Level 3 Exemplar

Section A (44 marks)

1. A free good must be free of charge. Do you agree? Explain your answer. (3 marks)

Yes. It is because the people do not prefer free good more. There are no opportunity cost involve of producing the free good. The people will not pay for it and the free good must be free of charge.

2. A chain restaurant providing Chinese cuisine set up a cake shop.

    (a)   Explain which type of expansion this was. (2 marks)

    (b)   List **TWO** possible motives for the above expansion. (2 marks)

    (c)   After the opening of 10 more restaurants, the firm found that its average cost decreased. State **TWO** possible reasons for this. (2 marks)

a) It is the lateral expansion. A chain restaurant and the cake shop is relatived about food but does not have the necessary competition and totally relatived

b) The brand name can be more famous. This expansion can lower the risk when the restaurant is facing some big problem.

c) ~~The cost of collecting material is more cheap~~ Due to the restaurants of scale is enlarged. It is more cheaper for the company to buy a large number of materials.

Also, the transcated cost of the company will decrease. ?

advertisment

3. Below are the gross domestic product (GDP) data of a country.

Real GDP growth rate

A

Time

Peak
~~though~~
trough
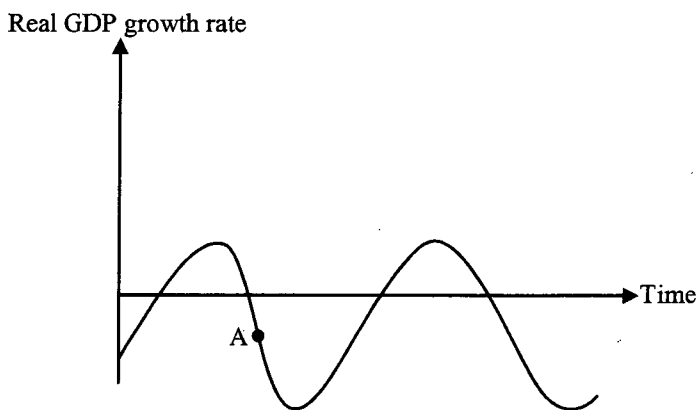
(a) Identify the phase of business cycle which point A is in. (1 mark)

(b) Apart from increasing unemployment rate, list **TWO** general economic phenomena which occur at point A. (2 marks)

(c) State **TWO** losses to society caused by unemployment. (2 marks)

a) Recession

b) The price level is decreasing
The private consumption ∧ and the investment expenditure
of the people decrease.
   /expenditure

c) The skills of the worker who are unemployed will decrease. The machine is not fully used, the output level will falls.
   Also, the society will increase lots of crime, many unemployed working want to get money and try t do something wrong.

Answers written in the margins will not be marked.

4. Study the following information of an economy.

Year	Consumer price index (CPI)
2018	110
2019	117

(a) Calculate the inflation rate in 2019. (1 mark)

(b) Explain **ONE** difference between using CPI and GDP deflator to measure the change in the price level. (2 marks)

(c) 'The continuous open market purchase of government bonds by the central bank is the cause of inflation in the economy.' Justify the statement with reference to the classical quantity theory of money. LR (4 marks)

a) $\frac{117-110}{110} \times 100\% = 6.36\%$

b) The CPI will only measure the busket of the products. And GDP deflator will measure all the products.

c) Classical quantity theory, $M\bar{V} = P\bar{V}$
the M is refer to money supply.
And it is classical quantity theory of money is about in Long Run. So that when the open market purchase of government bond by the central bank, the Money supply will increase, and the price level is increase too.
So that it is the cause of inflation in the economy.

5. (a) What is the opportunity cost of holding money? Explain. (2 marks)

    (b) Peter owes Mary $100 and he has no cash in his wallet. He suggests repaying Mary by a cash coupon (with a face value of $100) issued by a supermarket chain. Give **TWO** economic reasons to explain why Mary would refuse to accept the cash coupon as a repayment of Peter's debt. (4 marks)

a) The cost of holding money is the nominal interest rate of doing investment.

b) When there is a unexpected inflation, the price level will increase. The real value of money will rise. But the cash coupon's value will be decrease. The Peter will lose.

The $100 for Peter is the earlier consumption, and the cash coupon is not the interest of the compensation of the earlier consumption.

6. Refer to Figure 1.
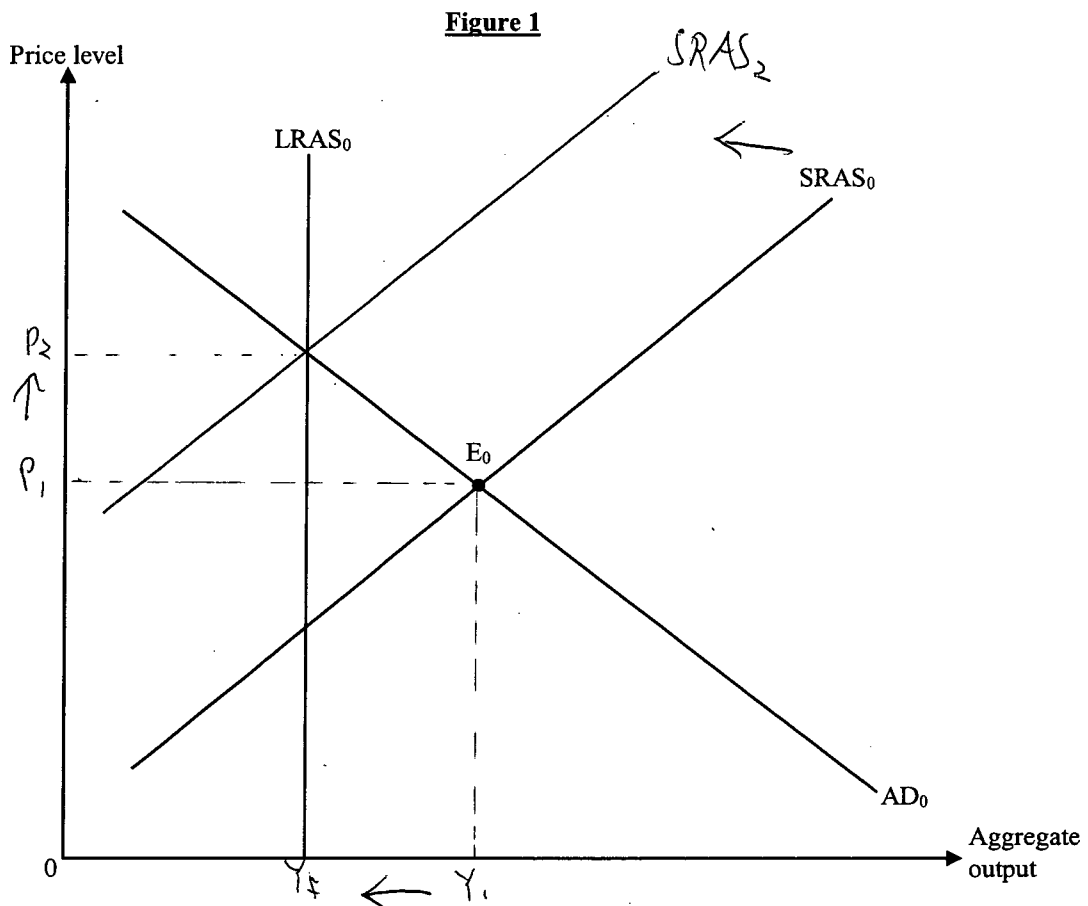
Figure 1

Suppose an economy initially operates at E_0. With the aid of Figure 1, explain how market forces can restore the aggregate output level to the full-employment output level in the long run. (5 marks)

When there is a inflationary gap. The input price will increase. The cost of production will increase. The short run aggregate supply will decrease, The price level increase and the aggregate output level restore to the full-employment output level.

7. Suppose the outputs per unit of resources of Country A and Country B are as follows:

	Toys (units)		Cars (units)
Country A	10 *1C*	OR	10 *1T*
Country B	20 *0.5C*	OR	10 *2T*

5T=4C

(a) Which good would Country B export according to its comparative advantage? Explain. (3 marks)

(b) Suppose Country A and Country B trade at an exchange ratio of 5 units of toys to 4 units of cars. A transportation cost of 0.2 units of cars is required to exchange for 1 unit of toys and the cost is equally shared by both countries. Calculate the gain per unit of export of Country B. Show your workings. (3 marks)

a) Let T be Toys , Let C be Cars.

The opportunity cost of producing Toys in Country A : $\frac{10C}{10} = 1C$

in Country B : $\frac{10C}{20} = 0.5C$

The opportunity cost of producing Cars in Country A : $\frac{10T}{10T} = 1T$

Country B : $\frac{20T}{10T} = 2T$

According to comparative advantage, the Country B of producing Toys have a fewer opportunity cost than Country A. So Country B will specialise producing Toys and export Toys.

b) Exchange ratio : $5T = 4C$

$1T = 0.8C$

The gain per unit of export of Country B :

$0.8 - 0.5 - 0.1$

$= 0.2$ //

8. Study the following balance sheet of the banking system in Country A.

Assets ($million)		Liabilities ($million)	
Reserves	1 000	Deposits	4 000
Loans	3 000		

Suppose the public always hold $800 million cash and the banking system does not hold excess reserves.

(a) Find the monetary base and money supply in Country A. (2 marks)

(b) Suppose firms withdraw $700 million from the banking system and remit the whole amount overseas.

(i) Find the change in monetary base in Country A. (1 mark)

(ii) Calculate the maximum possible change in money supply in Country A. Show your workings. (3 marks)

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a) Monetary Base = Cash hold in public + Bank Reserves

$= ($800 + $1 000)$ million

$= $ 1800 million

Money Supply = Cash hold in public + Bank deposits

$= ($800 + $ 4000)$ million

$= $4800 million //

b i) New Reserve $= ($1 000 - $ 700)$ million

$= $300 million

∴ the change in monetary base $= [$1800 - ($300 + $800)]$ million

$= $700 million //

ii) New Reserves $= $300 million   New Deposits $= $4000 - $700 = $3300 million

The required reserve ratio $= \frac{1000}{4000} \times 100\% = 25\%$

Maximum Deposits $= 300 \times \frac{1}{25\%} = $1200 million

∴ The The maximum possible change in money supply

$= $4800 - ($1200 + $800) $ million $= $2800 million //


END OF SECTION A

Section B (60 marks)

9. Ocean Park and Hong Kong Disneyland are the two large theme parks in Hong Kong.

    (a) What is the market structure of the theme park industry in Hong Kong? List **TWO** features of this market structure. (3 marks)

    The first hotel in Ocean Park was launched in 2018 while the second hotel and the water park were scheduled to be opened before 2021. It is expected that such infrastructure development can attract more tourists to stay longer in Hong Kong.

    (b) Other things being equal, what will be the effects of the infrastructure development on Hong Kong's aggregate demand and long run aggregate supply in the future? How about on aggregate output? Explain your answers with the aid of a diagram. (8 marks)
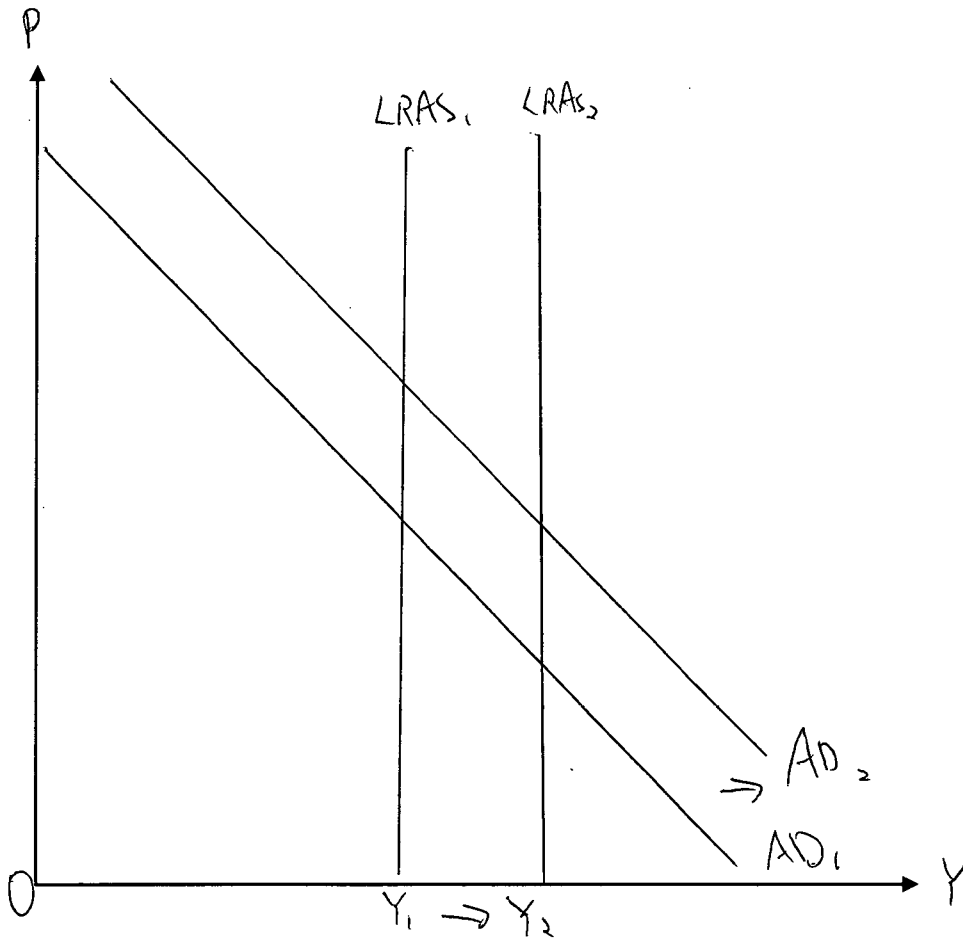
(c) Instead of obtaining bank loans to finance the infrastructure development, it is suggested that Ocean Park can be listed in the stock market and issue shares to raise capital. State **TWO** advantages of issuing shares over obtaining loans from banks for raising capital. (2 marks)

(d) The contribution of the infrastructure development of Ocean Park to Hong Kong's GDP in 2019 could be smaller than the total amount invested in the two hotels and the water park. Explain why the statement may be correct with **TWO** reasons. (4 marks)

a) Oligopoly. They are price searchers and there are imperfect information of the company.

b) Due to the infrastructure development in the future will attact more tourists to stay longer in Hong Kong. The aggregate demand will increase. The price level and the aggregate output will also increase. And the infrastructure development will raise the the long run aggregate supply, the aggregate output will increase. So that the final aggregate output increase.

c) Issuing share for raising capital have no obligation to pay the divdend whatever the company have a lost or have a profit.
Also, it is more safety to afford the risk when the company face a lost.

d) It is because the

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10. The following source shows the current account data of the US in 2017 and 2018.

	Year 2017	Year 2018

Balance on goods (USD billion)

Balance on services (USD billion)
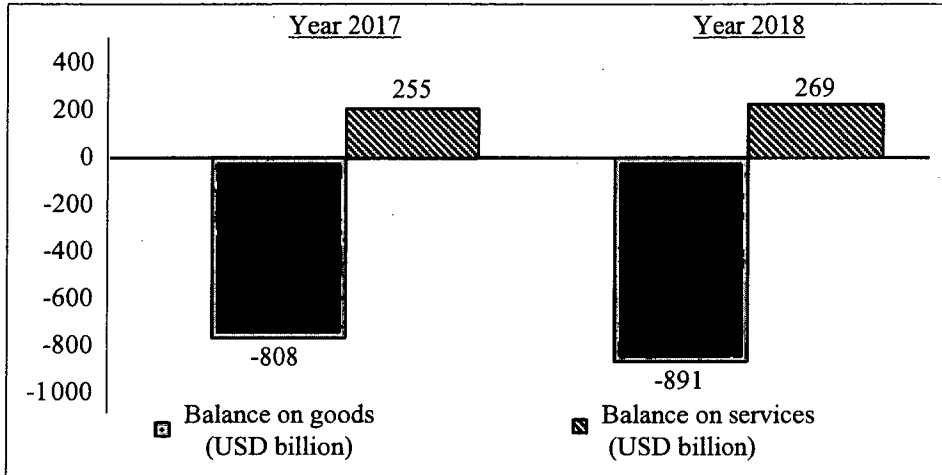
(a) (i) Describe the changes of current account data of the US in the above source. (2 marks)

(ii) 'Based on the above source, we can conclude that the current account deficit of the US in 2018 *necessarily* increased.' Do you agree? Explain. (2 marks)

Donald Trump, the US president, once said that imposing tariffs would only increase the revenue of the US government and the US consumers did not have to pay more for the imported goods.

(b) (i) With the aid of a supply-demand diagram, explain under **ONE** extreme condition that the consumers would bear **NO** tariff burden after the imposition of tariff. (4 marks)
(For simplicity, the tariff is assumed to be per-unit.)

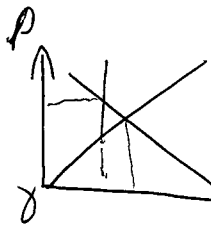(ii) Indicate the tariff revenue (i.e. sellers' burden) in the same diagram. (1 mark)
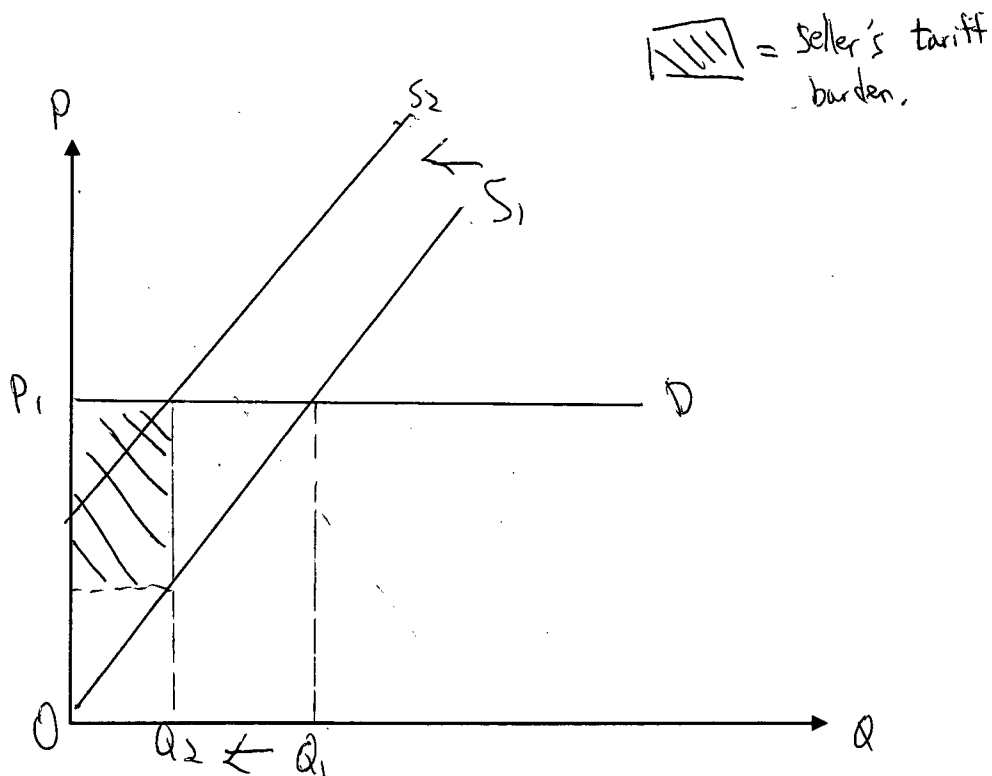
= Seller's tariff burden.

(c)　Economists argue that tariff may harm both the consumers and producers.

| So: the supply curve before tariff |
| St: the supply curve after tariff |
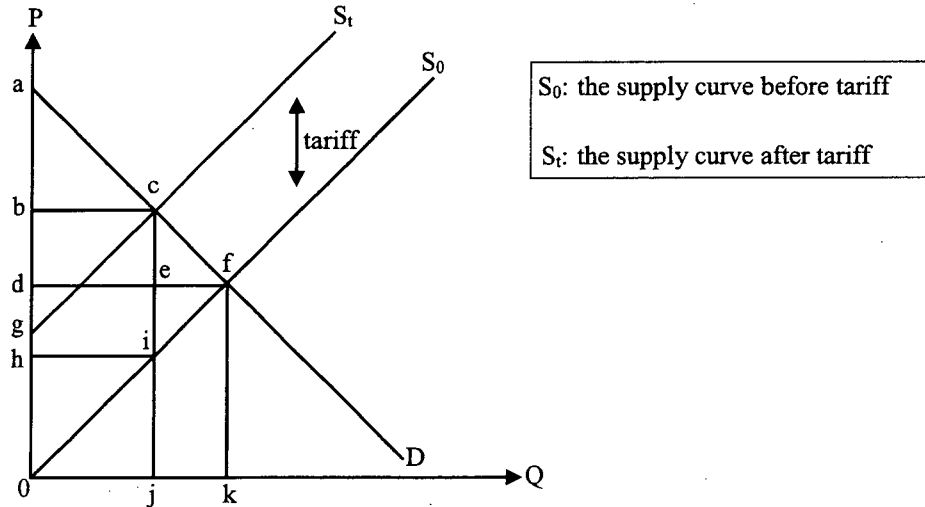
With reference to the above supply-demand diagram, complete the table below.　(3 marks)

	Before tariff	After tariff
Consumers' surplus	Area adf	Area abc
Producers' surplus	Area dfO	Area bciO

(d)　The US government could impose quota to restrict imports. From the viewpoint of the US government, state ONE advantage and ONE disadvantage of using tariff instead of quota to restrict imports.　(2 marks)

a)i)　In 2017, 255－808 = －553 billion

In 2018, 269－841 = －622 USD billion

It loss 63 USD billion

ii)　No, because there are only show the balance on goods in 2017 and show the balance of services in 2018. The net income from abroad and current transfer may be have a surplus.

b) When the elasticity of demand is perfectly elasticity.
    The consumers would bear no tariff burden.

11. Traffic congestion in the cross harbour tunnels during peak hours is a serious problem in Hong Kong. For simplicity, the discussions below only focus on two cross harbour tunnels in Hong Kong, namely the Cross-Harbour Tunnel (CHT 紅隧) and the Western Harbour Crossing (WHC 西隧).

Source A: Existing tunnel tolls for private cars

| CHT (owned by the government)	$20
WHC (owned by a private firm)	$75

Source B: Traffic information during peak hours of the two tunnels

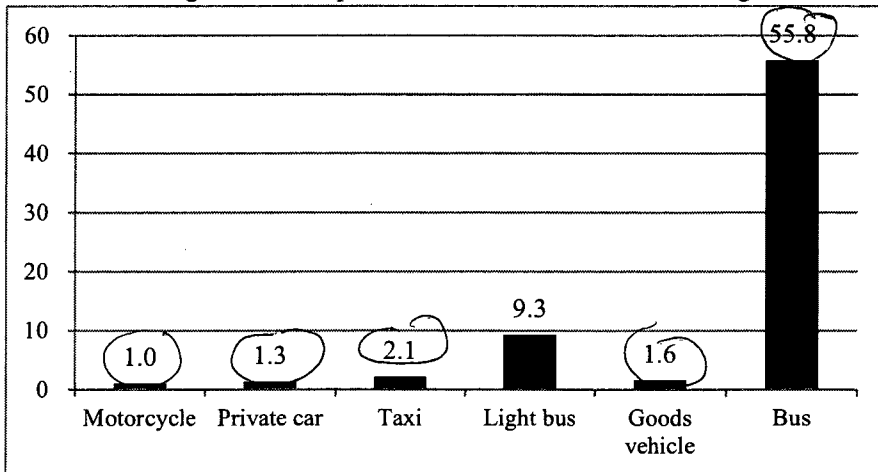|	Designed capacity per hour	Actual number per hour	Queue
CHT	2 600 (cars)	4 400-4 600 (cars)	1 500-3 000 (metres)
WHC	4 200 (cars)	3 600-3 800 (cars)	0 (metres)

Source C: An extract of a report on traffic congestion

Traffic congestion not only affects individual drivers, but also results in inconvenience to society as a whole. Apart from the time wasted during congestion, people also need to allow extra time for the journey to cater for the uncertainty in travelling time. The stop-and-go traffic pattern during congestion increases the total operating costs of vehicles as more fuel would be consumed.

Source D: Percentage of vehicles crossing the harbour during peak hours (by types of vehicles)
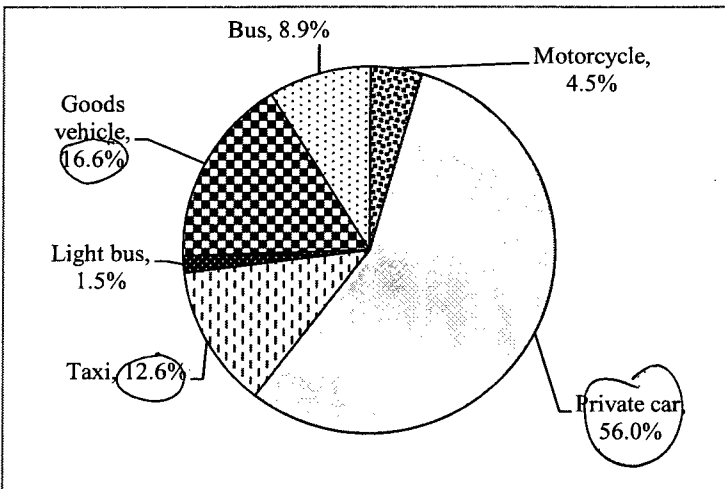
Source E: Average number of persons in each vehicle when crossing the harbour during peak hours
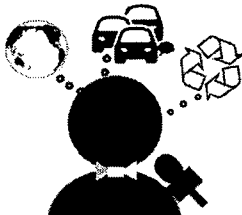
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Source F: Views on cross-harbour traffic in Hong Kong

A politician	Every citizen needs to travel across the harbour. An increase in tunnel tolls affects everyone, especially the low-income group.
A government official	We cannot underestimate the difficulty in negotiating any adjustment in tunnel toll of WHC. The government has no right to object to the tolls set by WHC.
An environmentalist	Reducing traffic congestion in cross harbour tunnels is only one tiny step. The root of the problem is that there are too many cars in Hong Kong.
A taxi driver	Channeling traffic to the under-utilised WHC benefits every road user and this allows taxi drivers to have more businesses.

(a)   Refer to Source A. State **ONE** advantage and **ONE** disadvantage of providing cross harbour services by a private firm instead of the government.   (2 marks)

(b)   Refer to Source B. With the aid of a supply-demand diagram, explain the phenomenon in the CHT (紅隧) during peak hours.   (4 marks)

(c)   Refer to Source C.

        (i)   Explain, with **ONE** example, why there may be a divergence between private and social costs during traffic congestion.   (3 marks)

        (ii)   Explain why the situation in part (i) may result in inefficiency.   (2 marks)

(d)   According to Sources D and E, explain why private cars may be regarded as one of the major sources of traffic congestion in the cross harbour tunnels.   (2 marks)
        (Assume that the number of persons using the cross harbour tunnels per day during peak hours is constant.)

For part (e), candidates are required to present their answers in an essay form. Criteria for marking will include the use of sources and economic theories, relevant content, logical presentation and clarity of expression.

(e) Suppose there are two cross-harbour-tunnel-toll adjustment proposals to relieve the problem of congestion:

| Proposal I | The government raises the toll of the CHT (紅隧) for private cars to $75. |
| Proposal II | The toll of the WHC (西隧) for private cars is reduced to $20. |

With reference to the above sources and your own knowledge in Economics, discuss which proposal, proposal I or II, each of the following groups of stakeholders would prefer:

- the owners of the WHC company
- the politicians who are concerned about the income inequality in Hong Kong
- the government economists who are concerned about government revenue and/or expenditure
- **ONE** other group of stakeholders

(Hint: You may discuss the reasons why one group of stakeholders would prefer a certain proposal **OR** why that group would not prefer the other proposal.)

(14 marks)

(f) Suggest **ONE** proposal, other than tunnel-toll adjustment, for relieving the traffic congestion problem. Briefly explain how your proposal works. (2 marks)

a) The disadvantage is the existing tunnel tolls is more expensive. The advantage is the traffic ∧ time is shorter.
    congestion

b)
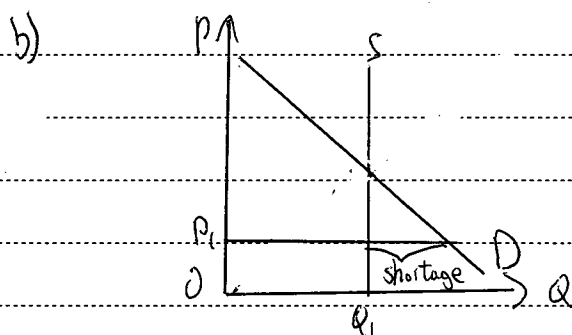
There are a shortage of the cross harbour - tunnel.

c i) The vehicles's total operating costs such as more fuel would be consumed. when it is during the stope -and - go traffic pattern. and the traffic congestion. The marginal social cost is larger than the marginal social benefits.

ii) The marginal social cost is larger than marginal social benefits. There is a over - production. And the negative externality occurs. And without paying compensation to the drivers.

d) Due to the Source D, the percentage of vehicles crossing the ~~Hab~~ harbour during peak time. The private car is 56%, this number and percentage is over the half of the total car ratio. And average number of person on the private car is only 1.3 people. But the bus have about 55.8 people. It show that the private cars is hinder the traffic and as one of the major sources of traffic ~~ong~~ Congestion in the cross harbour tunnels.

e) ~~the~~ The owners of the WHT Company will not prefer the proposal I. Due to a big adjustment of the price of the toll. Although it will have many drivers to chose WHT. But it is a non-price competition for two ~~tun~~ tunnel to competition. It may loss lots of revenue. Also, the WHT company have a hope that they want to give some driver to have a other option. But there is a cost which the monetary cost of enjoy by this tunnel is higher. Maybe there are some accident we need to pass through the Hong Kong Island in a short time. We may use the more expensive tunnel to arrived the place in the short time. So that it will ~~broke~~ broken the meaning of 2 tunnel's fare.

The governmet economist who are concorned about govermnt revenue will prefer proposal I. They hope that the fare will be higher. The quantity demanded will be decrease. But these two Although

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END OF SECTION B

Section C (16 marks) Answer any **ONE** question.

12. ABC Electricity Limited, the sole supplier of electricity in Country A, adopts uniform pricing.

    (a)   If the marginal cost is constant, explain how the profit-maximising output of ABC Electricity Limited will be determined. Indicate the output (Q_M), the price (P_M) and the deadweight loss in Figure 2.   (5 marks)

Figure 2
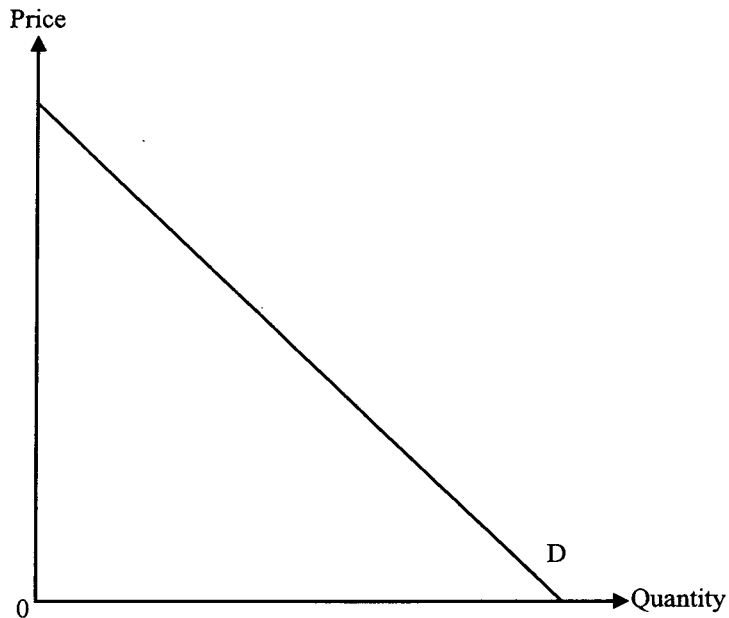
    (b)   Suppose the government imposes a lump sum tax, which is a fixed amount regardless of the quantity produced, on ABC Electricity Limited. (Assume that the tax amount is smaller than the profit.)

        (i)   Indicate the after tax profit-maximising output (Q_t) and price (P_t) in Figure 2.   (2 marks)

        (ii)   Explain whether economic efficiency would worsen as a result of the tax.   (2 marks)

    (c)   ABC Electricity Limited charges users in the urban area $1 per unit of power consumed and users in the rural area $1.5 per unit of power consumed. Define price discrimination and explain why this price arrangement may **NOT** constitute price discrimination.   (3 marks)

ABC Electricity Limited planned to install new equipment for electricity supply in the rural area and asked the equipment providers to bid for the contracts. It was found that the two equipment providers in a region agreed to take turns being the bid winner.

    (d)   (i)   Which anti-competitive behaviour would the above case constitute? If the above case happened in Hong Kong, which conduct rule of Competition Ordinance would be violated?   (2 marks)

        (ii)   State **TWO** ways the above behaviour would harm ABC Electricity Limited.   (2 marks)

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13. Refer to Figure 3. PPF_A and PPF_B are the production possibility frontiers of Country A and Country B respectively. E_0 is the consumption point of Country A without trade.

Figure 3
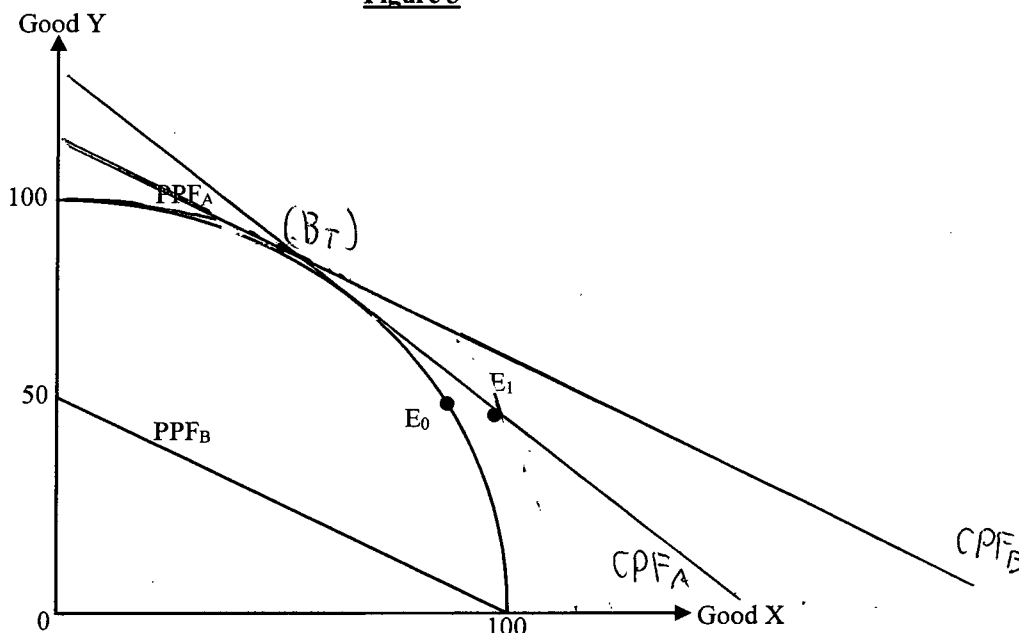
Assume the domestic cost of production of 1 unit of Good X in Country A is 1.5 units of Y at E_0.

(a) With reference to the domestic production costs of Country A and Country B, explain which country will specialise in producing Good X.   (3 marks)

(b) After Country A engages in trade with Country B, the consumption point of Country A is E_1.

Indicate in Figure 3,

   (i) the consumption possibility frontier (CPF_A) of Country A (Hint: CPF_A should pass through E_1),

   (ii) the production point (A_T) of Country A after trade and explain your answer in terms of terms of trade, and

   (iii) the consumption possibility frontier (CPF_B) and the production point (B_T) of Country B after trade.

                                                                                      (5 marks)

(c) Suppose Country B adopts artificial intelligence technologies in the production of Good Y, which doubles her productivity of the good.

   (i) Explain whether your answer in part (a) would be affected by the above change.   (2 marks)

   (ii) Give **TWO** reasons to explain why the adoption of artificial intelligence technologies may boost economic development of Country B.   (4 marks)

   (iii) Apart from adopting artificial intelligence technologies, list **TWO** factors that may boost economic growth.   (2 marks)

Answers written in the margins will not be marked.

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a)   The opportunity cost of producting Good X
in Country A is $1X = 1.5Y$

The opportunity cost of producting Good X
in Country B is $50Y = 100X$, $1X = 0.5Y$
Due to the opportunity cost of producing Good X
is $0.5Y$ in Country B is lower than in Country A. And
Country B have a comparative advantage of producing good X than
in Country A. So that Country B will specialise in producing
Good X.

(i)   The total output of good Y of country B
is 100 unit of Good Y after technologies.
The opportunity of producing Good X is $1Y$
and it still lower than Country A. So it will
not change.

ii) The human expancy life year will be rised.
The mean year of education is increased.

~~The The GDP growth And the quality and~~
iii) The quality and the quantity of the
output increase may bost the economics growth.

END OF PAPER

Sources of materials used in this paper will be acknowledged in the *HKDSE Question Papers* booklet published by the Hong Kong Examinations and Assessment Authority at a later stage.