

## Section Two: Data interpretation/Short response

50% (50 Marks)

This section has **four (4)** questions. Answer all questions. Write your answers in the spaces provided.

Spare pages are included at the end of this booklet. They can be used for planning your responses and/or as additional space if required to continue an answer.

- Planning: If you use the spare pages for planning, indicate this clearly at the top of the page.
- Continuing an answer: If you need to use the space to continue an answer, indicate in the original answer space where the answer is continued, i.e. give the page number. Fill in the number of the question(s) that you are continuing to answer at the top of the page.

Suggested working time for this section is 90 minutes.

### Question 31

(15 marks)

Question 31 refers to the information below.

Australia will increase the excise tax on tobacco by 25 per cent from Friday to raise \$5 billion in budget revenue over the next four years, Prime Minister Kevin Rudd has said. A government statement says the changes will cut tobacco consumption by six per cent and the number of smokers by two or three per cent – about 87,000 Australians. The 25 per cent tax increase will mean an increase of about \$2 for a pack of 30, and all of the extra revenue will be directly invested in healthcare, Mr Rudd said in a statement. "Cigarette price increases have been shown to be effective in cutting smoking, especially among young people who are particularly sensitive to price," he said. The federal government has also confirmed it will force tobacco companies to use plain packaging from July 1, 2012. It will ban logos, images, colours and promotional words from cigarette boxes.

28<sup>th</sup> April 2010

- (a) Outline two reasons why 'young people are particularly sensitive to changes in price'. (2 marks)

*Nice argument*

- Young people are particularly sensitive to  $P$  changes in price due to having a low <sup>real</sup> income. When an increase in price occurs, the real income needing to be spent increases. It is stated that the more income spent, the more ~~income~~ the chance of an item being elastic. Therefore, due to having a relatively low real income and elasticity of an item becoming elastic as more income is spent, young people are sensitive to changes in price.

②

- (b) Explain the likely impact of the plain packaging legislation on the position and slope of the demand curve for cigarettes. (2 marks)

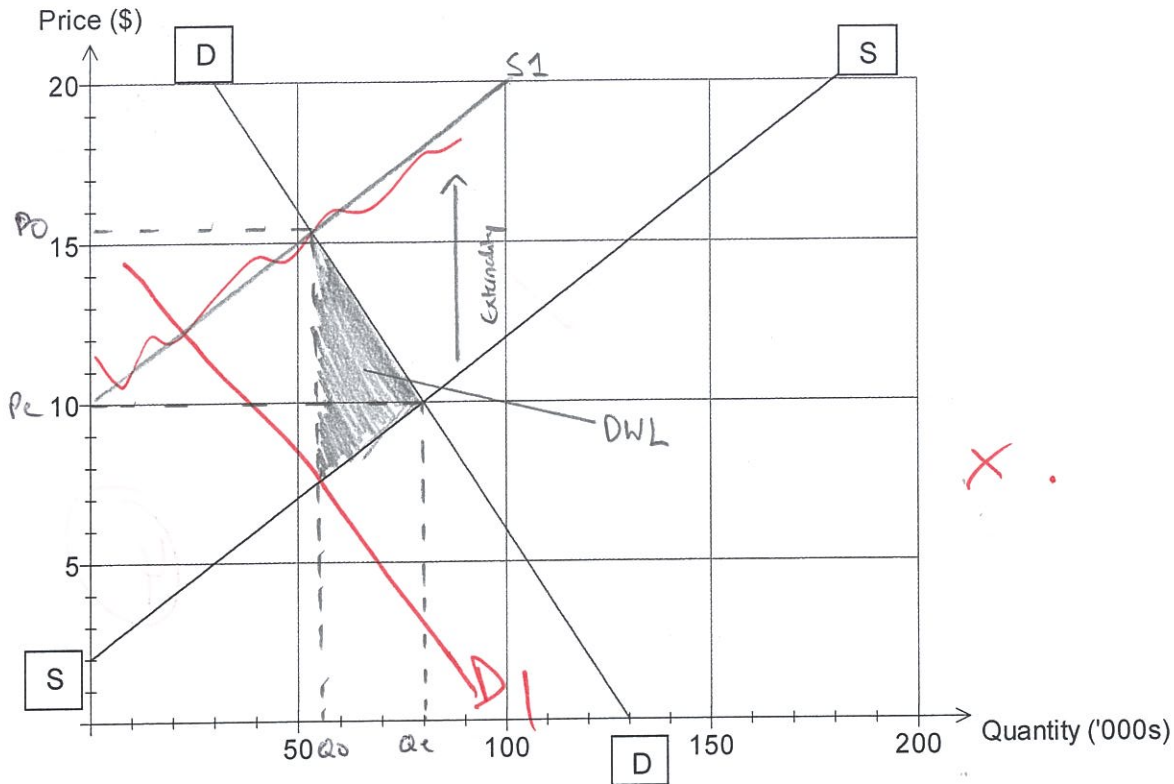
- The plain packaging legislation cuts down & narrows the advertisement for cigarettes. Due to advertising being a factor of affecting the demand curve, & it is currently being limited, then the demand curve will decrease and shift to the left. This decreases demand for cigarettes.

①



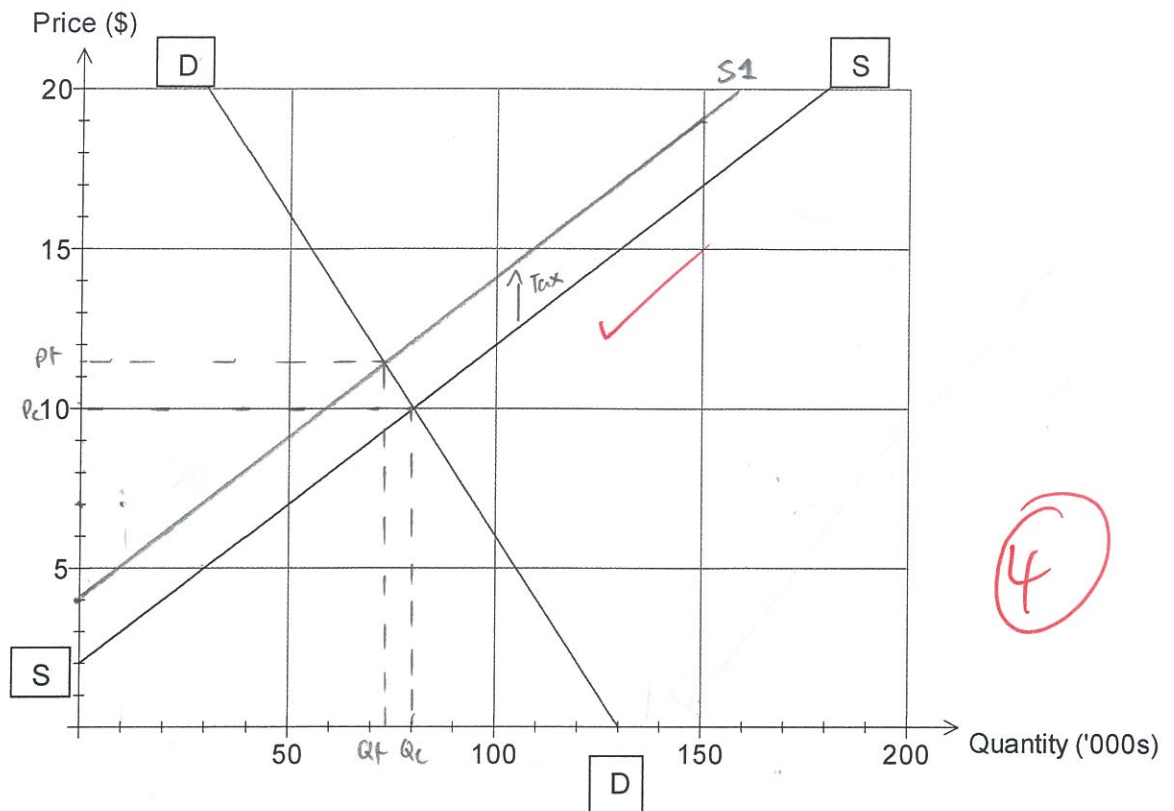
(c) Smoking causes negative consumption externalities. Use the diagram below to illustrate this concept and explain what you have drawn. (5 marks)

Market for cigarettes



-Smoking causes a negative consumption externality. When a negative consumption externality occurs, an over-production occurs. Society currently operates at points  $Q_e$  and  $P_e$ . Operating at these points means society is not capturing the negative externalities of smoking. Society should however capture this negative externality. If the negative externality was captured, then society will operate at  $P_o$  and  $Q_o$ . This is the optimal operating place. Due to society operating at  $P_e$  and  $Q_e$ , a deadweight loss occurs, as labelled on the graph. This is due to an over production of goods.

- (d) On the diagram below, draw a new curve which shows the effect of the increase in tax of \$2 per packet. Discuss the effects of the imposition of the tax. (6 marks)



Due to ~~incess~~ smoking causing an ~~increase~~ negative externality on society, society loses out and has to pay for this through medical bills etc. The imposition of a tax makes producers pay for imposing this negative externality on society. The tax is placed to try to capture the effects of the negative externality. This prevents market failure of an over production of goods and cleans the DNL. The imposition of the tax causes a shift from ~~Q\_e & P\_e~~ to  $Q_t$  and  $P_t$ .

The imposition of the tax causes a shift in the supply curve from S to ~~S~~ S1,  $\Delta$  =

If you have data/numbers, use them.

Question 32

(15 marks)

Refer to the table below to answer the following questions.

PPC combinations	A	B	C	D	E	F	G
DVD player	42	40	36	30	22	12	0
MP3 player	0	4	10	18	28	40	54

(a) When the economy moves from point B to point D:

the opportunity cost is 10 dvd players

the opportunity gained is 14 MP3 players.

2

(2 mark)

(b) Explain why the opportunity cost increases as we move along the curve from Point A to Point G. (4 marks)

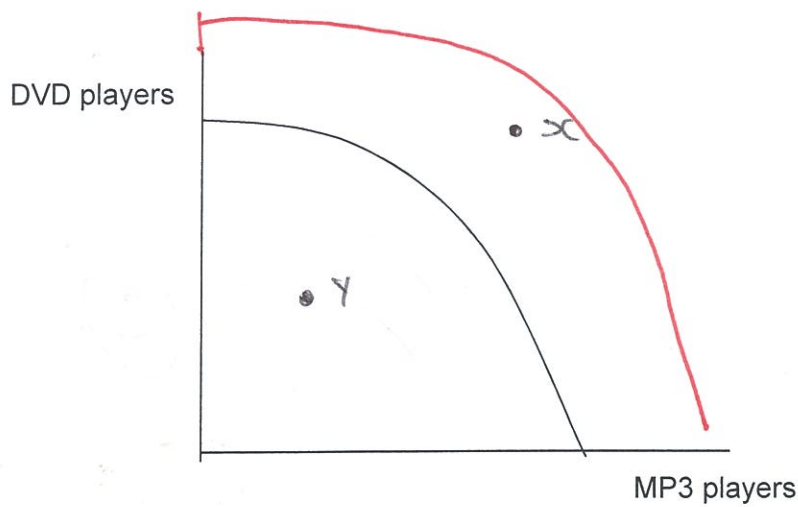
- As producers reallocate resources, ~~resources~~ it can be noted that some resources are better suited to creating <sup>DVD</sup> ~~MP3~~ players than MP3 players. This means that more of ~~the~~ resources must be used to produce a certain amount.

- For example, resource X is very good at making dvd players, it can make 10 dvd players. However resource X can only make 1 MP3 player. Resource Y ~~too~~ can make 10 MP3 players. ~~The~~ If the producers do not want to make DVD players, then they will reallocate resource X to production of ~~MP3~~ MP3 players. To create the same amount of MP3 players as resource Y, then there will need to be 10 of resource X to produce 10 MP3 players.

- opportunity cost increases as we move along the curve from Point A to Point G due to different resources being ~~are~~ better suited at producing one good, than they ~~me~~ produce. This requires more of the resources to produce a set amount.

4

- (c) Explain how both an increase in the production of both products and an underutilisation of resources can occur in the PPC model. Label these two situations on the model below. (4 marks)



2

- An under utilisation of ~~point~~ resources can occur at point Y of the PPF.

- An increase in production of both goods can occur at point X if technology and/or new resources are discovered.

- (d) Using the data above, explain how the production possibility curve/frontier model helps to illustrate the economic problem and the concept of opportunity cost. (5 marks)

- The economic problem refers to the scarce resources in which we possess to satisfy the thirst of all our needs and wants. This causes us to make choices.

- The concept of opportunity cost ~~refers to the~~ refers to what individuals give up to achieve what is valued most at the time. It is the second alternative forgone.

- The ~~economic~~ production possibility curve/frontier model helps to illustrate the economic problem as it shows ~~the~~ choice making. In order to produce more DVD players, less MP3 players will need to be produced. This refers to our scarce resources in which we must carefully utilise.

- The production possibility curve/frontier helps to illustrate the concept of opportunity cost as to produce more of 1 good, we must forgo producing ~~the~~ amount of another.

- We lose the opportunity to create 1 good, to create another. I.e. to create 10 dvd players, we lose the opportunity to create 5 MP3 players for example.

5

Question 33

(10 marks)

What is an emissions trading scheme?

Australian citizens – along with business groups, industries and unions – want action on climate change. This means that we must put a limit on how much greenhouse pollution we pump out. Governments, industry and environment groups agree that one of the best ways to do this is through a carbon emissions trading scheme.

Rather than putting a greenhouse pollution limit on each factory, power station or car, under carbon trading there is one national limit, known as a cap. The national cap is then divided into individual permits, which businesses and organisations can buy (some are initially issued free to various industries).

If a company wants to emit a tonne of greenhouse pollution they will need to have a greenhouse permit. These permits cost money. So, just as you would pay to dispose of a trailer-load of rubbish at the tip, big companies will pay to deposit a tonne of greenhouse pollution into the atmosphere. Most importantly, there is a set number of national greenhouse permits available and, correspondingly, a limit on the total amount of pollution permitted. The term 'trading' when applied to carbon emissions refers to companies' ability to buy and sell their greenhouse permits. This is why carbon trading is sometimes referred to as 'cap and trade'.

[http://www.acfonline.org.au/articles/news.asp?news\\_id=1817](http://www.acfonline.org.au/articles/news.asp?news_id=1817) accessed 5/05/09

(a) Identify a negative externality mentioned in the article. (1 mark)

Greenhouse Pollution

1

(b) Define market failure (1 marks)

- Refers to the inability to produce socially efficient outcomes.

- occurs ~~also~~ due to an inefficient use of resources or an ~~over~~ overproduction / underproduction.

2

(c) Explain the concept of externalities, both positive and negative. (3 marks)

- An externality is the intended / unintended consequence of performing an action.

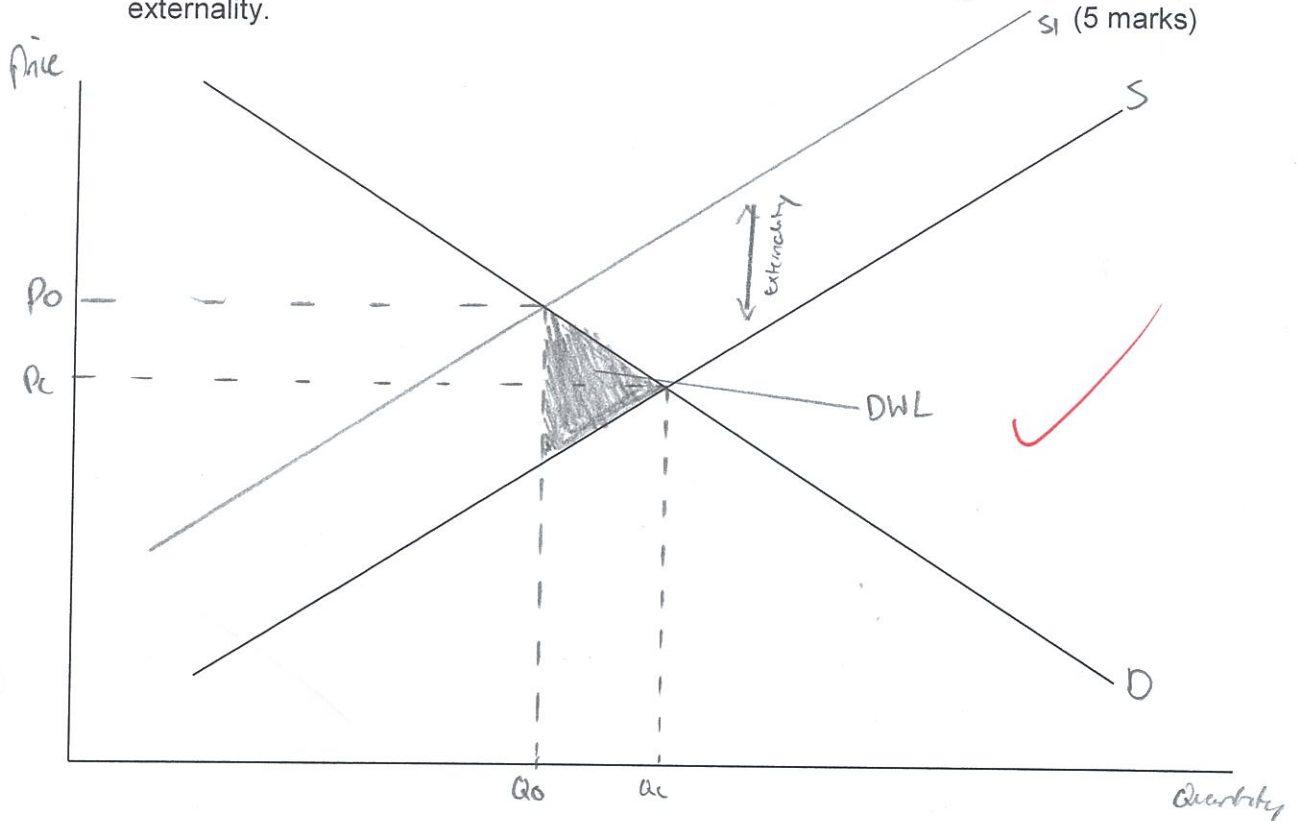
- Negative externalities can be put simply as burdens society has to pay for, ~~whereas~~ ~~if~~ firms can produce these for free. E.g. Green-house gas pollution ~~is~~ is a negative externality which society will pay for through medical bills. Polluted air = increase chance of health problems. Negative externalities cause an over-production.

- A positive externality can be put simply as 'freebies' society benefits from for free. An example can be seen through education. Society benefits from educated people as they can create economic growth. Positive externalities causes an underproduction.

- Both positive & negative externalities cause market failure.

3

- (d) Use the demand and supply model to explain the effects of a negative production externality. (5 marks)



A negative production externality causes an overproduction of goods in the market. This is due to firms not having to pay for these negative externalities. An example of this can be seen in factories, where factories release pollution into the air, they are NOT being charged for this. Society pays for this negative externality through medical bills, as pollution increases chances of health problems. Due to ~~socially~~ not firms & factories NOT being charged for the negative externalities, society operates at  $Q_c$  and  $P_c$ . However, society does not need to pay for the negative externalities, and instead factories ~~regain~~ should be required to. IF the firms & factories were charged with not producing negative externalities (i.e. pollution), then society will operate at  $P_0$  and  $Q_0$ , the optimal level of production. Operating at  $Q_0$  and  $P_0$  means the negative externalities have been caught. HOWEVER, due to society currently operating at  $Q_c$  and  $P_c$ , a DWL occurs, as labelled on the graph.

Well done -  
excellent answer!!

5

**Question 34**

(10 marks)

The following table depicts the weekly demand and supply for wine in Western Australia:

1	2	3	4	5
Price Per Bottle	Demand ('000s)	Supply ('000s)	Consumer Surplus	Producer Surplus
6.00	14	4	-	
7.00	13	5	-	
8.00	12	6	-	
9.00	11	7	-	
10.00	10	8	-	
11.00	9	9		
12.00	8	10		
13.00	7	11		
14.00	6	12		
15.00	5	13		

- (a) What is the equilibrium price and quantity of wine? \$11 9,000 (1 mark)
- (b) Complete columns 4 and 5 in the table. (2 marks)
- (c) i) What is the total Consumer Surplus? 18,000 (1 mark)
- ii) What is the total Producer Surplus? 22,500 (1 mark)

**The Government decides to impose a price floor for wine of \$13.00 per bottle.**

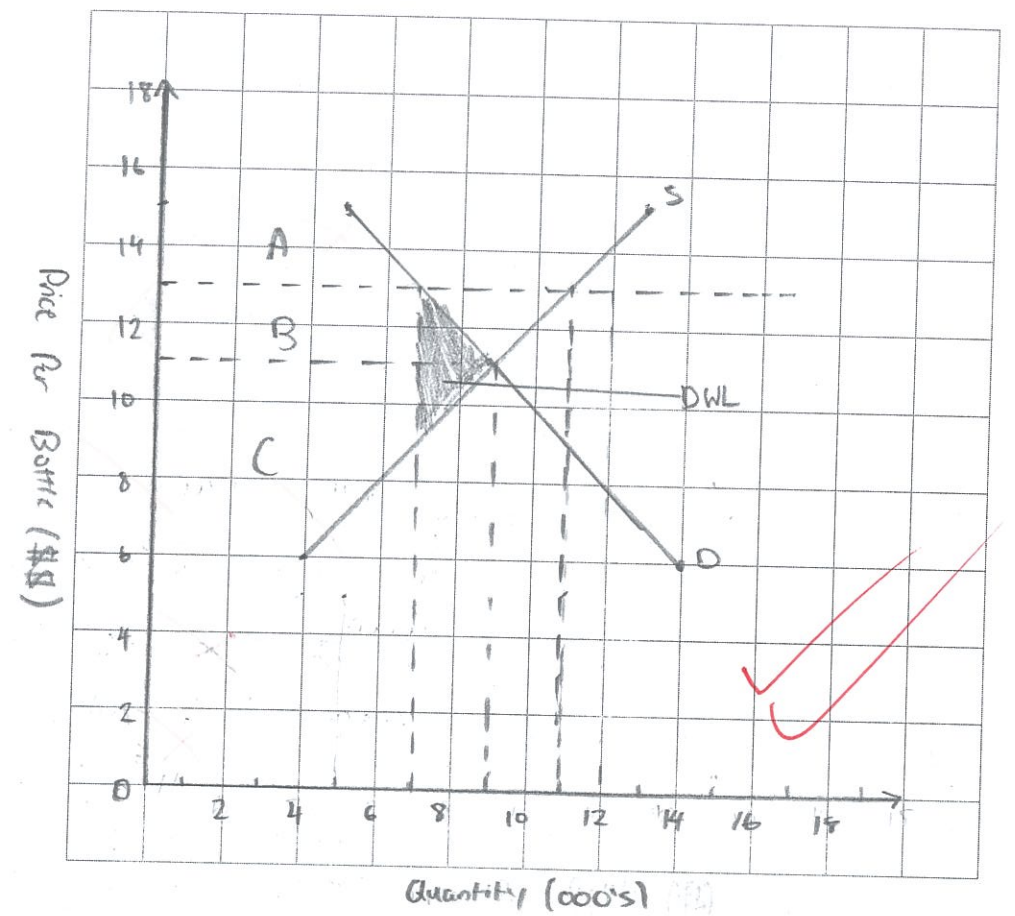
- (d) Give a reason as to why the Government might impose this price floor. (1 mark)

~~Protect absolutely guaranteed profits for the wine industry~~  
 Protect income of wine industry





- (e) Use the grid below to illustrate the economic consequences of the decision to impose a price floor on wine. Discuss what you have drawn. (5 marks)



- The economic decision to create a price floor causes a DWL as labelled on the graph.
- Shifts quantity demanded from 10000 to 8000
- Consumer surplus decreases, it is now A
- Producer surplus increases, it now encompasses B & C
- The implementation of a price floor creates market failure.

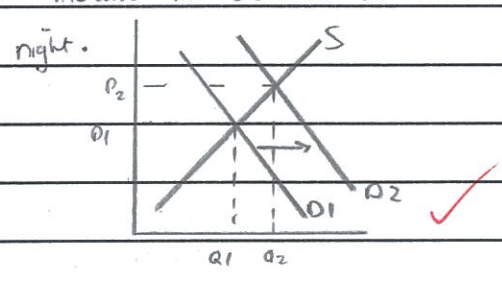
surplus amount?

4 1/2

A) The equilibrium point can be defined as a point of unchanged, it is where supply equals demand and it is the optimal working point. Market forces establish the equilibrium price for cars through the price mechanism. For example, if the price for cars is too low, then there will be a shortage in cars. If a shortage occurs, consumers will begin bidding higher prices for the cars. This causes price to rise and when price rises, supply expands. This will occur until the equilibrium price. If there is a surplus in supply for cars, then this means the price is too high and not enough will be sold. Producers will then lower the price. Lowering the price of a product expands demand, therefore more cars will be purchased. This process will gradually work towards the equilibrium price and it is how market forces, in a competitive market, establishes the equilibrium price for cars.

graph →

b) An increase in demand is when the entire demand curve shifts to the right.



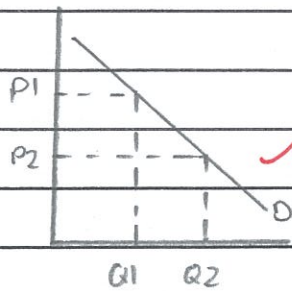
Increasing in the demand curve for cars will cause the quantity demanded to shift from  $Q_1$  to  $Q_2$  and the price to change from  $P_1$  to  $P_2$ . This means that increasing in demand for cars will increase the equilibrium price for cars and increase expand the quantity demanded. An increase in demand causes the entire curve to shift.

An expansion of demand for cars is the movement, up and down, the demand curve. It can be noted that the demand curve does not shift. An expansion of demand will occur if price decreases. Price is the only factor which can affect the demand curve in terms of expansion and contraction.

non-price factors?

3

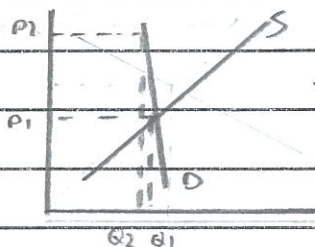
7



"if <sup>the</sup> price for cars are to decrease from  $P_1$  to  $P_2$ , then demand for cars will expand from  $Q_1$  to  $Q_2$ . This is due to the inverse relationship demand has with price.

An increase in demand can occur if real income increases, ~~between~~ the success of advertising campaigns, tastes and preferences, population and the price of substitutes. These factors can all cause an increase in demand. An expansion of demand can only occur through a change in price. If prices of are low for cars, then demand for cars will expand. If ~~there~~ a successful advertising campaign was released for cars, then ~~there~~ an increase of demand for cars will occur. If the other factors affecting demand (tastes & preferences, price of substitutes, population) change, then an increase in demand may be seen.

c) Price elasticity of demand refers to the responsiveness of the demand curve to a change in price. ~~This~~ knowledge of this is important for a firm that sells cars as it allows firms to manipulate prices. For example, if cars are relatively inelastic, then the firms are able to increase the price of cars, due to quantity demanded still being relatively the same. When a product is relatively inelastic, it means that a change in price is proportionally greater to a change in quantity. An example of price inelasticity can be seen in the graph below.



- Price Inelasticity of Demand.

The model shows the theory of price inelasticity. Price changes proportionally more than quantity.  $P_1$  shifts to  $P_2$  whilst  $Q_1$  shifts to  $Q_2$ . It is quite evident that price changes more than quantity does. ~~It is~~ It is important for a firm that sells cars to have knowledge of the impacts of price elasticity of demand on their producers to maximise profits. If their cars are relatively inelastic in terms of price & demand, then ~~the~~ the firms can increase ~~the~~ the price. If the cars are relatively elastic, then increasing price can cause profit loss. This is why it is important for firms to have knowledge on the impacts of price elasticity of demand.

Income elasticity refers to a change in quantity demanded for a product when income changes. It is important for a firm to understand this concept in order to maximise profits. For example, the demand for Nissan R32's will decrease when ~~income~~ real income increases. ~~The~~ ~~can~~ consumer may much rather prefer to buy a brand new Nissan R35, as they can now afford it. Income elasticity ~~also~~ causes a decrease in the number of inferior goods demanded and an increase in the demand for luxury goods. It is important for a firm that sells cars to understand income elasticity as they can use this ~~knowledge~~ knowledge to maximise profits and adjust prices/~~accordingly~~ supply accordingly.

But what are cars? Elastic or inelastic?

- inferior / normal goods
- ~~elastic~~ elastic / inelastic