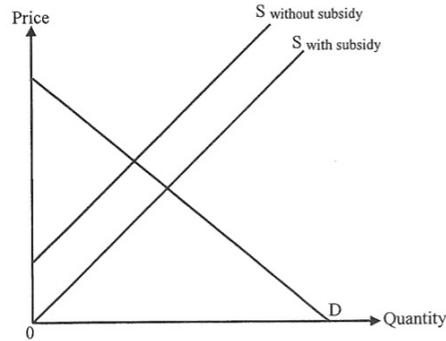


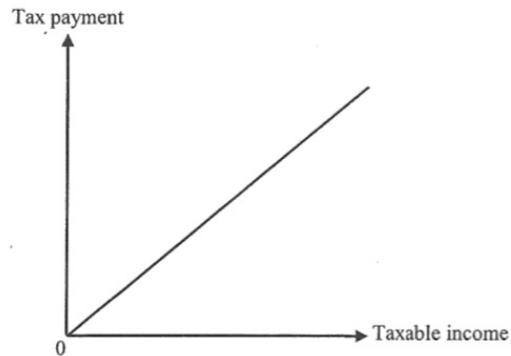
21. Refer to the following supply-demand diagram of Good X.



If the government cancels the per-unit subsidy on Good X, it will lead to a decrease in \_\_\_\_\_.

- (1) quantity transacted
  - (2) consumer surplus
  - (3) deadweight loss
- A. (1) and (2) only
  - B. (1) and (3) only
  - C. (2) and (3) only
  - D. (1), (2) and (3)

40. The following diagram shows the relationship between taxable income and tax payment in a tax system.



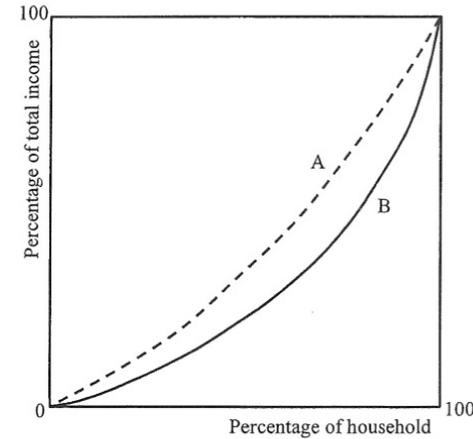
Which of the following statements about the above tax system is correct?

- A. It is in line with the equality principle put forth by Adam Smith.
- B. There is no tax allowance for the tax.
- C. Tax rate increases as taxable income increases.
- D. The tax system narrows the income gap between the rich and the poor.

22. Which of the following will most likely be the positive external effect of the opening of the full Tuen Ma Line of MTR?

- A. The travel time is shortened for MTR passengers.
- B. The business of restaurants near the stations of MTR Tuen Ma Line rises.
- C. The problem of noise pollution worsens.
- D. The income of minibus drivers drops.

23. Refer to the following Lorenz curves of a country.



- A: based on pre-tax pre-social transfer income
- B: based on post-tax post-social transfer income

Based on the above information, which of the following statements about the country is/are correct?

- (1) The tax system is progressive.
  - (2) Social transfer helps equalise outcome.
  - (3) The income inequality problem becomes more serious after the government's redistribution of income.
- A. (1) only
  - B. (2) only
  - C. (3) only
  - D. (1) and (2) only

37. Which of the following may lead to a rise in aggregate output and an improvement in equity in Hong Kong at the same time?

- (1) a charity fund donating HK\$10 billion to set up non-governmental organisations in order to provide services for the underprivileged
  - (2) a cash payout of HK\$10 000 to each permanent resident aged 18 or above by the Government
  - (3) a 1% reduction in the standard tax rate of salaries tax
- A. (1) and (2) only
  - B. (1) and (3) only
  - C. (2) and (3) only
  - D. (1), (2) and (3)

3. Refer to the following data about Country A.

Year	2019	2020
Per capita disposable income	\$15 000	\$20 000
Gini coefficient (based on household income)	0.51	0.56
Gini coefficient (based on household disposable income)	0.51	0.44

- (a) State **TWO** reasons to explain why the increase in per capita disposable income may lead to an over-estimation of the improvement in living standard of Country A. (2 marks)
- (b) Based on household disposable income, did income inequality of Country A improve or worsen in 2020? Suggest **ONE** policy which may have caused such a change. (2 marks)

5. Country D introduced a short-term capital gains tax (STCGT) on property market.

Capital gains (\$)	STCGT rate (%)
10 000 or below	8
10 001 to 50 000	16
50 001 to 100 000	24
100 001 or above	32

STCGT is a tax on capital gains from the sale of a property held for less than 1 year.

A spokesman of the tax department said that a new computer system had been developed for STCGT. Although the system cost more than 1 billion dollars, it allowed tax payers to check and pay the amount of STCGT online easily.

- (a) Evaluate the new tax in terms of **TWO** principles of taxation put forward by Adam Smith. (4 marks)
- (b) 'The introduction of STCGT would not relieve the problem of rising property prices.' Explain whether this is a positive statement or a normative statement. (2 marks)

10. The Olympic Games attract billions of international television viewers to watch the competitions among thousands of top athletes.

- (a) Some restaurants in shopping malls find their businesses increase sharply when the malls broadcast Olympic events. Explain how the broadcast of Olympic events may result in a divergence between private and social benefits. (3 marks)
- (b) Suppose the divergence in part (a) does exist. How can market mechanism help reduce this divergence? (2 marks)

Athletes compete in the Olympic Games with their support teams consisting of sport psychologists, physical therapists, nutritionists, etc.

- (c) Which economic principle is illustrated in the above practice? State **TWO** reasons why such a practice can increase labour productivity. (3 marks)

Some professional athletes receive a monthly salary and share a proportion of the prize money whenever they win in competitions.

- (d) Instead of paying the athletes a monthly rate only, explain why some employers of professional athletes use the above wage payment arrangement. (2 marks)

Whenever an athlete wins a gold medal in a certain sport, there will be the following phenomena: more people will start learning the sport. As a result, there will soon be long queues registering for courses in the sport.

- (e) With the aid of a demand-supply diagram, explain the above phenomena. (5 marks)

Professional athletes usually start their full-time training before graduating from secondary school and have to give up their studies.

- (f) Will the opportunity cost of being a professional athlete be affected if the average income of professional athletes increases? Explain. (2 marks)

## SECTION 9: ROLES OF GOVERNMENT

### 9.1 EXTERNALITIES

#### Multiple Choice Questions

1985/AL/I/02

A chemical company drops waste into a farmer's water supply, causing significant damage to the farmer. The farmer cannot legally ask for compensation from the chemical company. In view of this situation

- A. an output tax should be imposed on the chemical company because of the implied inefficiency.
- B. it is in the farmer's interest to pay the chemical company to decrease waste dumping.
- C. the law should be changed to allow the farmer to demand compensation from the chemical company.
- D. the chemical company should be allocated elsewhere.

1985/AL/I/23

A divergence between private cost and social cost means

- A. the market fails to maximize welfare.
- B. income distribution requires improvement.
- C. resources allocation requires improvement.
- D. the cost to an individual of an action differs from the cost to the society.

1986/AL/I/06

A divergence between private and social costs

- A. is inefficient and should be eliminated by government regulations.
- B. can be resolved by private contracting.
- C. means that income distribution is more unequal.
- D. (out of syllabus)

1986/AL/I/25

The smoke from a metal processing factory in Hong Kong pollutes a large government housing estate nearby, and the toxic nature of the smoke may threaten the lives of residents who are scheduled to move into the estate soon. Economic analysis tells us that

- A. the polluting factory must be relocated.
- B. the residents must not be allowed to move into the housing estate.
- C. life is invaluable and must be saved, therefore either the factory or the housing estate must be relocated.
- D. to maximize social gain there is not enough information to decide on the proper course of action.

1988/AL/I/17

A restaurant opens near a housing estate. The cooking smell annoys the residents nearby. Economic analysis indicates that

- A. the residents of the housing estate should be encouraged to sue the restaurant owner.
- B. resource allocation will be more efficient if the restaurant owner pays the residents to tolerate the smell.
- C. it is more beneficial to society if the government forbids the restaurant to operate near the housing estate.
- D. the mere presence of the annoying smell does not necessarily represent inefficient use of resources.

1990/AL/I/25

Suppose a factory pollutes the environment. If the right to pollute is well-defined and transferable,

- A. the level of pollution is subject to market contracting.
- B. pollution will be eliminated.
- C. the factory will necessarily increase its production.
- D. then, on efficiency grounds, the government should intervene when the right to pollute is not transacted.

1990/AL/I/30

A divergence between private and social costs is **NOT** wasteful if

- A. the majority of people benefit from the divergence.
- B. the cost of eliminating the divergence is greater than the cost of the divergence itself.
- C. people who suffer from the divergence choose not to complain to the government.
- D. the divergence is not expected to last for a long time.

1991/AL/I/01

A divergence between private and social costs

- A. occurs when one person's action inflicts damage on another person.
- B. cannot be resolved without government intervention.
- C. may be eliminated by market transactions if the action that causes the damage is a private property right.
- D. means inefficient allocation of resources.

1992/AL/I/22

Which of the following implies a divergence between private and social costs?

- A. A factory pollutes the neighbouring housing for workers, and this housing is owned by the factory.
- B. Increasing textile exports to the USA leads to higher clothing prices in Hong Kong.
- C. Mr. Smith plays the piano which his neighbour loves to hear, but he plays it so often that the marginal benefit of his music to the neighbour is exactly zero.
- D. None of the above.

1992/AL/I/23

Suppose the construction of a flyover causes the value of nearby properties to fall. To attain economic efficiency,

- A. the flyover builder should compensate the nearby property owners.
- B. the flyover builder should install a noise reduction device.
- C. the nearby building should be relocated.
- D. There is not enough information to answer the question.

1992/AL/I/24

If private ownership of a forest is abolished, and the forest is subject to common exploitation,

- A. the rate of depletion will remain unchanged.
- B. the trees will become a public good.
- C. the private cost of cutting trees will differ from the social cost.
- D. the trees will become a free good because they no longer have a price.

1993/AL/1/08

In its production process, a chemical factory upstream pollutes a river nearby without considering the damages inflicted upon a fish farmer downstream. Under zero cost of transaction,

- A. the chemical factory will pollute more if it has the private property rights to use the river.
- B. there will be no water pollution if the fish farmer has the private property rights to use the river.
- C. there will be no water pollution if the fish farmer purchases the ownership of the chemical factory.
- D. water pollution will be reduced if private property rights over the use of the river are established, regardless of who owns these rights.

1994/AL/1/08

If all property rights are well defined and transaction costs are zero,

- A. there will be no pollution.
- B. the marginal social cost of pollution will equal the marginal social benefit of pollution.
- C. the level of pollution will be minimized.
- D. the existing level of pollution will remain unchanged.

1994/AL/1/15

A divergence between private and social costs results from

- A. market failure.
- B. property rights not being clearly defined.
- C. too little government intervention.
- D. the inability to distinguish private goods from public goods.

1995/AL/1/23

The construction of a new cross harbour tunnel in Western District has caused the value of nearby properties to rise. Therefore, to increase efficiency,

- A. nearby property owners should share the capital gain with the tunnel company.
- B. the tunnel company should ask nearby property owners to share the tunnel construction costs.
- C. the government should encourage property developers to build more new flats in that area.
- D. None of the above.

1996/AL/1/21

Given that people have well-defined rights to enjoy fresh air, which of the following justifies the government prohibiting smoking in public areas?

- A. Smokers inflict harm on non-smokers.
- B. The cost of contracting between smokers and non-smokers is prohibitive.
- C. The rights of non-smokers must be protected at all costs.
- D. It is impossible to find a tax schedule to correct the external effects of smoke pollution.

1997/AL/1/27

A pianist plays the piano. His neighbour enjoys the music but the pianist receives no payment from the neighbour. A divergence between private and social costs/benefits occurs in the following situations EXCEPT:

- A. The more music the pianist plays, the more the neighbour enjoys the music.
- B. The more music the pianist plays, the less the neighbour enjoys the music.
- C. The neighbour feels that the last minute of the music has a zero value.
- D. Although the neighbour loves the music, he feels that it would be better if the pianist plays a little less.

1997/AL/1/28

In the United States, as in some other developed countries, one who builds a highrise blocking the view of others may be subject to public hearings, and through these hearings the right to build the highrise may be denied. In Hong Kong, however, so long as the building code is met, every builder has the right to block the view of the residents nearby. Which of the following is true?

- A. A divergence between private and social costs is more likely to occur in Hong Kong.
- B. A divergence between private and social costs is less likely to occur in Hong Kong.
- C. The transaction costs involved in the elimination of the divergence between private and social costs is higher in Hong Kong.
- D. None of the above.

1998/AL/1/13

A factory dumps waste into a farmer's water supply, causing significant damage to the farmer. With prohibitive transaction costs in making contracts,

- A. the situation may be efficient and no government intervention is needed.
- B. the situation is inefficient and the factory should not be allowed to produce.
- C. the farmer should have the right to demand compensation from the factory.
- D. the situation is inefficient and government regulation is the only way to improve efficiency.

1998/AL/1/19

A divergence between private cost and social cost

- A. will not exist if transaction costs are zero.
- B. cannot be resolved without private contracting.
- C. implies that income distribution is unequal.
- D. means that the market is inefficient and requires government regulation.

1999/AL/1/19

The new airport in Hong Kong relieves the people living under the old flight path from noise pollution, but causes noise pollution to those under the new flight path. After the opening of the new airport,

- A. the value of properties under the new flight path will fall if the noise pollution is fully anticipated.
- B. the value of properties under the new flight path will rise if the noise pollution is fully anticipated.
- C. the respective property values will change if changes in the levels of noise pollution are not correctly anticipated.
- D. the respective property values will not change under any circumstances.

1999/AL/1/27

Which of the following implies a divergence between private and social costs?

- A. Male students contribute money towards buying perfumes for female students.
- B. A student accidentally pours coffee on a professor's jacket and says sorry.
- C. A husband complains about his wife all the time but refuses to get a divorce.
- D. A piano player who never receives any payment for his music from his neighbour always plays the piano that the marginal value of his piano play to his neighbour is zero.

2000/AL/1/19

Newspaper and magazine publishers often increase their sales and incomes by reporting personal information about famous movie stars who usually do not receive any financial return from the publishers. However, these movie stars often benefit from these reports which serve as a kind of publicity for them. Which of the following statements is correct regarding this situation?

- A. There must be a divergence between private and social costs.
- B. To attain economic efficiency, the government should force the party who benefits more from these reports to compensate the other party.
- C. The marginal benefits of these reports to the two parties must be the same since neither party pays the other.
- D. The costs of making and enforcing contracts are prohibitively high.

2000/AL/1/20

When a pianist plays the piano up to a point where the marginal value of the unpaid music to his/her neighbour is zero,

- A. private marginal benefit diverges from social marginal benefit.
- B. the total gain to the pianist and his neighbour is maximized.
- C. the property rights to the music has to be defined for economic efficiency.
- D. the time spent on playing the piano is indeterminate.

2003/AL/1/27

The construction of a new airport generates unpleasant noise for nearby residents, and yet the value of nearby properties increases as a result of the new airport. Which of the following is correct?

- A. There may be no divergence between private and social costs.
- B. The existence of both noise damage and increases in property value calls for a tax on the one hand and a subsidy on the other.
- C. There must be a divergence between private and social costs.
- D. There is definitely no divergence between private and social costs.

2005/AL/1/29

The introduction of a new airport near a city as a rule creates noise and pollution that affect the market value of the property nearby. Also as a rule, the market value of the nearby property rises because of a substantial increase in business activities. Which of the following is correct?

- A. There is a divergence between private and social costs, and taxes imposed on airplane take-offs and landings will reduce this divergence.
- B. There is a divergence between private and social costs, and subsidies awarded to airplane take-offs and landings will reduce this divergence.
- C. So long as the market value of nearby property continues to rise with more airplanes using the airport, hence more noise and pollution, the divergence between private and social costs declines.
- D. There is no divergence between private and social costs as long as the market value of nearby property rises.

2006/AL/1/29

Two adjacent houses have trees extending into each other's garden area. Both owners clear the fallen leaves in their own lawns without saying anything to one another. Which of the following statements is correct?

- A. There may be no divergence between private and social costs.
- B. The marginal damage of these trees to each party must be the same since no compensation is given.
- C. There must be a divergence between private and social costs.
- D. The cost of negotiation between the two parties is irrelevant.

2006/AL/1/30

A divergence between private and social costs

- A. may not exist even in the absence of private property rights.
- B. will never exist with private property rights.
- C. will never exist with government intervention.
- D. may still exist even if transaction costs are zero.

2007/AL/1/30

Building a highway creates a nuisance for the environment nearby. Land prices near the highway often increase after the announcement of the route. This implies that

- A. The government has selected the location of the highway accurately.
- B. The benefits derives from the highway outweigh the nuisance created.
- C. Pollution is inevitable when the economy develops.
- D. There is necessarily a divergence between private and social costs.

2008/AL/1/28

In many countries, residents in apartments are not allowed to keep dogs, but residents in garden houses are allowed to do so. Which of the following statements is correct?

- A. The nuisance of dogs barking is transacted in the market.
- B. The divergence between private and social costs increases whenever dogs are allowed to be kept.
- C. The divergence between private and social costs decreases whenever dogs are not allowed to be kept.
- D. None of the above.

2008/AL/1/30

The strict enforcement of a no-smoking law

- A. will eliminate the divergence between private and social costs with respect to the effects generated by smoking in public.
- B. will reduce the divergence between private and social costs of public smoking.
- C. may increase the divergence between private and social costs of public smoking.
- D. is more efficient than the absence of this law because the poll shows that the majority of people support its passing.

2009/AL/1/28

A divergence between private and social costs

- A. may exist even if transaction cost is zero.
- B. may exist even if all resources are allocated by using market prices.
- C. implies the efficiency condition is violated.
- D. implies the absence of private property rights.

2010/AL/1/28

In 1920, A. C. Pigou of Cambridge advanced the argument that, with a superior road and an inferior road, car drivers flock to use the superior road and cause traffic congestion.

- A. There is a divergence between private and social costs in this situation.
- B. A tax imposed by the government on the use of the superior road will reduce the divergence between private and social costs.
- C. If the roads are privately owned, a higher toll will be charged for the use of the superior road.
- D. All of the above

2012/AL/1/28

A. C. Pigou observed that the sparks of passing trains harmed the crops of farmland near a railway. However, the noise of the trains also scared away the birds feeding on the crops and because of this the price of the farmland rose. Which of the following statements is correct?

- A. A tax imposed on the use of the railway would reduce the divergence between private and social costs.
- B. A subsidy granted to the farmers would reduce the divergence between private and social costs.
- C. There is no divergence between private and social costs when the price of nearby farmland reached a maximum.
- D. So long as the market value of nearby farmland continued to rise with more trains passing, there was no divergence between private and social costs.

SP/DSE/1/18

In which of the following situations will there be NO divergence between private and social costs / benefits?

- A. A chemical factory upstream pollutes a river without considering the damage inflicted upon fish farmers downstream.
- B. A diner smokes in a restaurant without considering the effects on people nearby.
- C. A farmer raises some sheep which damage the crops of nearby farmland owned by the farmer.
- D. A pianist plays the piano at home and receives no payment from his neighbour who enjoys the music.

2013/DSE/1/18

Suppose the market equilibrium output level is greater than the efficient output level. It implies that

- A. total social surplus will increase if output is reduced towards the efficient output level.
- B. at the equilibrium output level, marginal benefit is greater than marginal cost.
- C. the sum of consumer surplus and producer surplus is maximized as the market output level satisfies the equilibrium condition.
- D. government intervention is necessary to reduce output as there is over-production.

2013/DSE/1/20

A beekeeper keeps the bees for their honey. The bee-keeping benefits the farmers in the orchard nearby because the bees help pollinate the fruits in the orchard. Which of the following statements about this case is correct?

- A. There will be a divergence between private and social benefits and the honey is over-produced.
- B. The beekeeper should be subsidized by the government to improve economic efficiency.
- C. If the value of honey is higher than the value of fruits, there is no need for the government to intervene to correct the externality.
- D. There will be no divergence between private and social benefits if the orchard nearby is owned by the beekeeper.

2014/DSE/1/18

Korean pop singers are becoming more popular in Hong Kong. To these singers, which of the following are their private benefits?

- (1) the rise in royalties from the sales of their albums
- (2) the rise in sales revenue of Korean-designed fashion
- (3) the rise in the number of tourists visiting Korea
- (4) the rise in revenue shared from their concerts held in Hong Kong

- A. (1) and (3) only
- B. (1) and (4) only
- C. (2) and (3) only
- D. (2) and (4) only

2014/DSE/1/19

Which of the following are ways to lessen the problem of divergence between private and social costs in Hong Kong?

- (1) to collect a sewage charge
- (2) to collect a university tuition fee
- (3) to collect a charge on electricity
- (4) to collect a levy on plastic bags

- A. (1) and (3) only
- B. (1) and (4) only
- C. (2) and (3) only
- D. (2) and (4) only

2015/DSE/1/17

Which of the following is an example of the divergence between private and social benefits?

- A. A security guard watches live concerts when he is working in a concert hall.
- B. A tourist enjoys the music performed by a singer on the street and he does not pay for that.
- C. A resident living next to a karaoke lounge cannot fall asleep because of the noise.
- D. After the removal of the airport, the market value of the residential flats in that region increases.

2018/DSE/1/23

Recently, unmanned aircraft systems have become very popular but using those aircrafts in urban areas has caused noise and safety concerns. The Civil Aviation Department is considering regulating the manufacture, import and sale of unmanned aircraft systems.



It is an example of divergence between private and social \_\_\_\_\_ and the \_\_\_\_\_ solution is being considered to reduce the divergence.

- A. costs ..... market
- B. costs ..... government
- C. benefits ..... market
- D. benefits ..... government

2020/DSE/1/21

The White Moose Café  
May 5 at 1:31 AM · 📍

**\*\*SCREAMING CHILD TAX\*\***

For the benefit of both staff and customers alike, we have taken the decision to impose a tax on children who scream. If we notice that your child is screaming, an automatic 15% surcharge will be applied to your bill. For every further screaming child you have in your group, an additional 10% will be added.

We trust you understand our position.

1.4K Comments 533 Shares

With reference to the above information, which of the following statements is correct?

- A. Children screaming in the café results in negative externality and all cafés should introduce similar policy to restore efficiency.
- B. The extra charge on screaming children increases the marginal private cost of the groups with screaming children.
- C. The 'screaming child tax' is a government solution to the divergence between private and social costs.
- D. The 'screaming child tax' is a kind of discrimination and should not be imposed.

Short & Structured Questions

1985/AL/1/7

'Education benefits society, therefore if the government subsidizes education, the society will benefit more.'

- (a) Critically evaluate this statement. (It is essential to remember that the production of goods also benefits society.)
- (b) It is sometimes argued that if more people are educated, then in daily social contacts the uneducated may learn from the educated free of charge. For the sake of argument, defend government subsidization under this condition.

1986/AL/1/10

The following data show that a factory, in the process of production, pollutes and inflicts damage on the neighbouring properties.

Level of Output	Total Revenue \$	Total Private Cost \$	Total Damage to Property Owners \$
100	180	130	34
200	360	270	66
300	540	420	96
400	720	580	124
500	900	750	150
600	1 080	930	174
700	1 260	1 130	196
800	1 440	1 440	216

- (a) If the factory owner seeks to maximize his own gain and ignores the damage inflicted on his neighbours, what will be the level of output? Explain.
- (b) Assume all transaction costs are zero. If the factory owner has the right to inflict damage on his neighbours, what will be the level of output? Explain.
- (c) Again assume all transaction costs are zero. If the property owners in the neighbourhood have the right to restrain the factory from polluting, what will be the level of output? Explain.

1988/AL/1/7(a)

The Hong Kong Cross-Habour Tunnel is often congested and takes time to cross. Time is valuable. In principle, it is possible to raise the toll to reduce or even eliminate the traffic congestion.

If congestion occurs, explain why a tunnel user will generate a divergence between private and social costs, and why an increase in toll charges will reduce or eliminate this divergence.

2005/AL/1/7(a)

The Chinese government subsidizes the training of promising athletes. Some of the athletes have become sports stars, such as winners of Olympic gold medals.

On what economic ground could this subsidization in training athletes be justified?

2007/AL/1/7(a)

The Hong Kong government has imposed a strict and severe no-smoking law, prohibiting smoking in most public areas. Milton Friedman said that each and every individual should have the freedom to harm himself, including committing suicide; however, in doing so he may inflict damage on others and create a social cost problem. One who smokes cigarettes enjoys smoking, but may inflict damage on the health of others nearby.

How would you assess the social gains and costs of our new no-smoking law? Can anyone be certain that the social gains are greater than the social costs?

2008/AL/1/7(b)

Large shopping centers everywhere tend to charge much lower rents for anchor stores, or stores considered as big draws attracting visitors or shoppers to the centers, than ordinary retailers.

Fixed rents per square foot charged to anchor stores are often only small fractions of the fixed rents charged to smaller shops not noted for their drawing powers.

The anchor stores are drawing shoppers, which benefits the non-anchor stores. In what sense is there a divergence between private and social costs? In what sense does this divergence not exist?

2015/DSE/1/12(d)

Research shows that the "Individual Visit Scheme" of mainland tourists has brought economic benefits to Hong Kong. However, more and more Hong Kong residents have called on the government to reduce the number of mainland tourists to Hong Kong under the Scheme.

Some residents complained that the large number of tourists overloaded the public transportation system, resulting in a large increase in travel time for all passengers. Explain, in terms of externality, why inefficiency may exist when the transportation system is overcrowded. (4 marks)

2016/DSE/1/4

These years many customers like to take photos of the food they have in restaurants and share them on social media. However, some high-end restaurants do not allow their customers to take photos. Explain how the "photo-taking-and-sharing" behaviour of the customers may involve externality. (3 marks)

2017/DSE/1/4

Pokemon Go is a popular game for which gamers need to move around different places with their smartphones to catch the cyber-pets. Its developer has placed hotspots in different areas where many gamers are attracted to gather. Some restaurants in remote areas found their business sharply increased as they are located near these hotspots.

- (a) Based on the above information, explain, in terms of externality, how the placing of the hotspots may result in inefficiency. (3 marks)
- (b) How may such a problem of inefficiency be relieved by market? (2 marks)

2019/DSE/1/4

Getting vaccinated is an effective way to prevent infection and protect oneself from flu viruses. Using the concept of externality, explain why the government provision of subsidy on Seasonal Influenza Vaccination (接種季节性流感疫苗) may improve economic efficiency. (4 marks)

MARKING SCHEME

1985/AL/1/02 B	1992/AL/1/23 D	1998/AL/1/13 A	2006/AL/1/30 A (44%)	2013/DSE/1/20 D (69%)
1985/AL/1/23 D	1992/AL/1/24 C	1998/AL/1/19 A	2007/AL/1/30 B (63%)	2014/DSE/1/18 B (93%)
1986/AL/1/06 B	1993/AL/1/08 D	1999/AL/1/19 C	2008/AL/1/28 A (38%)	2014/DSE/1/19 B (81%)
1986/AL/1/25 D	1994/AL/1/08 B	1999/AL/1/27 B	2008/AL/1/30 C (45%)	2015/DSE/1/17 B (45%)
1988/AL/1/17 D	1994/AL/1/15 B	2000/AL/1/19 D	2009/AL/1/28 B (47%)	2018/DSE/1/23 B (73%)
1990/AL/1/25 A	1995/AL/1/23 D	2000/AL/1/20 B	2010/AL/1/28 D (73%)	2020/DSE/1/21 B
1990/AL/1/30 B	1996/AL/1/21 B	2003/AL/1/27 A	2012/AL/1/28 C (23%)	
1991/AL/1/01 C	1997/AL/1/27 C	2005/AL/1/29 C (37%)	SP/DSE/1/18 C	
1992/AL/1/22 D	1997/AL/1/28 B	2006/AL/1/29 A (71%)	2013/DSE/1/18 A (52%)	

Note: Figures in brackets indicate the percentages of candidates choosing the correct answers.

1985/AL/1/7

- (a) More of all goods, including housing, cars and education, is beneficial, but we cannot have more of all goods. If the government subsidizes education, more of it will be produced and consumed. Whether society benefits depends upon the value of the extra education (because of the subsidy) compared to the value of the other goods which the society would have to sacrifice in order to have the extra education (i.e. marginal benefit versus marginal cost). In general, because of the subsidy, the marginal cost of education to society would exceed its marginal benefit.
- (b) Candidates are expected to know that this part of the question concerns the divergence between private and social benefits. If the educated cannot charge a fee for the benefit they generate to the uneducated, then from the society's point of view they will tend to under-invest in education, in the sense that the marginal cost of more education to them will fall short of the marginal social benefit. Subsidizing education by the government will therefore lead to marginal gain to society.

1986/AL/1/10

Level of Output	Marginal Revenue (MR)	Marginal Private Cost (MPC)	Marginal Damage	Marginal Social Cost (MSC)
100	180	130	34	164
200	180	140	32	172
300	180	150	30	180
400	180	160	28	188
500	180	170	26	196
600	180	180	24	204
700	180	200	22	222
800	180	310	20	330

- (a) 600 units, where  $MR (\$180) = MPC (\$180)$  and the private gain is maximized ( $\$150$ ).
- (b) 300 units, where social surplus is maximized ( $\$24$ ). If the factory owner wants to increase output to, say, 400 units, the marginal profit from this increment is  $\$20$ , but the marginal damage to the neighbours is  $\$28$ . The neighbours therefore will pay the factory owner  $\$20$  to cut output back to 300 units.
- (c) Again 300 units, where the social surplus is maximum ( $\$24$ ). If the neighbours seek to reduce the factory's output to, say, 200 units, the marginal reduction in damage is  $\$30$ . Since the marginal profit (from the 3<sup>rd</sup> 100 units) is  $\$30$ , the factory owner will be able to pay and compensate neighbours to take the marginal damage.

1988/AL/1/7(a)

If congestion occurs, each user will slow down the speed of others, thereby imposing time cost upon one another without compensating them for this cost. The social time cost generated by one driver is the time cost of himself as well as the time cost he imposes upon all other drivers, whereas the private cost is the time cost to this one driver only.

A toll will reduce the traffic congestion, thereby reducing the likelihood of one user imposing time cost upon others.

2005/AL/1/7(a)

The presence of external effects, such as national pride or glory, may yield values to citizens at large, as most if not all Chinese in some measure enjoy a greater number of gold medals won in the Olympic Games. It would be highly difficult to collect payments for this type of external beneficial effects from all those enjoying the results of the training. (Transaction costs may be mentioned here.) Does national pride worth something to the citizens? Of course. But since payments are not enforced there is no way we can assess actually how much the citizens would be willing to pay.

2007/AL/1/7(a)

Social gains: Non-smokers' exposure to secondhand smoke is harmful to their health, and they are not compensated by the smokers who are responsible for such a negative externality. A ban on smoking can eliminate the existence of this negative externality.

Social costs: Smoking generates marginal benefit (MB) to smokers which exceeds its marginal social cost (MSC) at some levels. To maximize total social surplus (smokers' consumer surplus and tobacco companies' producer surplus), the 'efficient level of smoking' should be that smokers are allowed to smoke until their  $M(S)B$  equals  $MSC$ . A ban on smoking will lead to under-production and a deadweight loss.

Society will gain from a ban on smoking only if such social gains are larger than the social costs.

It is virtually impossible to show whether the social gains are greater or smaller than the social costs in this case, because there is no guideline to properly estimate these gains and costs. When people are not asked or not required to pay, as they do in the market, any such estimate is not reliable.

2008/AL/1/7(b)

There is a divergence between private and social costs in the sense that the anchor stores generate spillover benefits to the smaller shops.

There is no divergence between these spillovers are all captured by the owners of the shopping centers, and because the anchor stores are capturing their own beneficial spillovers by paying lower rents. On the other hand, the smaller shops, which pay higher rents, are actually buying the spillovers beneficial to them.

2015/DSE/1/12(d)

Negative externality / divergence between private and social costs. (1)  
When the public transportation system is overcrowded (i.e., at full capacity), any additional passenger using the system would increase the time cost for other passengers without having to compensate them for this extra cost (implying a divergence between private and social costs). As marginal social cost is now higher than marginal social benefit, the number of passengers using the system would exceed its efficient level. (3)

2016/DSE/1/4

Taking photos may disturb other people in the restaurants/sharing the photos in the social media may disclose the design of dishes. Both possibilities may have an undesirable effect on the revenue/profit of the restaurants, but such effects are not compensated (financially or otherwise) by the photo-takers. Such photo-taking-and sharing behaviour may thus involve negative externality (external cost is involved). (3)

OR

Taking photos and sharing them in social media may have a promotion effect, attracting more customers-bringing higher revenue/profit-to the restaurant, but the photo takers do not receive compensation for such benefits. Such photo-taking-and sharing behaviour may thus involve positive externality (external benefit is involved). (3)

2017/DSE/1/4

(a) Positive externality. Restaurants in remote areas enjoy benefits from increased business due to the game developer's choice of hotspots locations without paying the developer. So external benefit exists and marginal social benefit is greater than marginal social cost. The number of existing hotspots near the restaurants is lower than that required by the efficiency level. (3)

(b) The restaurants may pay the game developer to increase the hotspots nearby. (2)

OR

The game developer may charge the restaurants for placing more hotspots near them. (2)

2019/DSE/1/4

Getting vaccinated protects oneself as well as lowering the chance of others being infected by flu. Since the person receiving vaccination is not compensated by others (whose chances of being infected are reduced), there exists external benefit, with marginal social benefit exceeding marginal social cost. This implies that the number of people getting vaccinated is below the efficient level. Subsidy can increase the quantity of vaccination towards the efficient level and thus narrow the gap between marginal social benefit and marginal social cost. (4)

## 9.2 EQUITY

(Note: The concept of equity was not included in the AL syllabus. The only relevant topic is about wage determination in the factor market.)

### Multiple Choice Questions

1985/AL/1/28

Which of the following groups would most likely be harmed by a minimum wage law?

- A. teenagers with low productivities.
- B. salesmen who are paid by commission.
- C. waiters who are paid mainly by tips.
- D. technicians skilled in specialized techniques.

1991/AL/1/12

Workers in Hong Kong earn higher wages than those in the Philippines because

- A. there is a smaller labour supply in Hong Kong.
- B. the labour unions in Hong Kong are stronger.
- C. the workers in Hong Kong are more productive than those in the Philippines.
- D. the living standard in Hong Kong is higher.

1991/AL/1/24

God may have started out to create all men equal, but our parents intervened. Natural differences in abilities, attributes and tastes go far to explain wage differences. Economics tells us that

- A. the government should therefore set things right, and a socialist state is therefore preferable.
- B. the best condition is from whom according to ability and to whom according to needs.
- C. with equal education, people will have equal ability.
- D. with private property rights, the more productive your labour and the greater the demand for your services relative to its supply, the higher your wage rate.

1993/AL/1/26

The more human capital an individual worker brings to the labour market,

- A. the higher will be his marginal product.
- B. the easier it will be for him to find work.
- C. the more difficult it will be for him to find work.
- D. the more hours of labour he will be willing to supply.

1993/AL/1/30

An employer observes that when one employee is sick (and does not come to work), the value of output falls by \$500 per day. If two workers are sick, the value of output falls by \$1 200 and when three workers are sick the value of output falls by \$2 100. Suppose the wage rate is \$750 per man-day, the employer should

- A. keep the same number of workers.
- B. fire one worker.
- C. fire two workers.
- D. fire three workers.

1996/AL/I/03

In a competitive labour market, two industries require the same type of labour. Suppose the marginal productivity of labour in Industry A is higher than that in Industry B. In the absence of transaction costs, which of the following statements is correct?

- A. If labourers are switched from Industry B to Industry A, then the value of the total output of the industries will increase.
- B. Employers in Industry A will lay off some workers who will then be employed in Industry B.
- C. The labour demand curve for industry A will shift upward and that for industry B will shift downward.
- D. The labour demand curve for Industry A will shift downward and that for Industry B will shift upward.

1998/AL/I/04

In a competitive market, the observed wage rates of men are generally higher than those of women. This implies

- A. more men will be employed.
- B. more women will be employed.
- C. the marginal productivity of men is generally higher than that of women.
- D. None of the above.

1999/AL/I/26

In a competitive labour market, the wage rate received by a worker depends on

- A. his marginal productivity.
- B. the alternative offers he receives.
- C. the market demand for the product he produces.
- D. All of the above.

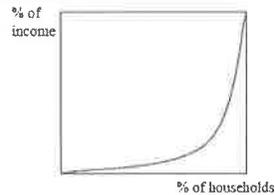
2007/AL/I/17

A researcher reported that people with good looks receive an income about 5% higher than average workers, other abilities adjusted. This implies

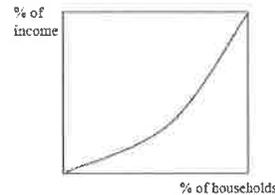
- A. discrimination.
- B. good looks are a capital asset.
- C. it pays to dress nicely.
- D. All of the above.

SP/DSE/I/19

Study the following Lorenz curves of two economies.



Lorenz curve of Country A



Lorenz curve of Country B

From the above diagrams, we can conclude that

- A. the income distribution of Country A is more even than that of Country B.
- B. the income distribution of Country B is more even than that of Country A.
- C. the high-income group in Country A earns a higher income than that in Country B.
- D. the high-income group in Country B earns a higher income than that in Country A.

PP/DSE/I/18

The following table shows the Gini coefficient of Economy A from Year 1 to Year 4.

Year	Gini coefficient
1	0.534
2	0.563
3	0.609
4	0.614

Based on the above information, which of the following statements is/are correct?

- (1) The income of high-income households increases while the income of low-income households decreases.
- (2) The income distribution becomes more uneven.
- (3) The general living standard declines.

- A. (1) only
- B. (2) only
- C. (3) only
- D. (1), (2) and (3)

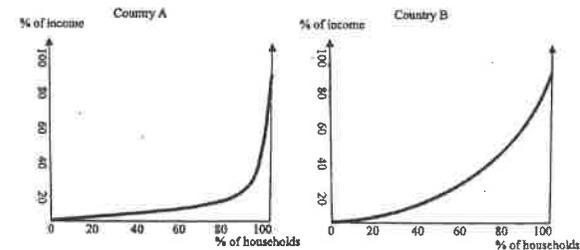
PP/DSE/I/19

Which of the following is the most likely effect of an effective minimum wage law?

- A. Income distribution will become more even.
- B. Total wage earnings of workers will rise.
- C. The employed population will increase.
- D. Non-price competition will emerge.

2012/DSE/I/20

The following diagrams show the Lorenz curves of Country A and Country B:



According to the above two diagrams,

- A. Country B has a higher national income than Country A.
- B. the low income group of Country B has a higher income than that of Country A.
- C. Country A has a more even distribution of income than Country B.
- D. Country A has a larger Gini coefficient than Country B.

2012/DSE/1/21

Which of the following are possible causes of income inequality among individuals?

- (1) difference in race
  - (2) difference in capital ownership
  - (3) difference in health
- A. (1) and (2) only  
 B. (1) and (3) only  
 C. (2) and (3) only  
 D. (1), (2) and (3)

2014/DSE/1/20

Which of the following policies can reduce the Gini coefficient based on post-tax post-social transfer monthly household income in Hong Kong?

- A. to raise the standard tax rate on salaries tax
- B. to reduce the marginal tax rate on salaries tax
- C. to reduce the amount of Comprehensive Social Security Assistance Schemes (綜合社會保障援助計劃)
- D. to grant an equal sum of money to the Mandatory Provident Fund accounts of every employee

2015/DSE/1/21

Suppose the post-tax Gini coefficient of an economy is larger than its pre-tax Gini coefficient. This implies that

- A. The government has increased the amount of transfer to the poor.
- B. The tax system of the economy is likely to be regressive.
- C. The problem of income inequality is worse than that in the previous year.
- D. The government should reform the tax system.

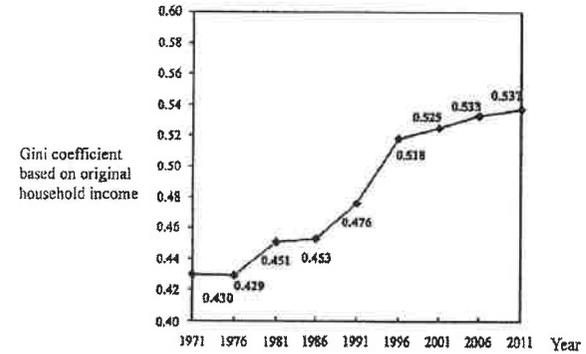
2017/DSE/1/20

Li Ka Shing Foundation gave HK\$5 000 to each 2017 HKDSE candidate living in those remote districts with lower average household income. Which of the following statements about this unconditional gift is correct?

- A. It reduces the income inequality as a larger portion of the receivers of the gift are from lower income group.
- B. It increases the income inequality as it is unfair to the candidates living in the non-remote districts.
- C. As the money is given to all candidates living in those remote districts, income distribution remains unchanged.
- D. It helps equalising opportunities as those candidates will study harder to improve their exam results.

2017/DSE/1/21

The following diagram shows the Gini coefficient of Hong Kong based on original household income.



Based on the above diagram, we can conclude that

- A. the income level of Hong Kong people increased.
- B. income for high income household increased while income for low income household decreased.
- C. the welfare policy failed to reduce the income inequality.
- D. income gap had been widening.

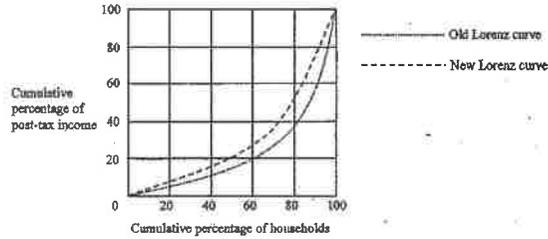
2017/DSE/1/22

The Work Incentive Transport Subsidy Scheme helps low-income earners reduce their cost of traveling to and from work and encourages them to get a job. Workers meeting certain criteria, such as monthly income and asset limits, are eligible to get the subsidy. Which of the following would likely occur after the implementation of this scheme?

- (1) Labour supply would increase . . .
- (2) Labour productivity would increase.
- (3) Geographical mobility of labour would increase.
- (4) Income inequality would decrease.

- A. (1) and (2) only
- B. (3) and (4) only
- C. (1), (3) and (4) only
- D. (2), (3) and (4) only

2019/DSE/1/19



Which of the following policies would result in the above change in the Lorenz curve in Hong Kong?

- A. lowering the profits tax rates
- B. reducing the salaries tax allowance
- C. increasing the progressivity of the salaries tax
- D. raising the air passenger departure tax

2020/DSE/1/13

In recent years, the rise in demand for private cars in China has attracted Volkswagen, a German car manufacturer, to set up car manufacturing factories in China.

The above case illustrates the \_\_\_\_\_ function of price because \_\_\_\_\_.

- A. rationing ..... private cars are sold to the highest-valued users in China
- B. rationing ..... fewer buyers are willing to buy private cars in Germany
- C. allocative ..... the supply of private cars falls in Germany
- D. allocative ..... more resources are allocated to the production of private cars in China

2020/DSE/1/19

Study the following news extract.

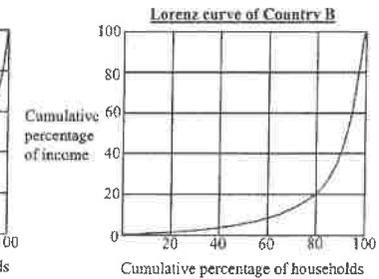
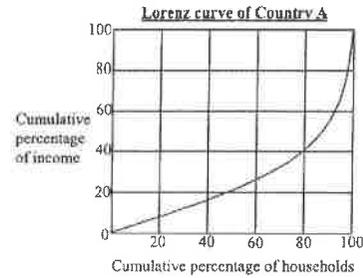
In the last decade, the rent of residential units in Berlin was doubled due to continuous increase in demand. To deal with the problem, the Berlin government imposed a 'Rent Frozen Bill' under which the rent of residential units was not allowed to increase for at least 5 years.

Suppose a similar bill is implemented in Hong Kong. Which of the following statements is correct?

- A. The Gini coefficient will increase.
- B. The property tax revenue of the government will increase.
- C. There will be a deadweight loss if the demand for residential units keeps on increasing.
- D. The property owners will have higher incentives to renovate their flats.

2020/DSE/1/22

Study the following two Lorenz curves.



Compared with Country B,

- A. the Gini coefficient of Country A is larger.
- B. Country A has a higher standard of living.
- C. the top 20% of households in Country A have less total income.
- D. Country A has a more even income distribution.

2020/DSE/1/23

The following table shows the data of average annual income earned by women and men according to their age in 2018.

Age	Average annual income of women (HK\$)	Average annual income of men (HK\$)
20 - 29	122 000	121 000
50 - 59	482 000	645 000

Which of the following may explain the phenomena shown by the above data?

- (1) Women tend to leave the job market earlier than men for taking care of the family, leading to fewer women to take up senior positions in companies.
- (2) Sex discrimination in labour market exists in the older generations.
- (3) Accumulation of human capital contributes to the difference in income between different age groups.

- A. (1) only
- B. (2) only
- C. (3) only
- D. (1), (2) and (3)

Refer to the following policy proposals in Hong Kong.

Proposal (1):	providing a cash subsidy for those who have been on the waiting list for public housing over five years
Proposal (2):	raising the eligible age for the Elderly Comprehensive Social Security Assistance Scheme from 60 to 65
Proposal (3):	raising the standard tax rate of the salaries tax

Which of the above proposals will reduce the Gini coefficient based on post-tax post-social transfer monthly household income in Hong Kong?

- A. (1) and (2) only  
 B. (1) and (3) only  
 C. (2) and (3) only  
 D. (1), (2) and (3)

2021/DSE/I/22

The following table shows the information about two top-tier football leagues.

Football league	Average annual income of the players	
	Defensive players	Attacking players
England	£2 751 537	£3 839 875
Italy	£1 536 945	£2 625 975

Which of the following is/are possible reason(s) for the income differences among players?

- (1) The television broadcast revenue generated by the top-tier football league in England is higher than that in Italy.  
 (2) The price level in England is higher than that in Italy.  
 (3) The commercial values of attacking players are higher than those of defensive players since attacking players are more popular.
- A. (1) only  
 B. (2) only  
 C. (3) only  
 D. (1), (2) and (3)

Short & Structured Questions

PP/DSE/II/11(d)

Under the School Textbook Assistance Scheme (STAS), needy students are granted subsidies to cover the costs of textbooks and miscellaneous school-related expenses. Explain how STAS can enhance equity in Hong Kong society. (4 marks)

2012/DSE/II/4

According to a report of the United Nation in 2008, the Gini coefficients of Hong Kong and Beijing were 0.53 and 0.22 respectively.

- (a) Was the income gap between the rich and the poor in Hong Kong wider or narrower than that in Beijing? (1 mark)  
 (b) Explain how an increase in the standard tax rate of salaries tax will affect the post-tax Gini coefficient of Hong Kong. (3 marks)

2012/DSE/II/10(b)

In 2011, the Financial Secretary announced the "Scheme \$6 000" which provides \$6 000 to each Hong Kong permanent resident who is 18 years old or above.

Do you think that the government should introduce the "Scheme \$6 000" to improve equity in the Hong Kong society? Explain. (4 marks)

2013/DSE/II/7

Table 1 shows the Gini coefficients by occupation of Hong Kong in the years 2006 and 2011.

Table 1

	Gini Coefficient	
	2006	2011
Construction	0.362	0.385
Financing, insurance, real estate and business services	0.544	0.548

- (a) According to Table 1, which occupation has a smaller income inequality among its workers? Give TWO possible reasons that account for such a difference in income inequality. (4 marks)

Table 2 shows the employment distribution by industry section of Hong Kong in the years 2006 and 2011.

Table 2

	Employment distribution by industry section	
	2006	2011
Construction	8.0%	7.7%
Financing, insurance, real estate and business services	17.0%	19.2%

Table 3 shows the Gini coefficients of Hong Kong in the years 2006 and 2011.

Table 3

	2006	2011
Gini Coefficient	0.533	0.537

- (b) How may the data given in Tables 1 and 2 help explain the change in the income inequality of Hong Kong as reflected in Table 3? (4 marks)

2013/DSE/II/11

The government has launched the "Work Incentive Transport Subsidy Scheme", with the following objectives:

- (1) To relieve the burden of travelling expenses commuting to and from work on the part of low-income households with employed members
- (2) To promote sustained employment

Applicants must meet the monthly income and asset limits of the household (e.g. for a single person, the monthly income cannot exceed \$7 300 and the assets cannot exceed \$72 000) and work no less than 72 hours per month in order to apply for a subsidy of \$600 per month.

- (a) Do you think that the scheme can achieve the above two objectives? Explain. (4 marks)
- (b) (i) Discuss the effects of the scheme on income inequality. (3 marks)

2015/DSE/II/8

The government is considering spending a certain sum of its budget surplus on the following two proposals:

- Proposal 1: To extend the free education to 15 years*  
*Proposal 2: To provide unemployment benefits*

Evaluate the two proposals in terms of equality. (4 marks)

2016/DSE/II/11

Medical service is one of the basic human needs.

Source B: an extract from the Hospital Authority webpage

*The Hospital Authority is committed to providing community-based primary care services. Our target patients include the elderly, low-income individuals, and patients with chronic diseases.*

- (c) With reference to Source B, explain how the services provided by the Hospital Authority can enhance equity. (2 marks)
- (d) Many people argue that public clinics should raise the fee to reduce the waiting time. Evaluate this argument in terms of equity. (2 marks)

2017/DSE/II/11(c)

The government of Country X introduces a per-unit subsidy to the education services of private universities.

Explain whether subsidizing education can help improve equality. (3 marks)

2019/DSE/II/2

**Li Ka Shing Foundation offered an unconditional cash gift of \$5000 to each 2018 HKDSE candidate living in Yuen Long, Tuen Mun and Islands districts under the project 'Decide Well, Spend Wisely'.**

**Statement A: The project can improve the public examination results of candidates in those districts.**

**Statement B: The project can improve equity in Hong Kong.**

- (a) Explain whether Statement A is a positive statement. (2 marks)
- (b) Justify Statement B. (4 marks)

2021/DSE/II/10

Masks have become a daily necessity as it is compulsory for people to wear masks in many public areas.

- (a) 'Compulsory mask wearing creates a larger burden to the low-income group than the high-income group.' Justify the statement. (2 marks)
- (b) The Government distributed 'CuMask' to citizens in Hong Kong for free.

MARKING SCHEME

1985/AL/1/28 A	1993/AL/1/30 C	2007/AL/1/17 D	2012/DSE/1/20 D (82%)	2017/DSE/1/20 A (68%)
1991/AL/1/12 C	1996/AL/1/03 A	SP/DSE/1/19 B	2012/DSE/1/21 D (64%)	2017/DSE/1/21 D (91%)
1991/AL/1/24 D	1998/AL/1/04 C	PP/DSE/1/18 B	2014/DSE/1/20 A (73%)	2017/DSE/1/22 C (73%)
1993/AL/1/26 A	1999/AL/1/26 D	PP/DSE/1/19 D	2015/DSE/1/21 B (63%)	2019/DSE/1/19 C
2020/DSE/1/13 D	2020/DSE/1/19 C	2020/DSE/1/22 D	2020/DSE/1/23 D	2021/DSE/1/21 A
	2021/DSE/1/22 B			

PP/DSE/II/11(d)  
The STAS increases the income of the needy students' families while the rich families cannot enjoy this benefit. (2)  
The STAS will help equalize opportunities as it helps the needy students further their studies. Education can increase future income of the needy students so it may help narrow the income gap over time. (2)

2012/DSE/1/4  
(a) Wider (1)  
(b) Lower, because (1)  
higher income group has a lower post-tax income while the income of lower income group remains unchanged. (2)

2012/DSE/II/10(b)  
Equity is a subjective concept that involves value judgments. / Different people use different standards of equity. (1)  
Yes, because the \$6 000 results in a higher percentage increase in income of the poor. (2)  
**OR**  
No, as it does not help equalize opportunities. Relative to the rich, the poor do not get more resources to improve their productivity / increase future income. (2)  
**OR**  
No, as it is not equalizing outcome as not everyone can benefit from the scheme, e.g. non-permanent residents and residents who are below 18 years old are not eligible for the \$6 000. (2)

2013/DSE/II/7  
(a) **Construction.** (1)  
This is because the entry to a particular occupation is closely associated with a person's human capital, which tends to be more homogeneous among the construction workers than among finance professionals. (2)  
The construction industry often pays their workers by time rates, which are more or less uniform across workers. In addition to basic salaries, compensations to the employees of financing, insurance, real estate and business services often include performance-based commissions, bonuses and profit-sharing, which may result in a greater diversity of income within this industry. (2)  
(Max: 3)

- (b) The Gini coefficient, which reflects the degree of income inequality, has increased in the HK economy as a whole. (1)  
As shown in Table 1, income inequality in both industries has increased. Other things being equal, this would contribute to the increase in the income inequality in the entire economy. (2)  
As shown in Table 2, there is an increase in the proportion of working population in the industry with a larger disparity of income (i.e. financing, insurance, real estate and business services) and a decrease in the industry with a smaller disparity of income (i.e. construction). Other things being equal, this changing pattern of employment distribution across the two industries would contribute to the increase in the income inequality in the entire economy. (2)  
(Max: 3)
- 2013/DSE/II/11  
(a) Objective (1): Yes, as it provides cash subsidies relieving the burden on travelling expenses. (2)  
Objective (2): Yes, if the WITSS continues to subsidize the workers on travelling expenses. (2)  
**OR**  
Objective (2): No, as employment (as well as unemployment) largely depends on the aggregate demand and supply of the economy (which may fluctuate over time) rather than the WITSS. (2)
- (b) (ii) It helps to reduce the income inequality. It helps equalize outcome as it provides extra money for the lower-income group only / it increases their opportunity of finding a job with higher income because they can travel farther away from their residential area. (3)
- 2015/DSE/II/8  
Proposal 1:  
Equalizing opportunities:  
Free education for longer years means that the poor are able to receive more education and improve their productivity and hence income-earning power in the future. (2)  
Proposal 2:  
Equalizing income/outcome:  
More welfare payments to the unemployed could help reduce the income inequality between the employed (rich) and the unemployed (poor). (2)
- 2016/DSE/II/11  
(c) Equalize income/outcome: basic medical service acts like a transfer or subsidy-in-kind, enjoyed mainly by the low-income group; The high-income group may choose not to "queue up" for such medical benefits and turn to private medical service instead. (2)  
**OR**  
Equalize opportunities: basic medical service provided to patients with chronic diseases would improve their health, allowing them to continue to work and earn income. Therefore, their income would not be affected by their ability to afford medical service (their background), but rather by their work effort. (2)
- (d) Equity:  
After the fee raise, the poor may no longer be able to afford the fee and thus be deprived of the opportunity to enjoy the medical services. Equity may be worsened as the poor cannot enjoy the transfer/subsidy while the rich can still use the service. (2)  
**OR**  
After the fee raise, the poor may no longer be able to afford the fee and thus be deprived of the opportunity to enjoy the medical services. The poor may then be deprived of the chance to work and earn income due to their poor health. (2)
- 2017/DSE/II/11(c)  
Yes. Subsidizing education is a measure to equalize opportunities, so the poor will not be deprived of university education due to financial constraint. Education could also raise their future income, thus reducing income inequality over generations (3)

2019/DSE/III/2

(a) Statement A is a positive statement because it is refutable by fact.

(2)

(b) Equalising income: the districts are with lower average household income so this cash will help narrow the income gap.

Equalising opportunity: the subsidy on education will enhance the chance of the poor to get higher education without being hindered by their backgrounds.

} @2  
max: 4

2021/DSE/II/10

(a) Assume the price of masks is same for low-income and high-income group, the proportion of income spent on masks of low-income group is higher than that of high-income group, so the percentage decrease in disposable income of low-income group is higher.

(b)

(i) No, more of it is preferred to less of it.

(ii) No, it is excludable and rival in consumption.