Discuss. [25]

In healthcare market

T1 → Information failure is one of the reason for government int

AT1 → presence of positive externalities is another reason for government int

AT2 → equity is another reason for government int (changing from Medishield to Medishield Life)

In health insurance market

T1: Asymmetric information + adverse selection

Asymmetric info (why crs know more about their health conditions than do insurance firms) → lemons market and adverse selection → possible case of

- (i) v high premiums: insurance firms charge high premiums since only the high-risk cases are willing to pay the high premiums → rest of crs opt out since the high premiums
- (ii) insurance firms unwilling to take on crs with pre-existing conditions since this will add to the payout and hence cost → keep premiums down and keep the rest of the crs from opting out

Either case, crs will be under-insured → unable to afford healthcare when catastrophic illness strikes. Hence the need for the gov to make changes to the existing MediShield, to replace with MediShield Life (i) compulsory consumption, (ii) coverage of pre-existing conditions

T2: Asymmetric information + moral hazard

Once crs are insured, they may undertake risky behaviour (smoking, drinking, higher-risk sports) which would result in them needing more medical treatment since crs do not bear the full cost of their treatment. Worse if they can purchase IP which pays 100% for treatment. Hence the propose changes in 2019 for a 5% co-payment.

AT1: Avoid over-consumption of healthcare

Even without imperfect information, having full IP → MPC of consuming healthcare is zero → consume beyond socially optimal level → may generate even larger welfare loss

AT2: To keep down gov expenditure, for a healthy budget position / avoidance of public sector debt

Where adverse selection → individuals not covered by health insurance and cannot afford healthcare, gov may be expected to foot the bill (and not let anyone die / suffer from inability to pay) → ballooning budget deficit, esp with ageing population, many of whom would have pre-existing conditions that private insurance firms would not cover.

Hence the need for the gov to make changes to the existing MediShield, to replace with MediShield Life (i) compulsory consumption, (ii) coverage of pre-existing conditions → higher premiums (from higher expected payout when all are included in the risk pool) would be shared out by citizens, not borne solely by the gov

NOTE: The gov, in making MediShield Life compulsory, would have to step in to subsidise or pay for the premiums of those who are unable to afford. In this case, the gov need only pay for the insurance premiums rather than the foot the entire healthcare bill → still much cheaper

Evaluation

Level	Mark	Descriptors
L1	1-8	<ul style="list-style-type: none"> Attempted analysis is limited, conceptual misunderstandings are evident and there is lack of understanding of the question requirements. <i>Insufficient scope</i> – answered that info failure is the reason for government intervention in <ul style="list-style-type: none"> one of the markets (one-sided) max 5 Attempted analysis on info failure is one of the reasons for government intervention in both markets, one sided with conceptual gaps
L2	9-14	<ul style="list-style-type: none"> <i>Insufficient scope</i> – answered that info failure is the reason for government intervention in <ul style="list-style-type: none"> Both markets (one-sided) max 9m Balanced argument on whether info failure is the reason for government intervention in one of the markets (1T1AT for one of the markets) max 11m Balanced argument for one of the markets (1T1AT) and one-sided for the other (1T or 1AT) Theoretical framework for explaining sources of market failure
L3	15-20	<ul style="list-style-type: none"> Balanced argument for both markets (1T1AT for both markets) max 16 AND analysis for healthcare market includes both efficiency and equity (for high L3) AND theoretical framework for explaining sources of market failure AND analysis includes context given in the pre-amble
E	1	Unsubstantiated judgment or judgement that does not address the given question
E2	2-3	A judgment is given based on the analysis whether information failure is the main reason for government intervention in the 2 markets provided. Evaluation is substantiated.

- E3** **4-5** A judgment is given based on the analysis whether information failure is the main reason for government intervention in the 2 markets provided. Evaluation is substantiated AND further insights or relevant ideas are provided and substantiated.

Question 4

In a monetary policy move at the end of 2016, the US Federal Reserve Bank, the country's central bank raised the interest rate citing a stronger economic growth and rising employment. Here in Asia, currencies have generally been weakening against the US dollar as money has flown out of Asia and into the dollar.

Source: BBC News, 15 & 16 December 2016

- (a) By considering the economic goals and availability of relevant information, explain how the US Federal Reserve may have arrived at the decision to raise interest rate. [10]
- (b) Discuss the factors the governments in the Asian countries would have to consider when deciding on the policies to counter the adverse effects posed by the US interest rate increase. [15]

Part (a)**Economic goals:**

Federal Reserve, the US central bank, is in charge of the monetary policy in the country to achieve macroeconomic goals of high employment, price stability and moderate long-term interest rate.

Relevant information:

1. Current economic growth rate, unemployment rate, output gap and current inflation rate
 2. Leading indicators & domestic and global events that could affect EG, unemployment and inflation rate in the near future
 3. Policy time lag
- If the GDP is increasing at a rapid rate (high EG rate) and closing in on the full employment level of income, the extent of spare capacity is shrinking fast. The unemployment data would offer further corroboration – when the unemployment rate is declining and close to pre-crisis level. At this point, further reduction in unemployment may be limited and inflationary pressure is likely to set in. (Graph + reasoning)
 - An increase in inflation is, however, not always a cause for concern. If the current inflation rate is negative or very low – hovering close to zero – the C/B could actually hold back the i/r increase, allowing inflation rate to increase. If, however, the inflation rate is well-above zero, i.e. the economy is not at risk of slipping into deflation, further increase in inflation rate from this level may cause inflation to creep upwards by setting off an inflationary spiral.
 - Additionally, recognising that monetary policy works with time lag (briefly explain), policy makers may also incorporate how current domestic and global events are likely to influence EG, unemployment and inflation rate and act before the macroeconomic problems are seen in the macroeconomic indicators. Where events (exemplify) are expected to increase EG further, reducing unemployment and pushing the economy further towards full employment, this could cause inflation to accelerate.

Raise i/r for macroeconomic stabilisation (current)

The Fed could raise i/r to moderate the growth to avert the acceleration of inflation rate

- Increase i/r → increase cost of borrowing → decrease C & I. Against the backdrop of rapid increase in AD with modest / no increase in AS, this helps to moderate the net increase in AD → allow the economy to continue to grow while avoiding excessive price increase to keep inflation rate down (graph)

Raise i/r for macroeconomic stabilisation (long term)

Where the current *i/r* is very low, raising *i/r* will help to normalise *i/r*, to achieve a moderate long-term *i/r*. This will create the room for future *i/r* cuts should monetary stimulus be necessary.

Knowledge, Understanding, Application & Analysis		
<p>Level 3 Knowledge, Application & Analysis</p> <ul style="list-style-type: none"> • Thorough knowledge • Application to relevant current situations • Clear analytic explanation 	<p>High L3 (9 -10 m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • given the time constraint, demonstrations of knowledge, understanding, application and analysis could not be improved significantly • shows thorough knowledge and an excellent ability to explain facts and theory in a precise, logical and reasoned manner (an analytic explanation) <p>-----</p> <p>Comments to markers <i>To be in high L3, answers must ALSO</i></p> <ul style="list-style-type: none"> • <i>include information / consideration beyond the basic EG and unemployment in the preamble e.g. consideration of policy time lag and leading indicators need for <i>i/r</i> normalisation</i>
	<p>Low L3 (8m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • demonstrates both scope and depth • exhibits conceptual accuracy • is well-exemplified using examples and/or diagram and with clear application to the context • answers the question directly, explicit link back to the question • reasoned (analytic) structure to the whole answer <p>-----</p> <p>Comments to markers <i>Answers must be consistently focused on the question set</i></p> <p><i>(i) macroeconomic goals – focus on internal economy</i> <i>(ii) range of information relating to the goals – explain the relevance of the information to the decision to raise <i>i/r</i></i> <i>(iii) effect of <i>i/r</i> rise on the goals</i></p> <p><i>Answers must</i></p> <ul style="list-style-type: none"> • <i>address all 3 aspects (i)-(iii)</i> • <i>the relevant information has to be made explicit</i> • <i>analysis of the <i>i/r</i> hike must be set in the context of strong EG and rising employment</i> • <i>explain price stability as a macroeconomic goal broadly as low but still positive inflation, i.e. inflation to be positive and comfortably above zero.</i>
<p>Level 2 Application but undeveloped explanation</p> <ul style="list-style-type: none"> • Undeveloped explanation of facts and theory 	<p>High L2 (7 m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • shows depth of development but limited in scope or missing salient point(s), or • attempts to present a range of points without sufficient development of points, somewhat lacking in the rigour of analysis, • is relevant to question but the theory is incompletely explained

<ul style="list-style-type: none"> • Clarification and application 		<ul style="list-style-type: none"> • shows some ability at graphs but with incomplete explanation <p>-----</p> <p>Comments to markers</p> <ul style="list-style-type: none"> • <i>Analysis of the effect of i/r increase is rigorous, developed using the AD/AS framework, set in the context of stronger EG and rising employment.</i> • <i>Expect, however, some gaps in terms of addressing the question requirement e.g.</i> <ul style="list-style-type: none"> ○ <i>did not analyse the significance of all of the internal macroeconomic goals to i/r decision e.g. analysed only inflation and EG (or inflation and unemployment)</i> ○ <i>the information required might not be consistently made explicit, reader may have to infer</i> ○ <i>analysed price stability as avoiding high inflation, did not consider the possibility of the need to raise inflation if the rate is too low (or even negative)</i>
	<p>Low L2 (5-6 m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • is accurate but with undeveloped explanation of facts, theory and policy • largely theoretical, showing limited link to context or back to question • shows limited ability at recognising unstated assumptions, implications of a hypothesis or organisation of ideas <p>-----</p> <p>Comments to markers</p> <p><i>Expect ALSO some gaps in the analysis of the effects of i/r rise.</i></p> <p><i>Analysis might not be set in the given economic context.</i></p>
<p>Level 1 Undeveloped explanation</p> <ul style="list-style-type: none"> • Identify the key theory without explanation • Outline a list of relevant factors 	<p>High L1 (3 – 4 m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • shows some knowledge but inadequately explained and lacks economic analysis • shows that the meaning of the question is not properly grasped, i.e. is not answering the question • shows basic errors of theory, i.e. filled with multiple and serious conceptual errors
	<p>Low L1 (1 – 2 m)</p>	<p>For an answer that</p> <ul style="list-style-type: none"> • has only few valid points • is mostly irrelevant or inaccurate

Part (b)Adverse effects posed by US i/r increase

- Increase K outflow + decrease K inflow → worsening of K&F/A
- In the absence of gov intervention, this would also bring about a currency depreciation which in turn leads to problems such as: (1) imported inflation, (ii) loss of investor confidence, (iii) increase size of external debt

Factors the governments in the Asian countries would have to consider when deciding on the policies to counter the adverse effects posed by the US interest rate increase**FACTOR 1: Feasibility consideration - Availability of foreign reserves**

US raises i/r → increase K outflow + decrease K inflow as speculators shift their funds out of Asia into US in search of highest yields on their asset holdings → decrease dd for Asian currencies, increase ss of Asian currencies → depreciation of Asian currencies

- If the central bank has sufficient foreign reserves, it could use foreign reserves to buy the domestic currency in the forex market → increase dd for Asian currencies to stabilise ER
<insert dd/ss diagram>
- For central banks without sufficient foreign reserves, they could raise i/r to maintain parity with US i/r → avoid hot \$ outflows in search of higher yields → maintain ER stability

FACTOR 2: Appropriateness consideration - Prevailing economic conditions

While raising i/r to stabilise ER does not require the use of foreign reserves, it is not necessarily a better policy. Increase i/r has a contractionary effect on the economy (part a).

- For an economy that is facing sluggish economic growth and high unemployment, raising i/r will deepen these problems. Allowing ER to depreciate, on the other hand, could give the domestic economy a boost (explain), stimulating EG and reducing unemployment rate.
- If however the economy is facing the risk of over-heating, raising i/r would not only stabilise the ER but avoid the acceleration of inflation rate.

FACTOR 3: Effectiveness consideration

Where the policies implemented – whether raising i/r or direct intervention in the forex market – are insufficient to reduce ER depreciation, the government might consider introducing additional policies to deal with the negative impact that the ER depreciation brings e.g. if ER depreciation brings about a loss of investor confidence (reasoning), the gov could implement an expansionary FP (explain) to cushion the fall in AD arising from the fall in I.

FACTOR 4: ER System of the country

Open economy MP trilemma → for countries that maintain open K market, they will choose between ER control or i/r control. For Asian economies like Sg and HK, choosing to pursue an ER-centre MP means giving up a sovereign / independent MP – domestic i/r moves in tandem with US i/r. US rate increase → domestic i/r will also increase which will have a contractionary effect on the domestic economy. The govs in these countries may therefore have to introduce other stimulus measure. Factors when considering using these stimulus measure:

- k size → if sufficiently large, expansionary FP would be effective, otherwise, should consider alternative measures e.g. SR cost-cutting measures that do not work

Evaluation [SR v.s. LR]

- SR - Can still use foreign reserves to stabilise ER but foreign reserves are finite.
- LR - May eventually have to raise i/r and use expansionary FP to counter the contractionary effect of the i/r increase.
- LR - Additionally, gov should strive to improve the economic fundamentals and reduce the i/r and ER risk on its economy in the LR - by reducing the size of its external debt through greater fiscal prudence, by macro-prudential policies to manage the size of its hh debt so that crs are not at risk of sudden i/r increase, etc.

Knowledge, Understanding, Application & Analysis		
Level 3 Knowledge, Application & Analysis <ul style="list-style-type: none"> • Thorough knowledge • Application to relevant current situations • Clear analytic explanation 	High L3 (9 -10 m)	For an answer that <ul style="list-style-type: none"> • given the time constraint, demonstrations of knowledge, understanding, application and analysis could not be improved significantly • shows thorough knowledge and an excellent ability to explain facts and theory in a precise, logical and reasoned manner (an analytic explanation)
	Low L3 (8m)	For an answer that <ul style="list-style-type: none"> • demonstrates both scope and depth • exhibits conceptual accuracy • is well-exemplified using examples and/or diagram and with clear application to the context • answers the question directly, explicit link back to the question • reasoned (analytic) structure to the whole answer <p>-----</p> <p>Comments to markers</p> <ul style="list-style-type: none"> • <i>Answers must be consistently focused on the question set</i> • <i>At least 3 rigorously-developed factors</i> • <i>The factors for consideration must be made explicit</i> • <i>The eventual policy decision – whether to use Policy A or Policy B, whether Policy C is needed to complement the policies – also needs to be made explicit</i>
Level 2 Application but undeveloped explanation <ul style="list-style-type: none"> • Undeveloped explanation of facts and theory • Clarification and application 	High L2 (7 m)	For an answer that <ul style="list-style-type: none"> • shows depth of development but limited in scope or missing salient point(s), or • attempts to present a range of points without sufficient development of points, somewhat lacking in the rigour of analysis, • is relevant to question but the theory is incompletely explained • shows some ability at graphs but with incomplete explanation <p>-----</p> <p>Comments to markers</p> <ul style="list-style-type: none"> • <i>At least 2 rigorously-developed factors</i> • <i>AD/AS framework</i>

		<ul style="list-style-type: none"> • <i>Some unevenness in the quality of answers – explicit statements of policy decision and explicit identification of factors</i>
	Low L2 (5-6 m)	<p>For an answer that</p> <ul style="list-style-type: none"> • is accurate but with undeveloped explanation of facts, theory and policy • largely theoretical, showing limited link to context or back to question • shows limited ability at recognising unstated assumptions, implications of a hypothesis or organisation of ideas <p>-----</p> <p>Comments to markers</p> <ul style="list-style-type: none"> • <i>At least 2 factors</i> • <i>Expect gaps in</i> <ul style="list-style-type: none"> ○ <i>rigour of economic analysis</i> ○ <i>ability to make explicit the factors - reader may be left to make own inference</i> ○ <i>not answering question directly e.g. analysed limitations of various policies without making clear what the eventual policy decision is</i>
<p>Level 1 Undeveloped explanation</p> <ul style="list-style-type: none"> • Identify the key theory without explanation • Outline a list of relevant factors 	High L1 (3 – 4 m)	<p>For an answer that</p> <ul style="list-style-type: none"> • shows some knowledge but inadequately explained and lacks economic analysis • shows that the meaning of the question is not properly grasped, i.e. is not answering the question • shows basic errors of theory, i.e. filled with multiple and serious conceptual errors <p>-----</p> <p>Comments to markers</p> <p><i>Answer that is borderline relevant</i></p> <ul style="list-style-type: none"> • <i>e.g. analyse the adverse effects on Asian economies and the extent to which Asian economies are impacted</i> • <i>e.g. generic analysis of fiscal, monetary and supply-side policies by Asian govts with no clear links to US rate hike</i>
	Low L1 (1 – 2 m)	<p>For an answer that</p> <ul style="list-style-type: none"> • has only few valid points • is mostly irrelevant or inaccurate

Evaluation		
Evaluation Level 3 <ul style="list-style-type: none"> • Well-reasoned judgements/decisions 	E3 (4 – 5 m)	For an answer that <ul style="list-style-type: none"> • critically evaluates alternative theories, contemporary issues, perspectives and policy choices • evaluates relevance of unstated assumptions • synthesises economic arguments to arrive at well-reasoned judgements and decisions that <ul style="list-style-type: none"> ○ weighs both sides of the argument to arrive at clear stand to answer the question ○ has a well-supported justification for the stand e.g. laying out the criteria for judging • <i>Evaluation: to come to a conclusion on which among the 3 factors is the most significant with justification</i>
Evaluation Level 2 <ul style="list-style-type: none"> • Largely unexplained judgements 	E2 (2 – 3 m)	For an answer that <ul style="list-style-type: none"> • attempts at evaluation or a summative conclusion • is relevant to the question but does not explain the judgement or base it on relevant analysis
Evaluation Level 1 <ul style="list-style-type: none"> • An unsupported evaluative statement 	E1 (1 m)	For an unsupported evaluation statement(s) that lacks explanation

5. A stronger fiscal budget supports jobs and growth and instils confidence in an economy. Strengthening the nation's finances is key to a government's economic plan.
- (a) Explain how economic shocks and uncertainties affect a country's exchange rate. [10]
- (b) Governments should always work towards reducing the fiscal budget deficit despite economic shocks and uncertainties. Discuss. [15]
-

a)

Introduction

- Exchange rate: the exchange rate of a currency eg SGD, is the amount of foreign currency that can be exchanged for SGD. The external value of SGD is determined by the demand and supply of SGD in the forex market.
- Economic shocks (demand & supply shocks; can be internal OR external shocks) & uncertainties (adversely affecting investors & consumers' confidence level) => events that are by and large unexpected and bring out changes in real economic growth, inflation and unemployment. All countries are exposed to some degree to external economic shocks => changes the demand & supply of a country's exchange rate

Body

Students to illustrate any 3 cases of economic shocks and uncertainties and how these cases will affect the demand and supply of a country's currency in the forex market and thus leading to an appreciation /depreciation of the currency against another currency.

Assume a free float / managed float within the upper and lower bands, the equilibrium exchange rate is determined where the demand for SGD equals the supply of SGD in the foreign exchange market.

1. Economic shocks and uncertainties might affect the demand for Singapore exports
 - One of the factors affecting the exchange rate of a country is the amount of goods and services internationally traded. For example, with an economic shock- an economic downturn of a major trading partner, US, during the great recession=> a decrease in US national income → decrease in purchasing power, decreasing w&a to purchase g&s including g&s from Sg → a fall in demand for Singapore's export (*students to apply YED concept*). Thus the demand for SGD will fall from D_0 to D_1 as shown in Figure 1.
2. Economic shocks and uncertainties might affect Singapore's import expenditure
 - With an unexpected steep increase in oil and gas prices, and given $|PED| < 1$, the increase in prices of such essential fops for which no close substitutes are available will only bring about a less than proportionate fall in Q_d => might increase Singapore's import expenditure leading to an increase in supply of SGD from S_0 to S_1 in exchange for USD as shown in Figure 1
 - As seen, it is the intersection of demand and supply of SGD that determines the external value of SGD. A fall in demand and an increase in supply of SGD in this case, SGD depreciates against SGD from E_0 to E_1 (*student to explain price adjustment process*).

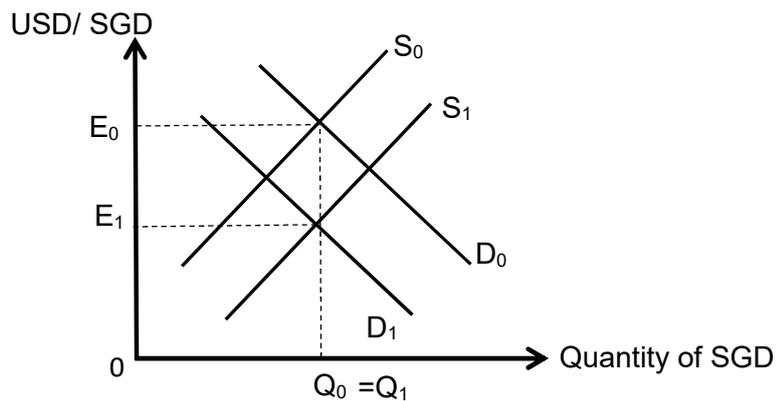


Figure 1: Determination of the external value of SGD

3. Economic shocks and uncertainties will influence the amount of capital flows into and out of a country => affecting both demand and supply of a country's currency in the forex market.
- A political turmoil in a regional country, will lead to an increase capital inflow in search for better returns (increase in demand for SGD) and a fall in capital outflow to that country (a fall in supply of SGD, ceteris paribus condition). This will cause SGD to appreciate. (Students to explain this effects with the aid of a diagram)

Knowledge, Understanding, Application & Analysis		
L1	Undeveloped explanation on factors that will affect a country's exchange rate, with no reference made to economic shocks and uncertainties	1-4
L2	<ul style="list-style-type: none"> • Explanation on three factors that will affect a country's exchange rate with link to economic shocks & uncertainties; weak on exemplification and analysis. • Only consider the change in either demand OR supply of a country's currency in the forex market. 	5-7
L3	<ul style="list-style-type: none"> • Developed explanation, with examples, on three factors that will affect a country's exchange rate • Explanation includes examples and diagrams (min 1 diagram with MAP is required, on how a country's exchange rate is determined by the demand and supply of the currency in the forex market) • Covers both movement of goods *export & imports and capital flow (either SR or LR). • Without capital flow, max 9m 	8-10

Part (b)

Introduction

- Fiscal budget deficit - an annual financial statement that represents the government's proposed revenue and spending for that financial year. It is in deficit when the revenue is less than its expenditure.
- Government main objectives – instils confidence in an economy to achieve macroeconomic & microeconomic objectives => improve SOL

Body

Thesis: Governments work towards reducing the fiscal budget deficit during economic shocks and uncertainties

- T1: especially if the economy is enjoying economic growth / and due to external economic shocks => the impact may not be great. The government may want to reduce budget deficit such as through reducing excessive spending on transfers like unemployment benefits, such welfare benefits => this will reduce the disincentive to work, leading to productive inefficiency.
- OR to reduce indirect subsidy on goods such as petrol => explain why this will improve resource allocation (students to explain with the removal of subsidy, eliminated the deadweight loss) & improve income equality (the higher income benefits more from petrol subsidy than the lower income group)
- T2: A government budget deficit means that governments need to borrow money. As the government borrows to finance government spending (crowding-out effect), it will crowd out private investment since the increased government borrowing to finance a budget deficit will increase interest rate and crowd out private spending. With i/r increasing, the expected rate of returns fall (MEI analysis) → fall in investment → fall in AD and slower increase in AS in the long run → undermine the productive capacity of the economy → sustained economic growth can't be achieved.
- T3: A large fiscal budget deficit may cause a further loss of business and consumers confidence as they worry about whether the government would need to increase taxes soon to correct the deficit or if the government would need to cut back on essential services (e.g. maintenance of roads). This would cause a fall in C & I → fall in AD as well as AS in the SR (AS in the LR will also be affected → fall in actual growth

Antithesis: Governments should not work towards reducing the fiscal budget deficit during economic shocks and uncertainties

- AT1: to reduce fiscal budget deficit => government has to reduce government expenditure and to increase revenue, such as increasing taxes => contractionary effect. If the economy's RNY is falling due to economic shocks & uncertainties, contractionary fiscal policy might push the economy into recession. (multiplier effect)
- AT2: No action may require (students may explain any case such as:
 - fiscal budget is a small % of GDP, reducing deficit through the years
 - self-financing => eg on industrial project development, expect to see the returns once the project is completed

- AT3: Government might choose to implement expansionary fiscal policy to help the economy during challenging periods (due to economic shocks & uncertainties). With expansionary FP, fiscal budget will be worsen.

Doesn't matter whether gov does / does not work towards reducing fiscal deficit, more important to identify the root cause of the shocks and uncertainties and tackle that first and foremost. Eg if ss shock → SSP instead

Conclusion & evaluation

- Economy current economic condition – strong? Improving? Having negative economic growth
- Expected impact on the economy due to the economic shocks & uncertainties
=> short run or long run, extent (degree)
=> dependent on external economy (such as for small & open economy)
- Other alternatives policies for the governments to implement=> to instils confidence in the economy

Knowledge, Application, Understanding, Analysis		
L1	<ul style="list-style-type: none"> • Irrelevant answer that does not address the question at all. • Descriptive answers that are largely regurgitated from notes without reference to the context – eg did not consider economic shocks & uncertainties 	1 - 4
L2	<ul style="list-style-type: none"> • For an answer that provides descriptive explanation with gaps in AD/AS analysis • One-sided answer • If students write budget deficit as increase G & reducing T (= expansionary fiscal policy) max 5m 	5 – 7
L3	<ul style="list-style-type: none"> • For an answer that provides clear explanation on cases why governments should work to reduce and not to reduce fiscal budget deficit despite economic shocks and uncertainties. • Good exemplification 	8 - 10
Evaluation		
E1	Evaluation that is not supported or substantiated.	1
E2	Evaluation is explained but not well developed.	2-3
E3	Evaluative statement that is based on economic analysis ie. ability to arrive at a conclusion with regards to the justification why government should / should not reduce fiscal budget deficit despite the challenging environment.	4–5

6. After years of surging foreign manpower growth, Singapore government moved to tighten the tap in 2009 as part of efforts to reduce reliance on low-skilled labour. The aim is to spur companies to invest in raising productivity so that wages and economic growth can go up in a sustainable way. But calls for more flexible manpower policies are re-emerging - specifically with the aim of bringing in highly-skilled talent to help companies go digital.

Source: *The Business Times*, 5 February 2018

- (a) Explain why a government aims to achieve sustainable and inclusive growth. [10]
- (b) Discuss the extent to which a tightening of the foreign manpower growth would impact Singapore's real gross domestic product. [15]

Part (a)

Introduction:

One of the macroeconomic objectives – government aims to achieve sustainable and inclusive growth => help to achieve other objectives => improve SOL

Define the 2 key terms:

- Sustainable economic growth refers to a rate of growth which can be achieved without causing significant other significant economic problems, such as depleted resources and environmental problems, particularly for future generations. It implies a positive and stable growth rate over an extended period of time.
- Inclusive growth is an economic growth that creates opportunity for all segments of the population and distributes the benefits of increased prosperity, both in monetary and non-monetary terms fairly across society (OECD, 2016).

Seen from the above definition, inclusive growth:

- is sustained over a period of time,
- is broad-based across economic sectors, and
- creates productive employment opportunities for the majority of the country's population.

Body:

Any 3 well-explained reasons; economic framework – increasing both AD & AS => improving standard of living (material & non material) through man-made physical capital (such as machines, factories, roads), human capital (education, skills, health care) and environmental capital (such as forests, water resources, climate, arable land, and soil quality).

Cover both sustainable & inclusive growth...

1. Governments aim to achieve sustainable economic growth so as to balance between economic growths on one hand and conservation and protection of environment on the other. This will help to meet the needs of the current generation without compromising the needs of future generation. Thus economic growth will be sustainable if the stock of capital assets including land remains constant or increases over time. It may however be noted that future economic development and quality of life crucially depends on the natural resource base and quality of the environment i.e., the quality of land, water and air.
2. To reduce negative externalities through preventing excessive destroy and over-exploit the natural resources indiscriminately and pollute the environment => will raise the short-term

growth rate and living standards of the people but this may have an adverse effect on the long-term future growth and the quality of life of the future generations as the latter will have smaller natural resource base and poor quality of environment.

3. To have a green growth and gainful employment opportunities for millions of the people who currently live in poverty but who rightly aspire to a better and prosperous future and also to ensure decent standards of living for the future generations. The transformation of developing economies to greener economies will create millions of new jobs for poor workers and thus lift them out of poverty. There are many challenges that pose a serious threat to sustainable development from climate change and increasing water scarcity to low resilience to natural disaster and biodiversity and ecosystem loss.
4. To meet rising consumption standards both in the developing and developed countries along with rapid growth of population in developing countries. It is evident that meeting the consumption needs of future generations when the world population is estimated to increase by an additional 3 billion by 2050 requires substantial changes in consumption and production pattern.

Inclusive Growth - efforts around the world to accelerate economic activity and to ensure that its benefits reach everybody in society.

5. To prevent the rising income inequality arising from economic progress. Helps to prevent waste of scarce resources, eg studies have found that children born to poor parents makes it harder to find better employment opportunities or climb the ladder of economic success.
6. To prevent adverse effect on economic goals due to income inequality – social discontentment, populist policies etc.

Conclusion

- To ensure that economic growth must deliver broad-based improvements in living standards.
- During the 20th century global economic output multiplied 40-fold and standards of living rose enormously. But this came at a price and was based on unsustainable use of scarce global resources – fuels, metals, minerals, timber, water and ecosystem.
- There can be no sustainable development without social equity, no growth without proper management of our natural resources that our economies depend on. Sustainable development is required to achieve prosperity for all, both for the present and future generations.

<i>Knowledge, Application, Understanding, Analysis</i>		
L1	<ul style="list-style-type: none"> • Irrelevant answer that does not address the question at all • Explain economic growth -actual and potential growth 	1 - 4
L2	<ul style="list-style-type: none"> • For an answer that provides descriptive explanations of sustainable and inclusive growth ie no economic framework, AD-AS or externalities • Explain either sustainable or inclusive growth only 	5 – 7
L3	<ul style="list-style-type: none"> • For an answer that provides clear explanation on sustainable and inclusive growth 	8 - 10

Part (b)

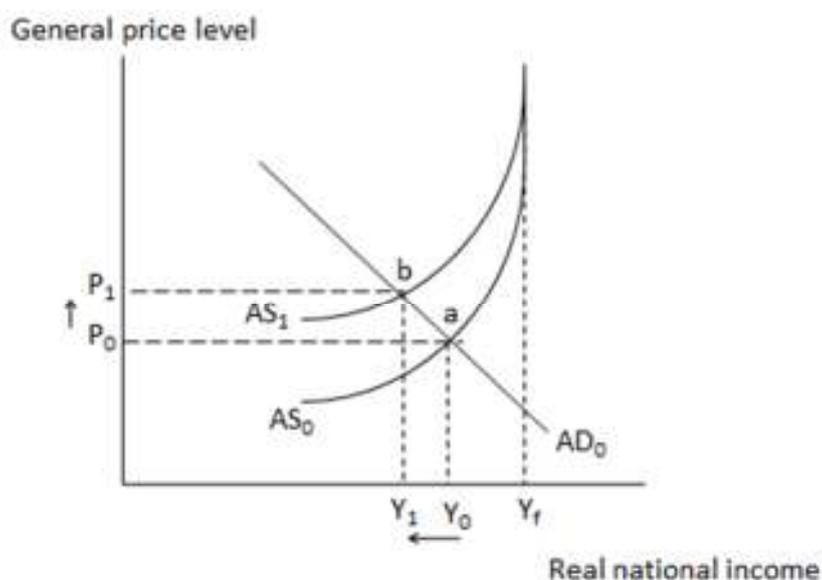
Introduction

- Singapore – small & open economy + aged population => dependent on foreign manpower
- Tightening foreign manpower growth – absolute number of foreign manpower may not decrease. In Singapore, the foreign manpower is increasing at a decreasing rate in recent years
- Reduce reliance on lower-skilled labour – issued less work permits for low skilled, untrained workers, especially in construction & shipbuilding sectors
- Continue to attract skilled foreign manpower – especially in the cybersecurity, data science, artificial intelligence sectors
- Impact on Singapore's real gross domestic product – direction and % change (growth)

Body

Impact 1: Real GDP might fall or increase at a slower rate

- Past policy of fuelling growth through importing large number of cheap, low skilled foreign workers also results in lower productivity
- The low skilled foreign workers may find it more difficult to learn new skills and may not be very receptive to changes in technology, reducing efficiency in production
- Declining number of foreign skilled workers, especially in jobs that could not attract Singaporean => would put pressure on the wages. Singapore Government has also increased the levy on foreign workers in recent years. An increase in labour cost raises the unit cost of production. To supply the same quantity of output as before, prices of final goods and services have to be raised to cover the higher unit cost => AS falls in the SR



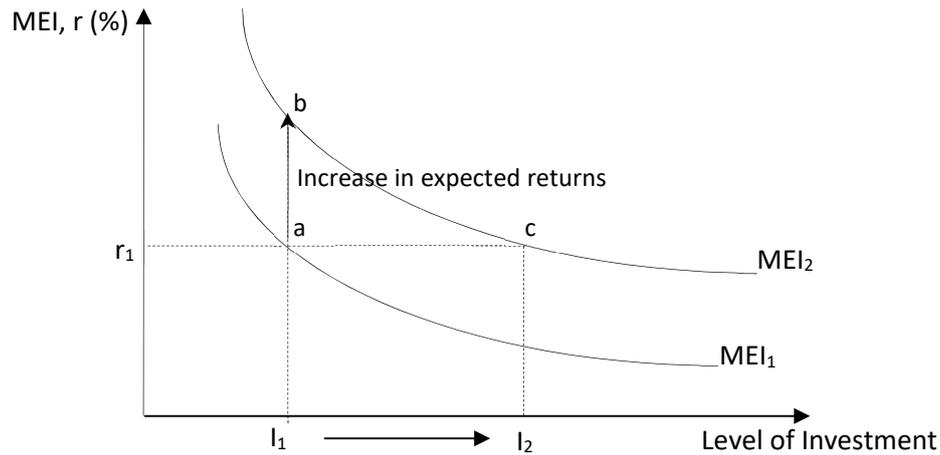
- As unit cost of production rises, firms will decrease output to protect profits. Singapore real GDP will thus fall from Y_0 to Y_1 which signals negative economic growth. As firms reduce production, they will also lay off factors of production, including labour, thus causing unemployment to increase. Firms will also pass on some of the increase in

unit cost of production to consumers to mitigate cost pressures. This causes the general price level to increase from P_0 to P_1 , causing inflation.

- Export prices might have to increase, affecting our price competitiveness
- May deter some investment, especially in manufacturing, construction sectors => AD may fall or increase more slowly, reducing or slowing down Actual Growth.
- Hence, it will become even more difficult for Singapore to support productivity and economic growth. If AS lags behind AD, there could even be inflationary pressure, making it even harder to sustain EG in the LR.

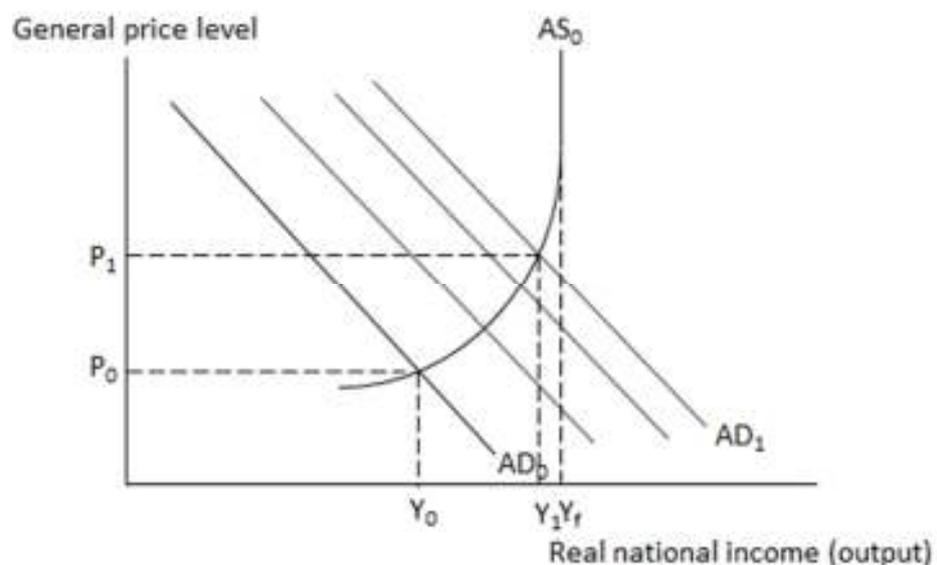
Impact 2: productivity improves, increasing real GDP

- Tighten the foreign manpower growth to reduce reliance on low-skilled labour, especially in labour-intensive jobs such as in cleaning, construction and F&B sectors. The fall in labour supply would motivate firms in these industries to use technology and improve processes that help to increase labour productivity and decrease unit cost of production at the same time.
- If Government is successful to spur companies to invest in raising productivity so that wages and economic growth can go up in a sustainable way.
- Improving labour productivity, which refers to the output per worker per hour of work or output per man-hour, is an important factor to achieve non-inflationary growth.
- Companies faced with a tight labour force and wage pressure may decide to invest in machinery, staff training, upgrade existing physical capital & do R&D etc (*students can select any 1 to exemplify*) so that the more efficient capital or production processes can enable the labour to improve labour productivity, this in turns can help Singapore economy to achieve both actual and potential growth.
- Furthermore, Government has various schemes to help the firms, such as
 - The Workforce Development Agency (WDA) in Singapore provides a range of training programmes which aims to build up the foundational and industry-specific skills.
 - The Singapore government has also committed \$2.5 billion over the period of 2010 to 2015 to schemes like Continuing Education and Training (CET) to drive productivity growth with a target of achieving 2% productivity growth per annum.
- Since reductions in unit cost of production would increase the AS in the SR, it will help to dampen cost push inflation as well as create actual growth.
- The increase in labour productivity may also attract investors (both local as foreign) as this improves business confidence as well as cost and efficiency of capital equipment - affect the expected return on investment and are illustrated by a shift in the MEI function, i.e. higher expected rate of return at various levels of investment.



Changes in non-interest-rate factor causing a (upward) shift in MEI

- Consider what happens when the expected returns from investment rises as a result of improvement in labour productivity. At investment of I_1 , the last dollar invested now yields a higher rate of return bl_1 up from the original al_1 , depicted by an upward shift of the entire MEI schedule from MEI_1 to MEI_2 . Holding interest rate unchanged at r_1 , for each additional unit of investment between I_1 and I_2 , the returns from investment (as illustrated by points on the new MEI curve between points b and c) exceed the interest rate r_1 . Thus they would yield positive *net* return and the firms would undertake them. By the marginalist principle, firms will increase investment up till I_2 (*investment at the margin*) whereby the rate of return (cl_2) is equal to the interest rate r_1 .
- With an increase in C (workers with higher wage rate), $I, G \Rightarrow AD$ will increase. Explain real GDP will increase with multiplier effect. Short-run effect (economy operating below full employment; Singapore economy assumed to have excess capacity): raises the AD, shifting it to the right



Effect of an increase in AD on equilibrium national income and general price level

- **EFFECT ON Singapore real GDP**
Firms have to draw on inventories of goods that are produced in the past to meet the increase in aggregate demand. In response to the unplanned disinvestment, firms will increase output in the next production cycle in attempt to restore their inventories to their optimal level. Firms enter the factor market to demand for more factors of production, including labour, paying out more factor income. As national income (output) rises, income-induced consumption increases, causing another round of increase in AD (C_d , being a component of AD), adding to the circular flow of income, setting off the multiplier effect where additional spending creates additional income which induces more spending. At each successive round, the increase in income and AD gets smaller and smaller because of the leakages in the form of saving, taxes and imports. Eventually the multiplier process will end and a new equilibrium national income is attained when the sum of additional leakages balances the initial injection ($\Delta J = \Delta W$). As firms enter the factor market to demand for more factors of production, holding factor supply constant, the increased competition for fops bids up factor prices. This increases the unit cost of production and firms, to protect their profits, will pass on part of the higher costs to buyers as higher prices of final goods and services. This process will continue until the aggregate output demanded equals to aggregate output supplied. Notice that in the process, employment also increases. Through the multiplier effect, an increase in AD from AD_0 to AD_1 , causing real GDP to increase from Y_0 to Y_1
- In the long run, it will increase the productive capacity of the Singapore economy, thereby helping to achieve potential growth and dampens DD-pull inflation in the long run. This policy is particularly effective as it targets the root cause of the problem. From the preamble, Singapore has a problem of low productivity (ranging from -0.8 to 2.3%) due to the reliance on low skilled workers in the past. Thus, targeting higher productivity can lead to higher actual growth & potential for Singapore => higher growth rate in real GDP in a sustainable way.

Conclusion & evaluation

- To reduce growth on low skill foreign workers in labour intensive jobs as an attempt to improve labour productivity in itself is also not easy to achieve. This is because; it requires education and retraining which may not be effective if workers are not receptive. Though CET was implemented from 2010, its success has largely been limited with productivity falling in certain years. Coupled with aged population, where older workers mindset could be hard to change. To counter this, the Singapore government has advocated for 'lifelong learning' and made systemic changes to the educational landscape and introduced the Skillsfuture package to encourage lifelong learning for all Singapore Citizens. Thus in the future, we would expect to see a change in the receptiveness of workers and this limitation will be less pertinent. Nevertheless, this policy on tightening foreign manpower on low skilled workers to improve labour productivity may only be more effective in the LR but not in the short run to see an increase in real GDP. (*Singapore enjoys an increase in real GDP due to other factors in recent years, without much success in labour productivity improvement.*)
- This policy will also incur opportunity cost as government spending on providing subsidies for training and retraining will mean less money for other social programmes such as healthcare and education. Furthermore, some labour intensive firms may relocate to other countries in search of lower unit labour cost. However, this is not a big problem for Singapore as the Government has strong reserves due to its prudent and disciplined approach in keeping a balanced budget annually. Singapore continues to attract investment => structural change in Singapore economy.

No marks will be awarded for answers on the impact Singapore's performance – on INFLATION, STRUCTURAL UNEMPLOYMENT, and BOP POSITION

Knowledge, Application, Understanding, Analysis		
L1	<ul style="list-style-type: none"> Irrelevant answer that does not address the question at all. Descriptive answers that are largely regurgitated from notes without reference to the context. 	1 - 4
L2	<ul style="list-style-type: none"> For an answer that provides descriptive explanation with gaps in analysis One-sided answer, either an increase or decrease in real GDP only 	5 - 7
L3	<ul style="list-style-type: none"> For an answer that provides clear explanation on the possible impact on Singapore's real GDP Answer has consider the short run and long run 	8 - 10
Evaluation		
E1	Evaluation that is not supported or substantiated.	1
E2	Evaluation is explained but not well developed	2-3
E3	Evaluative statement that is based on economic analysis ie. the ability to justify and arrive at a conclusion with regards to the effectiveness of policy measures adopted by the Singapore government in reducing the income gap.	4-5