Answers to 2014 H1 Economics Prelim Exam

Section A

Case Study Question 1:

ai)	Describe the trend of the world's cement production from the year 1994 to 2012. Increased (1) at an increasing rate (1).	2m
aii)	Using demand and supply analysis, account for the trend in the world's cement production. Rise in demand (2) Cement demand by China has increased exponentially by 437.5% in 20 years, while use in the rest of the world increased by 59.8%. Cement is a raw material used for the construction of new infrastructure (roads, bridges, dams and houses). Fall in supply (2) Sand is used in the production of cement and the increase in price of sand (Extract 1) would cause an increase in Marginal Cost and result in a decrease in supply. As cement demand has risen exponentially in China and China uses 58% of the world demand, rise in demand is likely to be greater than the fall in supply. With demand rising by more than supply, the equilibrium quantity would have increased. (1) From Fig 1 can justify that since production has gone up, quantity sold has increased hence the rise in demand is greater than the fall in supply.	5m
bi)	What is meant by price elasticity of demand? Price elasticity of demand measures the responsiveness of quantity demanded for the good to a change in its prices (1), ceteris paribus (1) formula also get (1)	2m
bii)	Explain how the rise in price of sand would affect Singapore's import expenditure on sand. Total Expenditure (TE) is price of sand x quantity demanded of sand (1). Demand for sand is inelastic as evident by Extract 2 "Singapore is not ready for high tech transformation in construction (1). When the price of sand increased, quantity demanded of sand would fall by a less than proportionate amount, the effect on TE would increase since the rise in TE from the rise in price would offset the fall in TE from the fall in quantity demanded(1).	3m
c)	Account how the production of sand has resulted in market failure. Market failure is said to occur when the free market does not allocate resources efficiently or does not allocate resources that best satisfies society's wants.	6m

From society's point of view, there is an over production of sand because of the presence of negative externalities. Negative externalities occur when third parties who are not producing sand are affected adversely. From Extract 1 "major impact on the rivers, coastal and marine ecosystems" and Extract 2 "deplete fish stocks and cause erosion, risking landslides and flooding".

Analysis of Negative Externalities Diagram

Assumption: There are no external benefits (positive externalities), MPB = MSB = DD

With the presence of Negative Externalities: (Note the sequence)

1. Negative externalities cause a divergence between MPC and MSC (MSC > MPC).

2. If the output is determined by market forces, profit maximising private producers of sand will only consider their private benefits and costs. The supply curve consequently reflects only MPC. The market will produce where MPC = MPB demand matches supply and the market equilibrium is at output Q.

   Society will take into account all the costs and benefits, hence social equilibrium will be where MSC = MSB, at output Q*.Hence, market equilibrium output Q is greater than the social equilibrium output Q*.

3. Overproduction of output Q*Q occurs. This additional output Q*Q was produced/consumed as the wrong price signals were given on the supply side, with producers, who look to maximise their profits, only considering MPC (instead of MSC) and their MPB in their decision making.

4. Deadweight loss of Area D is incurred as total social costs (Areas D+E) is greater than total social benefits (Area E)

5. Due to this deadweight loss of area D, output Q is socially inefficient. The sand market has failed to allocate resources efficiently.

Level	Descriptors
L3: 5-6	Able to apply the concept of negative externality to sand and drawing out evidence from the extract to show presence of MEC.
L2: 3-4	Explanation of production of sand resulting in negative externality due to the divergence between MPC and MSC leading to over production. If no diagram cap at 4
L1: 1-2	Able to define negative externality and how it results in market failure due to over production

d)	Using Table 1, comment on whether structural unemployment is the main cause of unemployment in Indonesia. Structural unemployment is caused by structural changes and can be due to a change in the method of production, loss of comparative advantage or change in demand. (1) There seems to be some correlation between Real GDP growth and unemployment rates, when the growth is higher, the unemployment rates are lower (1) In 2009, when growth rates were only 4.9% the unemployment rate was the highest at 7.9% (1) However, even though there has been growth registered, unemployment rate remains high, hence the unemployment in Indonesia cannot be largely demand deficient unemployment but instead Structural unemployment. (1)	4m
e)	Discuss the statement that "trade liberalisation has made life harder" for Indonesians. Trade liberalisation is the removal of protectionism. Protectionism refers to the partial or complete protection of domestic industries from foreign competition in domestic markets. Whether the removal of protectionism has made life harder for Indonesians depends on the consequences of increased trade on the consumers or producers in Indonesia. The impact can be explored based on the points of efficiency, equity, growth, employment, inflation and BOP equilibrium. 1. Growth Trade leads to actual growth of a country. (A) Export expenditure (X) is a component of AD and with an open economy, X can increase and lead to an increase in AD resulting in an increase in real GDP is the economy is below full employment. As seen in table 2, there has been positive growth for the Indonesia economy and there would be an increase in income for both consumers and producers in Indonesia. This analysis assumes import expenditure (M) remains unchanged or X rose by more than M. 2.Development of infant industries: However, trade also exposes the economy is an inflow of imports, an increase in M can lead to a fall of AD resulting in a fall in real GDP. "Entrepreneurs struggle to compete against cheaper goods produced elsewhere". Moreover, there may be industries in a country that are in their infancy which have a potential comparative advantage. Protection from foreign competition will allow them to expand and become more efficient and hopefully be able to lower their costs of production to translate to lower prices and hence able to compete with "cheaper goods produced elsewhere". With the introduction of protectionist measures, a country can protect its export industries (producers) thereby ensuring a positive X and M would be lesser than X thereby resulting in a positive net effect on (X-M) and therefore an increase in AD resulting in an increase in real GDP. (C)	8 m

	3. Efficiency: Protectionism may cause such industries to become contented and remain internationally uncompetitive and inefficient. Hence comparative advantage may not materialise. Furthermore, once protection is given it is hard to remove. (E) On the other hand, increased trade (by removing protectionism) results in increased competition which encourages firms to minimise cost and innovate. However, with trade, sometimes there is the failure to achieve social efficiency. This is especially true in the area of the presence of negative externalities. As discussed the export of sand has resulted in market failure and therefore, protectionism can prevent or slow down the environmental damage. Or in extract 3 “further exploiting Indonesia's natural resources” 4. Employment In times of recession, protectionism is necessary to protect jobs in the domestic economy and lower the incidence of demand deficient unemployment. (A) Protectionism would lower M which causes AD to rise which in turn lead to a rise in domestic output and generation of jobs. (C) However, from table 2, it does not appear that Indonesia is suffering from a recession and in fact, unemployment rates have been decreasing.(E) Trading partners may also retaliate and result in a loss of export demand for both countries. However, Indonesians maybe suffering from structural unemployment or even if they are not, the workers in the lower skilled industries are not gaining from the increase in X, instead “low-skilled workers say their salaries have stagnated”, this could be because the increase in X has solely benefitted the high skilled industries and not the lower skilled industries. 5. Increase in consumption and production when countries trade based on comparative advantage (CA). A country has CA over another country in the production of a good if it can produce the same good at a lower opportunity cost due to its factor endowment and immobility of resources between countries (“rely on each other's strengths”). However with protectionism, each country would not be able to specialised and not achieve the expected gains from trade due to CA. 6. BOP equilibrium A country may choose to use protectionism to correct BOP disequilibrium. For example, if a country is suffering from BOP deficit, it might want to protect its export industry and strive towards a BOP surplus of the current account. However, if a country is already in current account surplus, by enforcing protectionism, it might increase the surplus and cause the BOP equilibrium to be wider. Synthesis: While there may be instances where protectionism is valid, however, most arguments for protectionism tend to be only beneficial in the short term. In the long term, other countries would retaliate and also the gains from trade would be diminished.	

Level (Marks)	Descriptors
L3: 6-8	2 sided discussion the arguments for and against protectionism with evidence from the extracts
L2: 4-5	Explaining how protectionism can result in either being detrimental OR beneficial to an economy. One sided argument.
L1: 1 - 3	Brief description on the effects of protectionism and what it does to trade.
E 1-2	Ability to make a judgement on when it is justified to protect and when it is not.

Case Study Question 2 :

ai)	Identify two items in the current account of the balance of payments of a country. Visible balance – trade in goods or Invisible balance – trade in services, net property income from abroad or unilateral transfers. 1m for each item.	2m
aii)	Describe the trend in the current account balance of Spain between 2010 and 2012. The current account balance of Spain is in deficit throughout the entire period of 2010 – 2012 (1) but the current account balance has been improving every year. (1) or current account deficit has been reduced. (1)	2m
aiii)	Explain one possible reason for the changes in Spain's current account balance from 2010 to 2012. Current account has been improving and it could be due to increase in the export revenue or a decrease in the import expenditure. Import expenditure could be falling due to higher unemployment or falling economic growth. (1) With less jobs and income, the purchasing power of the Spanish consumers will fall and as such they would have to cut down on their spending on goods and services which includes imports. This will lead to lesser imports demanded and a reduction in the total import expenditure of the nation. (1) OR Export expenditure could be rising due to the falling value of the Euro (Table 3) (1) With a lower Euro value, the amount of foreign currency that foreign consumers have to pay for the Spanish goods and services will fall. With Spanish goods and services now being relatively cheaper to foreigners, they will likely increase their consumption and increase the total export revenue of the country. (1)	2m
b)	Explain how table 2 reflects changes in Germany's average standard of living in 2012. Standard of living is usually measured from a material and non-material perspective. Read GDP measures the income/output that is produced by the country and reflects the material standard of living as higher income means that their purchasing power increases and they would be able to consumer more goods and services. (1) The unemployment rate would indicate the number of people who are not employed and earning no income. When people are employed, they will then earn an income that would allow them to purchase goods and services and improve material SOL (1)	2m

c)	Using the AD-AS model, assess how austerity measures which includes the reduction of government spending and raising taxes may have deepen the recession in the EU. Austerity measures include reduction in government spending and raising taxes. Public sector and wages are reduced as well as mentioned in Extract 4. (1) - Cut in wages reduces household's income thus purchasing power drops and leading to a fall in consumption. - Raising taxes reduces disposable income and post-tax profits for consumers and firms respectively leading to a fall in consumption and investment. The resultant fall in AD impedes economic growth. Cutting government spending via public sector organisation will reduce AD as well. (2) - Explain that Since C, I and G falls, AD falls and National income falls via multiplier. (2) - As National income falls, government ends up collecting less tax revenue and it means government spending is cut further. (1) All these leads up to further fall in AD thus national income.	6m
d)	Assess the impact of Eurozone crisis on Singapore's current account balance. Singapore's current account is likely to be affected adversely but there is a need to consider the extent of the impact. Thesis: Eurozone crisis will reduce Singapore's current account balance. - Eurozone may sink into recession (Extract 4) coupled with the introduction of austerity measures will further limit the government's ability to spend, reducing their demand for imports, including those from Singapore. - Huge mortgage debt (Extract 6) such as in Spain results in a negative wealth effect, leading consumers to cut back on spending, including imports from Singapore. - Poor economic outlook generated by the further austerity measures to cut jobs and wages (Extract 4). The loss of job security and expectations of pay cuts further reduces expenditure on imports. - Weaker euro (Table 3) will make Singapore exports more expensive in euro, leading to fall in demand for our exports. On the other hand, imports from Europe will be cheaper in Singapore currency thus boosting quantity demanded for them. Assuming Marshall-Lerner, this will lead to a fall in net exports. Furthermore, from Extract 5, this is a high possibility of hot money inflow into Singapore, causing a likely appreciation of Singapore dollars. As Sing dollar appreciates, our net exports will be further reduced. The fall in net exports will lead to a deterioration of Singapore's current account.	6m

Anti- thesis: The impact on Singapore's current account may not be so significant

- The impact on the current account will unlikely be significant as those Eurozone countries that are in recession and has to tighten their spending further only accounts a small percentage of Singapore's export market. (Extract 5)

- The nature of our exports to Europe mean they are less susceptible to a fall in consumer incomes. (Extract 5).

- Healthy growth in Asia helps support Singapore's export demand, thus Singapore can be less dependent on Eurozone.(Extract 5)

Conclusion: Given the limited impact on the current account, it is likely to remain healthy and potentially improve despite the crisis in Europe unless the contagion sets in.

Mark scheme

L3	Well developed and balanced explanation with reference to extracts.	5-6 m
L2	Able to provide well explained but one sided argument or balanced argument but under developed explanations with lack of evidence	3-4m
L1	Able to provide theoretical reasons or limited reasons on the impact on current account.	1-2m

e) Discuss whether Spain should adopt similar measures as Germany to address her macroeconomic problems. — 10 m

Spain's macroeconomic problems primarily include negative GDP growth, High unemployment rates and a current account deficit as seen in Table 1. Other issues in Spain: Rigid wage system, lack of incentive to train workers, losing competitiveness. (Extract 6)

<u>Thesis – Germany's measure can address Spain's problems. (Extract 3)</u>
<u>Measure 1</u>

1) One measure that Spain could learn from Germany would be to <u>cut the wages and working hours</u> of the workers during the economic downturn. As demand for goods and services would decline during a downturn, firms would likely reduce the number of workers hired when output falls, resulting in higher unemployment. By reducing the wages and the number of hours worked by each worker, the firm would be able to afford to continue hiring the same number of workers while producing a lower amount. This would ensure that current workers would still be employed despite the downturn.

<u>Anti – thesis – Evaluation of measure 1</u>

1) Cutting the wages and hours of workers in Spain is less likely to succeed due to the inflexible labour market that currently exists in the country. (Extract 6) Spanish workers might be more resistant to such cuts as seen observed from the wage rigidity in the country. If such measures are forced on to them, workers might even go on

strikes which would further adversely affect the economic conditions.

Measure 2

Another measure that Spain could adopt would be to improve the education and training of their workforce. This would ensure that the labour force would have the relevant skills for expanding industries (Job friendly skills) and reduce structural unemployment. In addition, with higher skills, the country would also be able to attract greater foreign direct investments in high end industries that would create jobs and increase economic growth. As the workers improve their skills and productivity, this would increase the productive capacity and hence potential growth of the country. With a lower cost of production, this might also increase the price competitiveness of Spain's exports and lead to an improvement in their BOP and subsequently EG.

Anti – thesis – Evaluation of measure 2

The limitation of trying to improve the education and training system is that it might take some time before the effects can be seen. To fully educate or train people will not happen overnight and years may be required before the labour force is equipped with the required skills. In addition, given the austerity measures in place, the government might not be able to fund such changes in the economy. (Extract 5: One of the measures is the €6.5 billion cut in public services)

Measure 3

One of the main drivers of German growth comes from their high quality exports (German products are in demand not because they are the cheapest but because they are the best) to booming economies such as China and Russia. As such, Spain could offer incentives or provide subsidies that would encourage producers to conduct more research and developments to produce better quality goods that would be more competitive in the world market. This could result in an increase in exports of Spain and lead to more jobs created in the export industry. As more workers are hired and the income increases, there will be a multiplier effect resulting in further improvements in employment and economic growth.

Anti – thesis – Evaluation of measure 3

Investments in Research and Developments to improve the products will take a long time before any results can be observed. Given the dynamic nature of the business world, in the time for Spain to carry out the R&D, other countries/businesses might have already developed even better products that would adversely affect the export competitiveness of the Spanish goods.
Even with all the resources incurred, there is no guarantee that better quality products can be developed and help improve the Spanish economy. These resources could have been used in other areas to greater effect.

Conclusion

If Germany's measures could be successfully implemented in Spain, there is a high chance that the country's macroeconomic problems could be

solved. Nonetheless, with the current state of the Spanish economy and the various problems that she faces, it would be highly unlikely the same measures would be effective. The most likely measure that would make a difference in the short term would definitely be the cutting of wages and hours worked but the government would need to make harsh but necessary laws if it was to succeed.

Level	Descriptors	Marks
L1	Incomplete explanation of the workings of the measures	1-3 m
L2	Detailed analysis of how the measures can address Spain's macroeconomic problems and some attempt at assessing the effectiveness.	4-5 m
L3	Clear evaluation of 2 possible measures taking into account the characteristics of the Spanish economy.	6-8 m
E	Judgment based on analysis; good effort at substantiation	1-2 m

Section B

1. One of the measures Singapore adopts to control car population is the Certificate of Entitlement (COE) quota system. The government determines the number of COEs released every month and COEs are bid through the COE Open Bidding System. The limited number of COEs would then go to the highest bidders.

   a) Explain how the price mechanism addresses the central problem of economics. [10]

   b) Discuss the view that the COE quota system creates more problems than it solves. [15]

   a):

   Intro
   - All societies face 'scarcity of resources' which gives rise to the problem of choice - 'what and how much to produce' and 'how to produce', i.e. the problem of resource allocation.
   - Resource allocation is undertaken by the price mechanism in a free market economy, which is an economy in which
     - All resources are owned by households.
     - All decision-makers (consumers, factor owners and firms) are motivated by self-interest.
   - The price mechanism refers to the interaction of market demand and market supply which determines the price to be charged and output to be produced for different goods and services.
   - The price mechanism is able to allocate resources in a way that leads to a maximization of society's welfare by the signaling role played by prices in a free market economy.

   Body
   - What and how much to produce?
     - Explain that the price mechanism determines what is produced via the prices that households are willing and able to pay and the prices that firms are willing to accept.
     - Explain that market determines how much of a good should be produced by finding the price at which the quantity demanded equals the quantity supplied.
     - Explain with an example, how a change in DD or SS for a certain good will lead to a change in price which in turns elicit responses from HHs and firms that bring about a new quantity that is produced and bought.

       E.g.

       Rise in demand for cars (perhaps due to rising real income levels) → ↑ P_{cars} ⇒ rise in profitability which incentivizes firms to expand production (↑ Qs of cars) even as households respond by reducing consumption (↓Qd for cars).

       To expand production, the car firms will increase their demand for resources driving up factor prices in this industry.
       The factor owners will in turn be incentivizes to offer their factor services in the car industry instead of other industries. Thus, more resources will be channelled into the car industry.

       Or

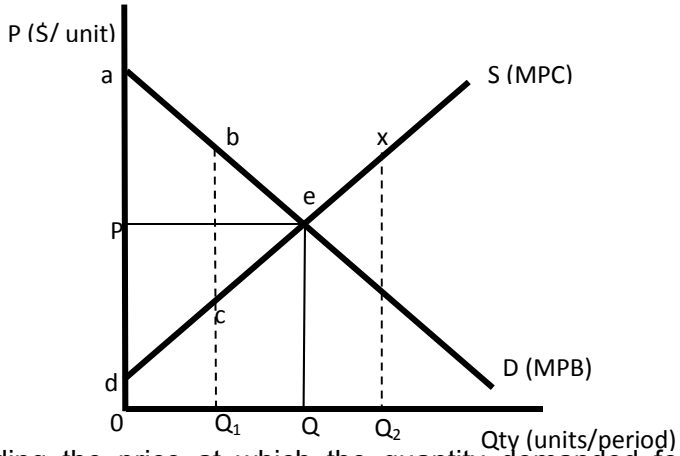
Fall in supply of crude oil (due to depletion) → ↑ $P_{crude\ oil}$ => disincentive for consumers (e.g. power generating firms) to use crude oil which has become increasingly scarce and hence creates the incentive to use alternatives sources of energy even as the rise in price of crude oil incentives the crude oil producers to invest in oil deposits exploration. The resultant rise in demand for alternative sources of energy will incentivize alternative energy firms to produce more (↑ Qs of cars). To expand production, the alternative energy firms will increase their demand for resources driving up the factor prices in this industry. The factor owners will in turn be incentivizing to offer their factor services in the alternative energy industry instead of other industries. Thus, more resources will be channelled into the alternative energy industries.

- How to produce?
  - The price mechanism determines how a good is produced via factor price signals and the motive of cost-minimization, given firms' motive of profit maximization.

    E.g. If If labour productivity is lower than capital but labour is so much cheaper than capital cause it is relatively more abundant such that a firm can obtain more output per $ spent on labour compared to capital, it will use a labour-intensive method of production. His desire to maximize profits by minimizing cost will thus drive him to choose the method of production that uses more of the resource that is less scarce and less of the resource that is scarcer.

  - The price mechanism causes only the firms who can produce at least cost to be the ones producing the good (i.e. inefficient firms can't survive).
  - Operation of the price mechanism promotes productive efficiency, which is a prerequisite for allocative efficiency.

- Explain that the market equilibrium quantity that is determined by the price mechanism is allocative efficient.



  - By finding the price at which the quantity demanded for a product equals the quantity supplied, the price mechanism is able to achieve allocative efficiency.
  - Measuring society's welfare by taking the difference in total benefit and total cost that accrue to society from a particular quantity of a good

produced, welfare is maximized at the free market equilibrium quantity.

- The welfare of society at the market equilibrium output is given by area aed (TB – TC of Q units = Area aeQ0 – Area deQ0).
- Any other output level yields a lower level of welfare. At Q_1 units, the welfare of society is area abcd only (TB – TC of Q_1 units = Area ab$Q_1$0 – Area dc$Q_1$0). At Q_2 units, the welfare of society is (area aed – area exy) only. The additional Q_2-Q units reduces society's welfare as the additional cost incurred in their production (area exQ_2Q) exceeds the additional benefit enjoyed from their consumption (area eyQ_2Q)

Concluding remarks

The price mechanism bring about at efficient allocation of scarce resources via the signalling role of prices. It should be noted that for the price mechanism to be able to achieve allocative efficiency, the following assumptions must hold - perfectly competitive markets, absence of externalities and private good.

Level	Descriptors	Marks
L3	Clear, accurate and complete explanation of how the price mechanism can achieve productive and allocative efficiency. Uses DD/SS diagram to aid the explanation. Surfaces the assumptions in the analysis.	7-10
L2	Explains how the price mechanism allocates resources and shows recognition of the concept of allocative efficiency but gaps in explanation.	5 - 6
L1	No / very limited explanation of how the price mechanism allocates resources. Fundamental inaccuracies in explanation.	1 - 4

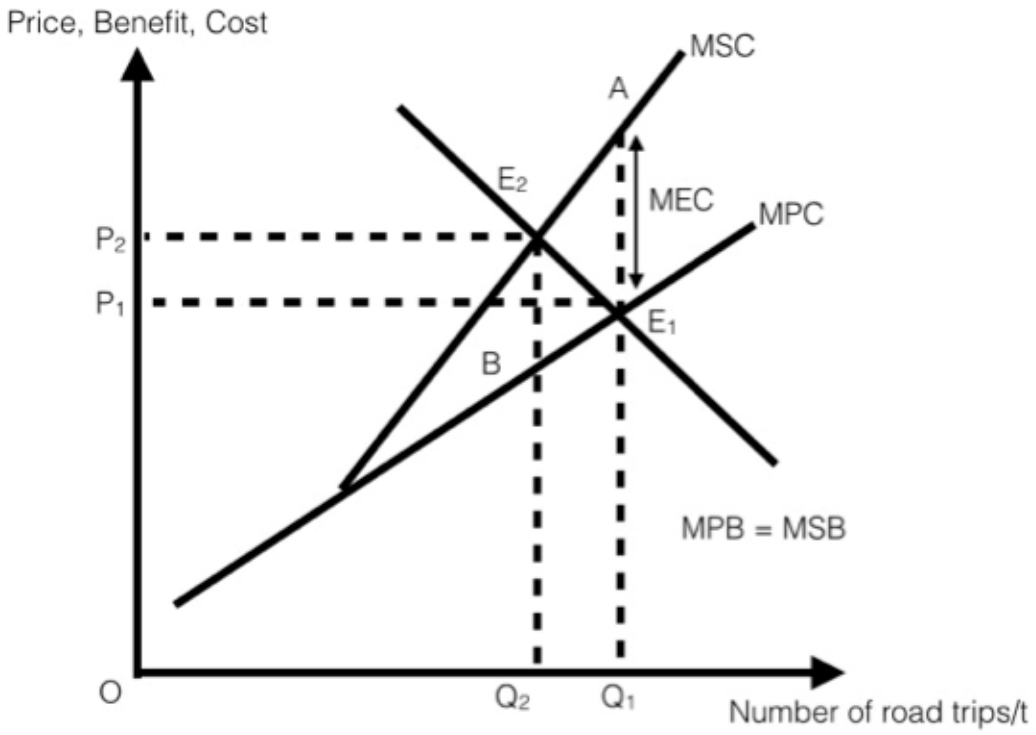
b)

Intro:

- A government has 2 microeconomic goals of efficiency and equity
- Efficiency: Resources are allocated in a way that maximizes welfare and it's not possible to make someone better off without someone else being worse off
- Equity: fairness in the distribution of income and output among individuals
- The Singapore government intervenes to control the car population in Singapore because of efficiency concerns

Body:

In the market for car usage, there is market failure because when there is excessive usage of cars. Negative externalities will occur and this results in inefficiency. Examples of such negative externalities include loss of productivity hours when employees are caught in traffic jams and also the pollution generated when cars are stuck in a jam.



Explanation of diagram:

- Market equilibrium: MPC = MPB, output Q_1
- Social equilibrium: MSC = MSB, output Q_2
- Overconsumption of Q_1Q_2 units of road trips taken
- Additional benefit of consuming $Q_1Q_2 = Q_2E_2E_1Q_1$
- Additional cost of consuming $Q_1Q_2 = Q_2E_2AQ_1$
- Deadweight loss of area E_2AE_1 when consuming at Q, as compared to consuming at Q_1
- Market has failed to allocate resources efficiently

<u>Thesis: COE addresses the problem of inefficiency indirectly</u>

The COE is a quota system that influences the supply of cars by restricting the number of cars that can be bought. Prospective car owners would bid for the COE which once obtained, gives them the 'permission' to own a car. By targeting car ownership, the government hopes to indirectly reduce road usage, thereby alleviating traffic congestion.

This policy generally easy to implement and monitor as it deals with the initial purchase of the car. The quota system provides certainty of outcome with regards to the car population. Given Singapore's lack of space, it serves as a good complement to other measures which target road usage more directly.

Another advantage of the COE system is that it allows revenue to be used that maybe used to either solve the traffic congestion problems or other government expenditures.

<u>Anti-Thesis: COE creates more problems arising from greater inefficiency and inequity</u>

However, this measure does not address the market failure caused by *usage* of cars. Rather, it targets the problem indirectly by controlling car ownership. While

this could address the market failure brought about by car usage, the problem is that it can lead to over-correction, i.e. too blunt, where people who may not use the car often or do not use the car during peak hours are also required to pay for the COE, discouraging them from buying a car.

On the other hand, the measure might be counter-productive. After having paid a large sum of premium for COE, Singaporeans might use their cars even more. i.e. to spread it the fixed cost.
Also, it might result in inequity of distribution issues, as those who need the car more may not be able to afford the COE premium.

Synthesis/Conclusion:
COE is a very blunt measure in addressing the market failure brought about by excessive car usage. In light of its limitations, the Singapore government has implemented other measures to complement COE, such as ERP and improving the public transport system to curb car usage. However, these policies may not have been very effective, as observed from the congestion that still happens in the city area. Perhaps the government can consider increasing ERP rates so that the higher penalty rates for using cars during peak hours will cause car users to feel a greater pinch in their pocket and discourages them to use less of their cars during peak hours.

Level	Descriptor	Marks
3	Well-developed analysis of the benefits and costs of using COE as a measure to tackle the problem of market failure brought about by excessive car usage	9-11
2	Underdeveloped analysis of the benefits and costs of using COE as a measure to tackle the problem of market failure brought about by excessive car usage	6-8
1	Mere listing of points and definitions	1-5
E2	Evaluative argument that is supported by economic reasoning	3-4
E1	Unsubstantiated judgment	1-2

2. a) Explain how globalisation may be a cause of inflation in Singapore. [10]

b) Discuss which policies the Singapore government can adopt to reduce inflation. [15]

a)
Introduction:

- Globalisation is defined as the increasing integration of economies around the world, through the movement of goods, services and capital across countries. Sometimes, it involves movement of labour, investments and technology as well.
- Inflation – sustained and inordinate increase in general price level of goods and services. The main sources of inflation are demand pull and cost push inflation in Singapore, driven mainly by price of oil and other commodities, rising labour cost and rising consumption or exports.
- Globalisation has a part to play in driving the factors that cause inflation.

Body:
1) Effects of globalisation that could cause demand pull inflation.

- With globalisation, Singapore experiences an increase in trade volume. Access to a larger market allows exporting firms to reap economies of scale and with lower cost; exports can be priced more competitively. With a rise in net exports, it will lead to rise in AD and since Singapore operates near or at full employment, GPL will rise. If AD continues to increase further due to further demand for exports from Singapore's trading partners, this creates sustained excess AD resulting in demand pull inflation.

- Globalisation promotes greater investment flow between countries and as Singapore opens up to more establishments of MNCs; increased in FDI leads to a rise in AD. With rise in national income, more jobs are created, hence with a rise in the level of income of Singaporeans, induced consumption will rise alongside, and AD will rise even further, causing demand pull inflation.

2) Effects of globalisation that could cause cost push inflation
- Singapore's high inflation rates could be due to cost-push inflation which could have arisen mainly from imported inflation due to high commodities prices. With increasing inter-connectedness between economies around the world, globalization has resulted in relatively open and import-reliant economies like Singapore to be more susceptible to imported inflation.
- Extreme weather in the form of droughts and floods in major grain producing countries like Australia, together with rising demand from developing countries have caused food prices to spike, contributing to imported inflation in Singapore.

- Globalisation, which has led to increase trade and production levels, has also led to increases in demand for crude oil. These have resulted in rising imported inflation in Singapore, as seen from the higher food and transport prices which were a result of the higher price of crude oil.

- On-going structural changes in the economy due to globalization may also increase the competition for main factor inputs hence pushing up factor prices in the economy that causes cost push inflation.

Conclusion: With Singapore opening up to globalisation, the effects of this trend will make Singapore more susceptible to rise in demand pull inflation and especially imported inflation.

Level	**Descriptor**
3	Detailed explanation of how globalization affects the rates of inflation with good use of context.
2	Incomplete explanation of the effects of globalization on both demand pull and cost push inflation. Lack context
1	Mere listings of the effects of globalization on either demand pull or cost push inflation.

b)

Introduction:
Low inflation is one of the 4 macroeconomic aims of the government and given the impact of inflation on the economy, there is a need to consider which policy can be adopted to reduce inflation. The criteria needed to know which policy should be adopted will be based on i) effectiveness in alleviating the root cause of inflation, ii) minimal conflicts with other macro goals.

Body:
1) Exchange rate policy as the main policy to curb rising inflationary pressure.

- Singapore has no natural resources, hence low prices of imported raw materials are especially important to keep inflation rate low. By maintaining a strong Sing dollar, it will be effective in curbing high imported inflation as price of imports will be cheaper in local currency.

- Since Singapore also faces demand pull inflation, a gradual appreciation will also increase the price of exports in foreign currency. This will lead to a fall in demand for Singapore's exports and export revenue will fall, causing AD to fall thus reducing inflationary pressure due to excess AD.

- Furthermore, appreciation of S$ makes imports cheaper in S$ increasing quantity demanded. Given that demand is price elastic, expenditure on imports will rise. This also makes AD fall, reducing demand-pull inflationary pressure.

- E: Given the small and openness of Singapore's economy, the dependence on trade and imported inputs allow the appreciation of Sing dollar to better cope with the effects of inflation compared to other demand management policies since it tackles the root cause of inflation in Singapore.

- On one hand, it is difficult to gauge how much the Sing dollar should be allowed to appreciate. If the Sing dollar is too strong, it may erode export competitiveness and also as a destination for investment which brings about a fall in national income.

2) Another current policy used to curb cost push inflation due to structural rigidity is supply side policies. Some of these policies are meant to increase the productivity of workers so that the productivity can increase faster than the wages. This would help lower unit cost of production. Some measures to achieve this include Productivity and Innovation credit (PIC) scheme and the Worker improvement through secondary education (WISE) scheme which are meant to equip workers and firms to upgrade their capital or skills.

- E: This policy not only curbs cost push inflation but it helps to increase the productivity capacity of the economy, in other ways reducing the effect of demand pull inflation as well.

- However such supply side policies may involve huge government expenditure and it may take a long time to achieve the outcome of reducing inflation as compared to exchange rate policy or other demand management policies.

3) Other policies such as <u>contractionary fiscal policy</u> to reduce demand pull inflation can be considered. This involves a reduction in government expenditure to reduce AD as well as increase personal and corporate tax to reduce C and I. With a fall in G, C and I, AD will fall which helps to curb inflationary pressure.

- **E**: However the effectiveness of the measure depends on the responsiveness of households and firms to the increase in tax rates.

- Moreover, as rising exports is a main source of inflation for the country and exports take up a very big share of AD, a fall in government expenditure will not do much to lower AD. Thus fiscal policy may not tackle the root cause of inflation in Singapore.

4) Another measure that Singapore can consider is to influence money supply and thus interest rates. An increase in interest rate may reduce the consumption and investment due to rise in borrowing cost. As such since AD falls, demand pull inflation can be curbed.

- **E**: However, since Singapore is an open and small country, the need for free flowing capital and the use of exchange rate policy makes it impossible to implement such policy. Also due to our small economy, Singapore is an interest rate taker thus unable to freely alter the interest rate. Trying to manage interest rate would be also very unstable for our economy since it may result in large inflow and outflow of hot money which in the end destabilise our exchange rate. Given the dependence on trade, this would adversely affect economic growth in Singapore.

In conclusion, the Singapore government has to consider a combination of policies in order to alleviate the effects of inflation. There is no one policy that Singapore government can adopt as it depends on the cause of inflation. In times when there is a high level of imported inflation and external demand is strong, a strengthening of the S$ would be an effective policy and in times when there is high cost-push domestic inflation with weak external demand, the government would have to rely more on supply-side policies that address the rising domestic costs. Furthermore if inflation is caused by domestic factors such as rising property and car prices, direct measures to cool down these markets will be more effective and immediate.

Level	Descriptor	Mark
3	Clear analysis and comparison of the workings of policies and its possible limitations in the context of Singapore	9-11

2	Good explanation of how policies would reduce inflationary pressure but incomplete explanation of limitations. Lack context.	6-8
1	Brief listing of the workings of at least two policies and recognition of its limitations only.	1-5
E2	For an evaluative assessment that clearly indicates why certain policy would be more effective.	3-4
E1	Unsubstantiated assessment of the effectiveness of certain policy	1-2