# Model Answers Unit 1 May 2010

9) A) With reference to Extract 1 and Figure 1, explain the causes of the increase in the price of food. Use a supply and demand diagram in your answer. (8)

Food prices increased because demand rose and supply fell. Demand rose because global population grew (extract 1). Also, LDC incomes rose (extract 1), meaning an increase in demand for normal goods like food *(KAA 2 marks)*. Supply fell because of price increases in fuel, machinery and animal feed (extract 1) increasing production costs *(KAA 2 marks)*.
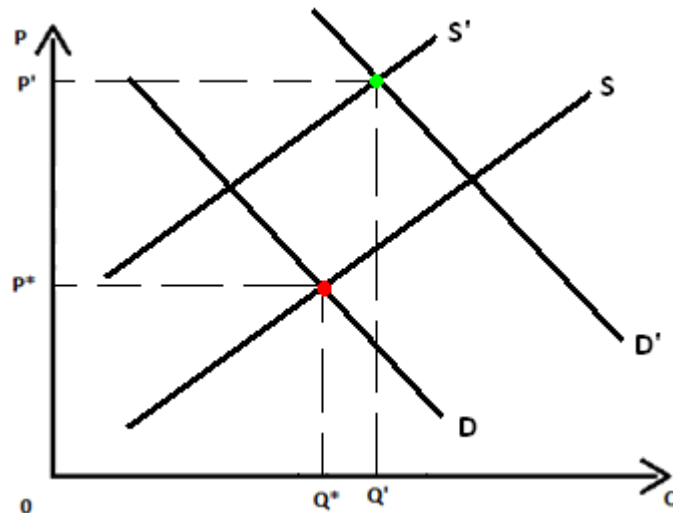
Demand shifts right from D to D', supply shifts left from S to S' and price rises from P* to P' *(KAA 4 marks)*.

B) To what extent are households on low incomes 'hit the hardest by rising food prices' (Extract 1, line 18)? (6)

Low income groups are likely to be hit hardest because they spend a higher proportion of their income on food than the rich. So as food prices rise further, the low income groups will spend even more of their income on food *(KAA 2 marks)*. Also, as demand for food is price inelastic, when food prices rise, quantity demanded falls less in proportion, so total expenditure on food rises *(KAA 2 marks)*. The effect on low income groups depends on the magnitude of the price increase. As food process more than doubled (figure 1) it will hit low income groups significantly hard *(E 2 marks)*.

C) Assess whether the demand for food is likely to be price elastic or price inelastic. (6)

Price elasticity of demand (PED) measures the responsiveness of demand to a change in price *(KAA 1 mark)*. If demand is price inelastic, a change in price leads to a less than proportionate change in demand *(KAA 1 mark)*. Food is a necessity and has no substitutes so PED should be inelastic. As food prices rise, consumers will only demand a little less food *(KAA 2 marks)*. However, some types of food may have an elastic PED. For example, luxuries like posh restaurants, as prices rise, demand will fall more in proportion *(E 2 marks)*.

*D) Evaluate the likely economic effects of the introduction of 'guaranteed minimum prices to encourage more domestic agricultural production' (Extract 1, lines 20 and 21). Use an appropriate diagram in your answer. (12)

A minimum price is a price floor set by the government, the market price cannot fall below it. The government must buy up any excess supply at this minimum price *(KAA 2 marks)*.
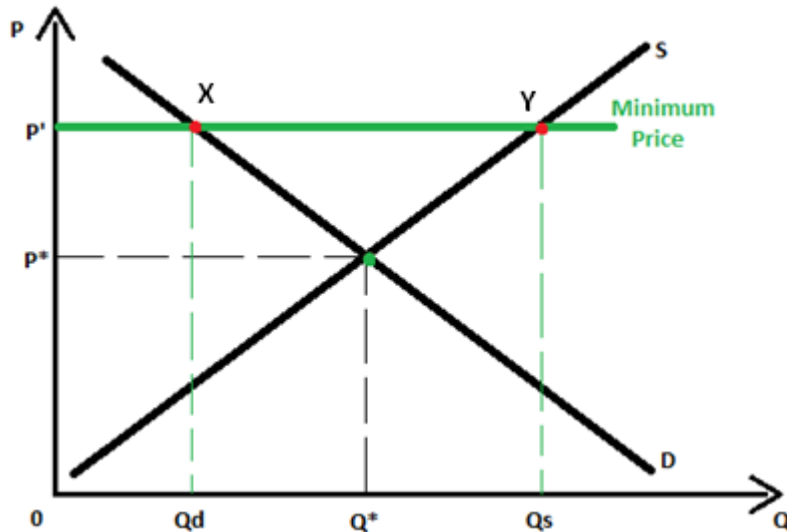
A minimum price causes price to rise to P', quantity demanded to fall to Qd and quantity supplied to rise to Qs. Resultantly there is excess supply $Qs - Qd$. The government must spend a total of XYQdQs *(KAA 4 marks)*.

The minimum price will cause consumer surplus to fall and producer surplus to rise *(KAA 2 marks)*. Also, because farmers are guaranteed a minimum price, they are encouraged to produce more to make more profit *(KAA 2 marks)*.

However, the minimum price scheme will not be effective if it is set slightly above equilibrium. Moreover, the minimum price scheme will have no effect if it is set below equilibrium *(E 2 marks)*. Also, the minimum price scheme will stop prices fluctuating below the minimum price but not above it. So it may not help create enough price stability to help investment and production *(E 2 marks)*. Finally, it may be very costly for the government to buy up the surplus farm output. The government may not have the funds to do this on a consistent basis. Even if they can, there may be an opportunity cost of lost spending on other sectors of the economy for example health and education *(E 2 marks)*.

E) i) Distinguish between private costs and external costs. (4)

Private costs are the costs incurred by first and second parties directly involved in a market transaction *(KAA 2 marks)*. For example, the price of raw materials *(KAA 1 mark)*. External costs are the costs imposed on third parties not directly involved in a market transaction *(KAA 2 marks)*. For example, air pollution from cars *(KAA 1 mark)*.

*E) ii) With reference to the concepts of private costs and external costs, assess the possible economic effects of 'using intensive farming methods and genetically modified crops' (Extract 1, lines 11 and 12). Use an appropriate diagram in your answer. (12)
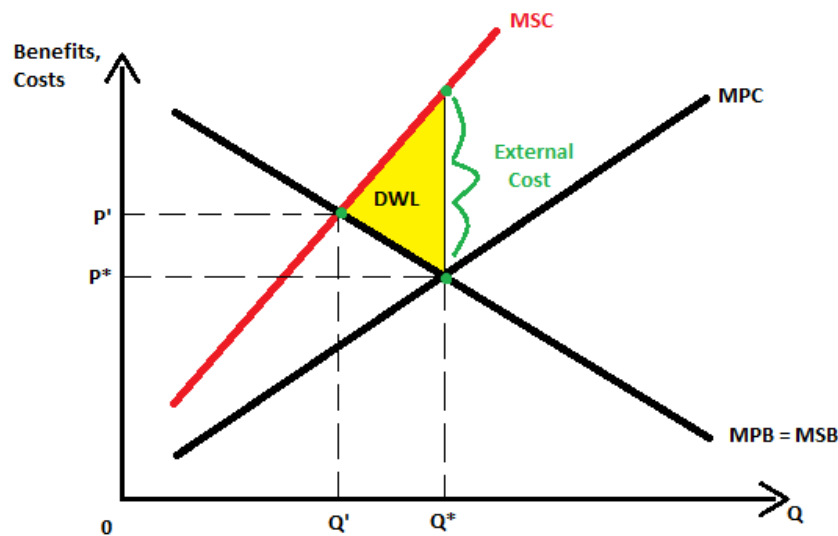

The free market equilibrium is at P* and Q*. The socially optimum equilibrium is at P' and Q'. A negative externality occurs because $MSC > MPC$, this results in a welfare loss to society *(KAA 4 marks)*.

The private costs of intensive farming methods and GM crops include the farmers' costs of buying specialist machinery and the research costs for GM strains *(KAA 2 marks)*. The external costs include a reduction in biodiversity and the potential health problems posed by GM crops *(KAA 2 marks)*.

The external costs depend on the magnitude of intensive farming and GM crops. If only one small farm uses these methods and crops then the external costs will be small. Perhaps GM crops must be used on a large scale because the UK produces only half of the agricultural output that its population consumes *(E 2 marks)*. Additionally, it may take time for the external costs to arise. For example, public health problems, loss of biodiversity and soil erosion may only occur in the long-run *(E 2 marks)*. Moreover, maybe the benefits outweigh the costs. For example, crop protection against bad weather conditions and higher farm profits *(E 2 marks)*.

10) A) i) With reference to Extract 1 and Figure 1, explain the likely effect on total revenue for car manufacturers following the decrease in demand for new cars between 2007-2009. Use a supply and demand diagram in your answer. (6)

Total revenue equals price x quantity *(KAA 1 mark)*. Most likely, car manufacturers' total revenue will fall *(KAA 1 mark)*. Car sales fell from 2.4 million to 2.26 million between 2007-2008 *(KAA 1 mark)*. Total revenue falls because, as demand falls, both price and quantity fall *(KAA 1 mark)*.
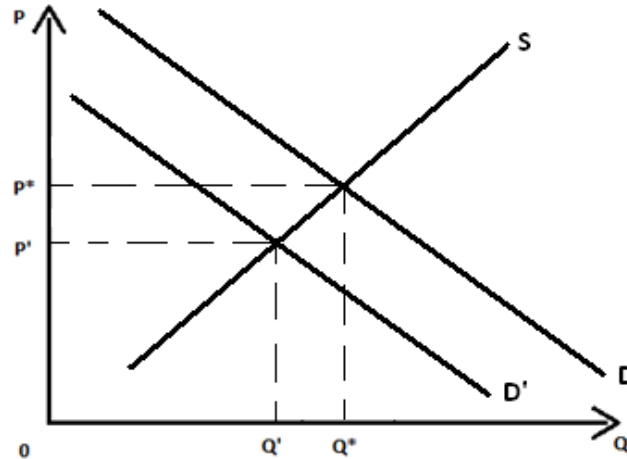
Demand shifts left from D to D'. Total revenue falls from P*xQ* to P'xQ' *(KAA 4 marks)*.

A) ii) Assess the likely impact of the decrease in demand for new cars on the labour market for car workers. (6)

Labour is a derived demand, it depends on the demand for the good it produces *(KAA 2 marks)*.
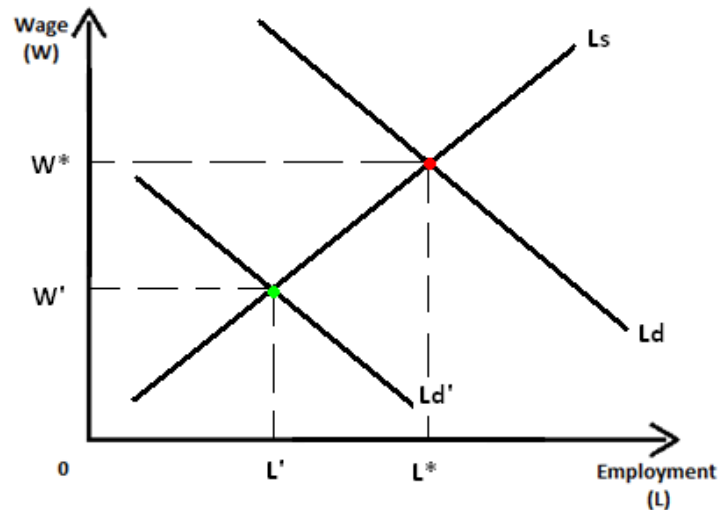
A fall in demand for cars decreases the demand for car workers from Ld to Ld', wages fall from W* to W' and employment falls from L* to L' *(KAA 3 marks)*.

The effect on wages depends on the elasticity of labour supply. If labour is supply inelastic then wages will fall by a large degree *(E 2 marks)*.

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B) Explain why labour immobility might be a problem following the closure of car factories. (6)

The occupational mobility of labour refers to the ability of workers to move between different types of jobs *(KAA 1 mark)*. Car workers may have a low occupational mobility because building cars is highly specialized so it is difficult for car workers to find different jobs *(KAA 1 mark)*. Car workers may need to retrain to find different jobs *(KAA 1 mark)*. The geographical mobility of labour refers to the ability of workers to move between different areas to find work *(KAA 1 mark)*. General Motors has plants in Luton (extract 1), if these plants close down then labour may not be able to find jobs in other areas *(KAA 1 mark)*. Maybe car workers do not have the information on available jobs in other parts of the country *(KAA 1 mark)*.

C) With reference to Extract 1, discuss whether the demand for all cars is likely to be income elastic. (6)

Income elasticity of demand (YED) measures the responsiveness of demand to a change in income *(KAA 1 mark)*. Cars are a normal good so as income rises, demand rises, cars thus have a positive YED *(KAA 1 mark)*. A 1% fall in income lead to a 21.8% fall in demand (extract 1) *(KAA 1 mark)*. This means $YED = \frac{-21.8\%}{-1\%} = 21.8$ so YED>1 and is elastic *(KAA 2 marks)*. Whether YED is elastic or inelastic depends on the type of car. A luxury car may have an elastic YED whereas a second hand car may have an inelastic YED *(E 2 marks)*.

*D) With reference to Extract 2 and Figure 2, assess the possible economic effects of the UK government car scrappage scheme. (12)

Consumers will benefit. Anyone who purchases a new car and scraps their 10 year old car receives a grant of £2,000 (extract 2). Consumers essentially benefit from lower car prices so consumer surplus rises *(KAA 2 marks)*. Also, car scrap dealers will benefit. More cars will be scrapped so car scrap dealers will have more scrap to sell and thus can make more profit *(KAA 2 marks)*. Moreover, the environment will benefit. A car made in 2008 emits less carbon dioxide than a car made in 1997 (figure 2). So there will be less external costs like global warming and less environmental damage *(KAA 2 marks)*.

The benefits depend on the magnitude of the car scrappage scheme. As the UK's scheme is only worth £300 million compared to Germany's £4.49 billion (extract 2), the UK's scheme may not have that much effect *(E 2 marks)*. Furthermore, motor firms may not benefit much. Motor firms must pay half of the £2,000 grant to consumers (extract 2) so they will not receive that much more profit *(E 2 marks)*. Additionally, there will be an opportunity cost. The government must pay for half of the £2,000 grant so they may need to increase taxes or reduce spending on other sectors like education to pay for the scheme *(E 2 marks)*.

*E) Evaluate the possible economic effects of a decrease in fuel taxes, as recommended by The Society of Motor Manufacturers and Traders. Use an appropriate diagram in your answer. (12)

Fuel duty is an indirect tax, it is a tax on expenditure **(KAA 1 mark)**.
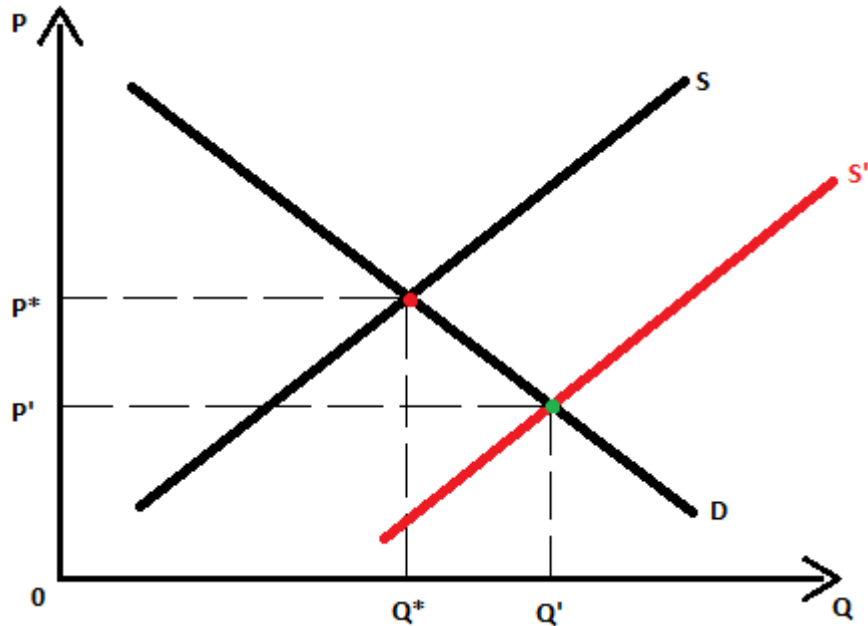
Supply shifts right from S to S', price falls from P* to P' and quantity rises from Q* to Q' **(KAA 4 marks)**.

A fall in fuel duty means it is cheaper to drive so consumers will demand more fuel and, because they are complements, will demand more cars **(KAA 2 marks)**. Also, motor companies may benefit from higher profits if demand for cars rises **(KAA 2 marks)**.

The magnitude of the fuel tax cut will affect the size of the effects. A small cut may have little effect because fuel duty is a major fraction of fuel prices *(E 2 marks)*. Additionally, demand for fuel is price inelastic, so a fuel duty cut may not have much effect. A large fall in fuel prices will only lead to a small rise in demand *(E 2 marks)*. Finally, more cars will be on the road so there will be more road congestion, environmental damage and more external costs like air or noise pollution *(E 2 marks)*.

Model Answers Unit 1 January 2011

9) A) With reference to Extract 1, explain why the price elasticity of supply of sugar is likely to change over time. (4)

Price elasticity of supply (PES) measures the responsiveness of supply to a change in price *(KAA 1 mark)*. In the short-run sugar should have an inelastic PES because it takes time to plant, grow and harvest. It takes up to 2 years for supply to respond to demand changes (extract 1) *(KAA 2 marks)*. In the long-run sugar may have an elastic PES because farmers can grow more *(KAA 1 mark)*.

B) With reference to Figure 1 and Extract 1, explain why the price of sugar 'more than doubled over the last few years'. Use a supply and demand diagram in your answer. (6)

The price of sugar rose because demand increased and supply decreased. Demand increased because of speculative buying of sugar (extract 1) *(KAA 1 mark)*. Supply decreased because of heavy rainfall in Brazil (extract 1) *(KAA 1 mark)*.
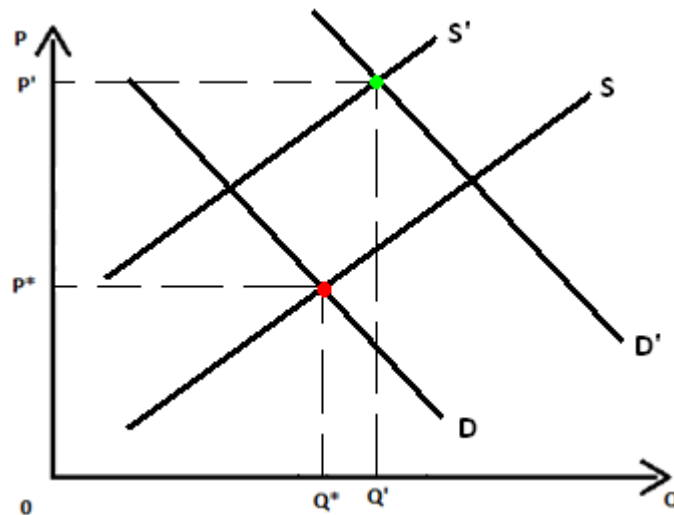
Supply shifts left from S to S', demand shifts right from D to D', price rises from P* to P' and quantity falls from Q* to Q' *(KAA 4 marks)*.

C) With reference to the last paragraph in Extract 2 and your own KAA, discuss whether chocolate and other confectionery are likely to be normal or inferior goods. (10)

Income elasticity of demand (YED) measures the responsiveness of demand for a good to a change in income *(KAA 1 mark)*. A normal good is one in which, as incomes rise, demand rises *(KAA 1 mark)*. A normal good has a positive YED *(KAA 1 mark)*. An inferior good is one in which, as incomes rise, demand falls *(KAA 1 mark)*. An inferior good has a negative YED *(KAA 1 mark)*. Chocolate is likely to be an inferior good because during the recession consumers bought more chocolate (extract 2) *(KAA 2 marks)*.

However, the rise in demand for chocolate may have been due to advertising or a change in consumer preferences. Chocolate may actually be a normal good *(E 2 marks)*. Whether chocolate is a normal or inferior good depends on its quality. Luxury chocolate may be a normal good whilst lower quality chocolate may be an inferior good *(E 2 marks)*.

*D) With reference to Extract 2, evaluate the likely effects of the increase in the price of sugar on the producers of chocolates and other confectionery. Illustrate your answer with a supply and demand diagram. (14)

A rise in sugar prices will increase the production costs of chocolate firms *(KAA 1 mark)*. Chocolate firms' supply curve will shift left from S to S', chocolate prices will rise from P* to P' and the quantity of chocolate will fall from Q* to Q' *(KAA 2 marks + Diagram 2 marks)*.
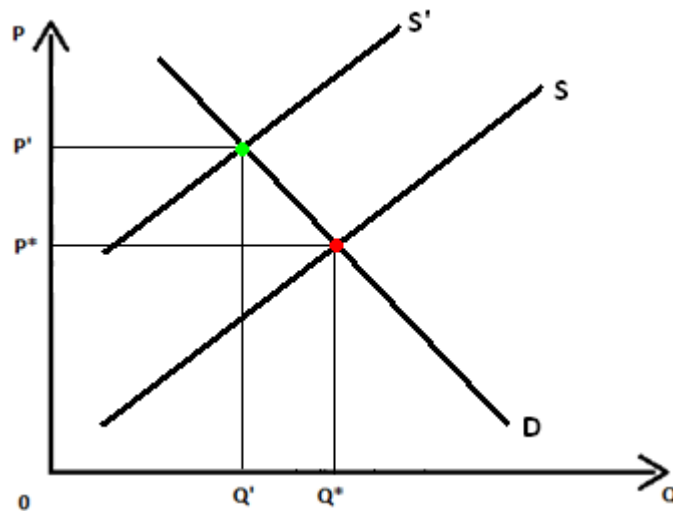

Chocolate firms' producer surplus will fall *(KAA 1 mark)*. Also, chocolate firms' profits will fall because their costs are higher *(KAA 1 mark)*. Moreover, some chocolate firms may go out of business if their costs are too high *(KAA 1 mark)*.

The extent of the effects on chocolate firms depends on the magnitude of the rise in sugar prices. An 80% increase in sugar prices (extract 1) will likely increase chocolate firms' costs by a significant amount *(E 2 marks)*. Although the price of sugar may be rising, the price of milk has fallen (extract 2). The fall in milk prices may cancel out the rise in sugar prices so that chocolate firms' costs do not change *(E 2 marks)*. Additionally, sugar prices may fall again in the future meaning chocolate firms' costs will fall and their profits will rise *(E 2 marks)*.

*E) To what extent is market failure likely to result from the consumption and production of sugar?

Market failure occurs when the price mechanism leads to an inefficient allocation of resources *(KAA 1 mark)*. Market failure can be caused if there are external costs. An external cost is an uncompensated cost imposed on third parties not directly involved in a market transaction *(KAA 2 marks)*.
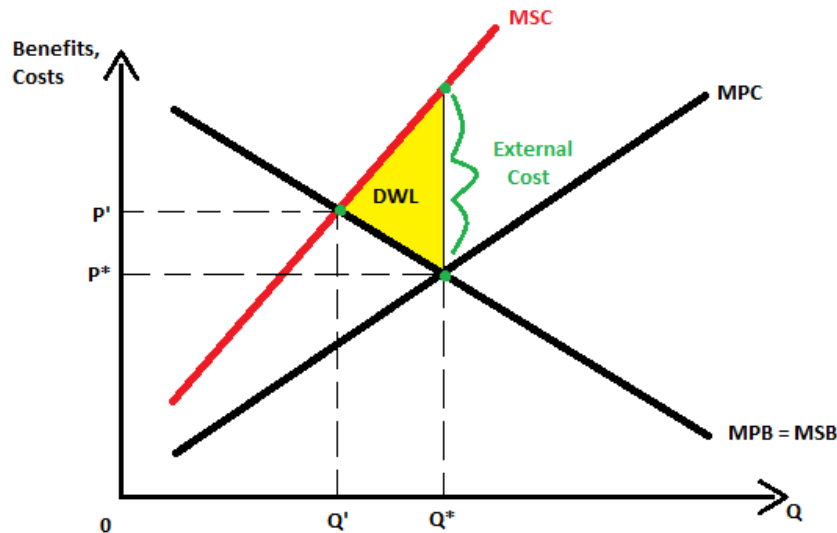
The free market equilibrium is at P* and Q*. The socially optimum equilibrium is at P' and Q'. A negative externality occurs because $MSC > MPC$, this results in a welfare loss to society *(KAA 4 marks)*.

The external costs of sugar consumption include innocent third parties having to pay more taxes for increases NHS spending to help people recover from sugar related illnesses. Also, firms will suffer lower profits because their staff may take many days off work with sugar related illnesses *(KAA 2 marks)*. The external costs of sugar production include farmers damaging the rainforest, soil and wildlife *(KAA 1 mark)*.

The magnitude of sugar consumption determines the external cost. Many people in developed countries consume sugar and suffer from sugar related illnesses such as diabetes meaning the external costs are significant *(E 2 marks)*. However, artificial sweeteners may develop and replace sugar in the future. Artificial sweeteners are a healthy alternative to sugar so external costs will fall *(E 2 marks)*. Additionally, sugar production may bring benefits to a society that outweighs the costs. For example, especially for LDCs, sugar can be exported and earn an economy export revenues *(E 2 marks)*.

10) A) Explain one reason why the government intervenes in labour markets by imposing a National Minimum Wage. (4)

The National Minimum Wage (NMW) is the legal minimum hourly rate of pay *(KAA 1 mark)*. In October 2009, the NMW was £5.80 per hour *(KAA 1 mark)*. The government may impose a NMW to decrease poverty. A NMW will increase wages, thus poor people will be able to buy more goods and services *(KAA 2 marks)*.

B) With reference to the last paragraph of Extract 2, analyse why government failure might result from an increase in the National Minimum Wage. (6)

Government failure occurs when government intervention leads to an inefficient allocation of resources *(KAA 2 marks)*. If the government increase the National Minimum Wage (NMW) then employers may pay their workers cash-in-hand to pay lower than the NMW and avoid paying taxes (extract 2). There is government failure because income tax revenue falls *(KAA 2 marks)*. Also, employers may hire illegal workers as they do not have to be paid the NMW *(KAA 2 marks)*.

C) Assess the likely benefits of division of labour to hairdressing salons. (10)

The division of labour occurs when labour specializes in the production process and each worker takes on a specific role *(KAA 1 mark)*. A benefit to salons is that profits rise because efficiency rises and unit labour costs fall *(KAA 3 marks)*. Also, as one person does the haircutting, one person sweeps the floor and cleans and one person works the till, each worker is repeating their role so they become more skilled and faster at their job *(KAA 2 marks)*. Furthermore, salons will incur lower training costs as they only have to train each worker for one role *(KAA 2 marks)*.

However, the division of labour may make the salon depend on one specific worker and if they are off ill then the salon may have to close until that worker returns *(E 2 marks)*. Also, the division of labour leads to boredom because it may make a job monotonous, meaning the hairdressers may make mistakes and incur extra costs for salons *(E 2 marks)*.

*D) With reference to Extract 2, to what extent might an increase in the National Minimum Wage lead to job losses in hairdressing? Illustrate your answer with an appropriate labour market diagram. (14)

The National Minimum Wage (NMW) increased by 7p (extract 1) *(KAA 1 mark)*. The rise in the NMW means salons' wage costs rise so their profits fall. Salons may then fire workers to decrease their costs and increase their profits *(KAA 3 marks)*.
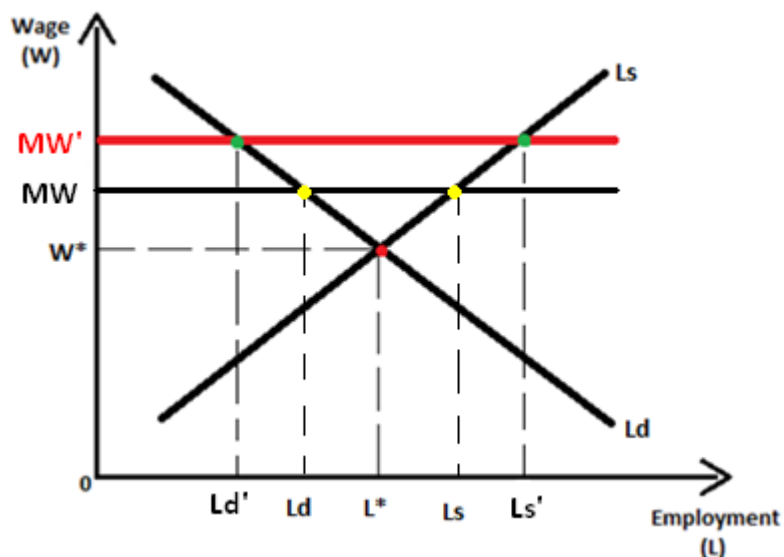
The minimum wage rises from MW to MW' and unemployment rises from Ls-Ld to Ls'-Ld' *(KAA 5 marks)*.

However, the magnitude of the rise in the NMW is small. It only increased by 7p (extract 1) so salons' costs will not rise by much and thus they may not need to fire many workers *(E 2 marks)*. Also, if hairdressers are paid significantly above the old NMW anyway then the new NMW that is 7p higher will not make a difference to their pay and thus salons do not need to fire anyone *(E 2 marks)*. Additionally, the rise in the NMW will not lead to many job losses if salons are hiring a lot of illegal workers, the NMW does not apply to illegals so the increase in the NMW will not affect salons' costs *(E 2 marks)*.

*E) Apart from the National Minimum Wage, discuss the factors which might influence the supply of labour to hairdressing or to another occupation of your choice. (14)

One factor affecting the supply of labour to hairdressing is the wage rate. A higher wage rate for hairdressing will encourage workers to supply more labour because they can earn even more money from working *(KAA 2 marks)*. Also, the amount of qualifications needed for hairdressing may affect labour supply. The less qualifications are needed to become a hairdresser, the easier it is to become a hairdresser and thus the higher will be labour supply *(KAA 2 marks)*. Additionally, income tax will affect labour supply. A fall in income tax will encourage hairdressers to work more because they can earn even more money than before *(KAA 2 marks)*. Moreover, the strength of trade unions will affect labour supply. If trade unions for hairdressers are weak then working conditions may be poor and there may be limited holidays, this will reduce the supply of labour *(KAA 2 marks)*.

The magnitude of the wage rate will determine labour supply to hairdressing. If the wage rate in hairdressing is only slightly higher than in other jobs then people may not want to become a hairdresser *(E 2 marks)*. Furthermore, people may be discouraged from becoming a hairdresser even if it has a high wage. This may be because it does not offer much in terms of promotions and career progression, there is only so far one can go in hairdressing *(E 2 marks)*. Finally, a fall in income tax could encourage hairdressers to supply less labour because they could earn the same after-tax wage as before by working less hours *(E 2 marks)*.

Model Answers Unit 1 May 2011

9) A) Using examples, explain the significance of opportunity cost to the increase in government spending on the NHS referred to in Extract 1. (4)

Opportunity cost is the next best alternative foregone *(KAA 1 mark)*. Between 1997-2008, the government increased spending on the NHS by £58.5 billion *(KAA 1 mark)*. The opportunity cost of this would be a decrease in spending on education *(KAA 1 mark)* or higher taxes to pay for the spending *(KAA 1 mark)*.

B) Explain two possible causes of the 'growing demand and cost pressures on the health care budget' (Extract 1, lines 5-6). (6)

A cause could be the ageing population. As more elderly people dominate a population, there is an increase in demand for health care so the government must provide health care and thus the health care budget increases *(KAA 3 marks)*. Another cause could be the increase in staff costs. As the NHS is one of the biggest employers in the UK, staffing costs have inevitably increased and account for 40% of the NHS budget (extract 1) *(KAA 3 marks)*.

C) Examine the possible impact on the production possibility frontier for the economy of the increase in government spending on the NHS referred to in Extract 1. Illustrate your answer with an appropriate diagram. (10)

The production possibility frontier (PPF) shows all the maximum combination of goods an economy can produce if resources are fully and efficiently employed *(KAA 1 mark)*.
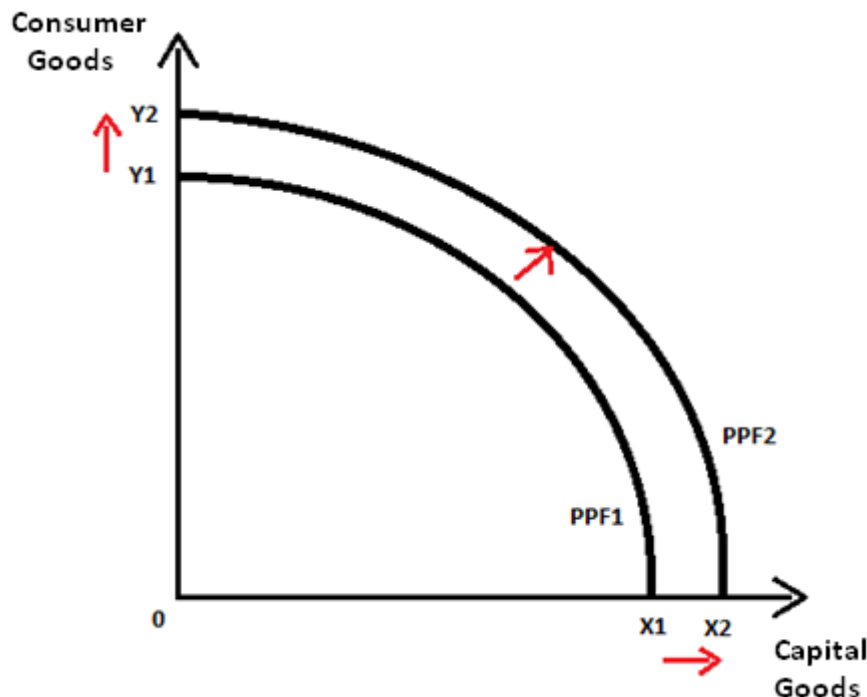

The PPF has shifts right from PPF1 to PPF2 and the potential output of both capital and consumer goods increases *(KAA 3 marks)*.

An increase in spending on the NHS will mean the workforce becomes more efficient. Workers are more productive because they can work harder and longer and take less sick days off work, so more can be produced *(KAA 2 marks)*. The effect on the PPF depends on the magnitude of the increase in government spending on the NHS. An increase of £58.5 billion (extract 1) is a large increase so it should shift the PPF out far rightwards *(E 2 marks)*. However, the increase in spending may be going towards paying staff costs or bureaucratic red tape, these may not lead to a better service of the NHS and thus may not improve the productivity of the UK's workforce *(E 2 marks)*.

*D) Apart from a shift in the production possibility frontier, assess the private and external benefits arising from the consumption of health care. Illustrate your answer with an appropriate diagram. (14)

A private benefit is the benefit to a first or second party directly involved in a market transaction *(KAA 2 marks)*. An external benefit is an unpaid for benefit enjoyed by third parties not directly involved in a market transaction *(KAA 2 marks)*.
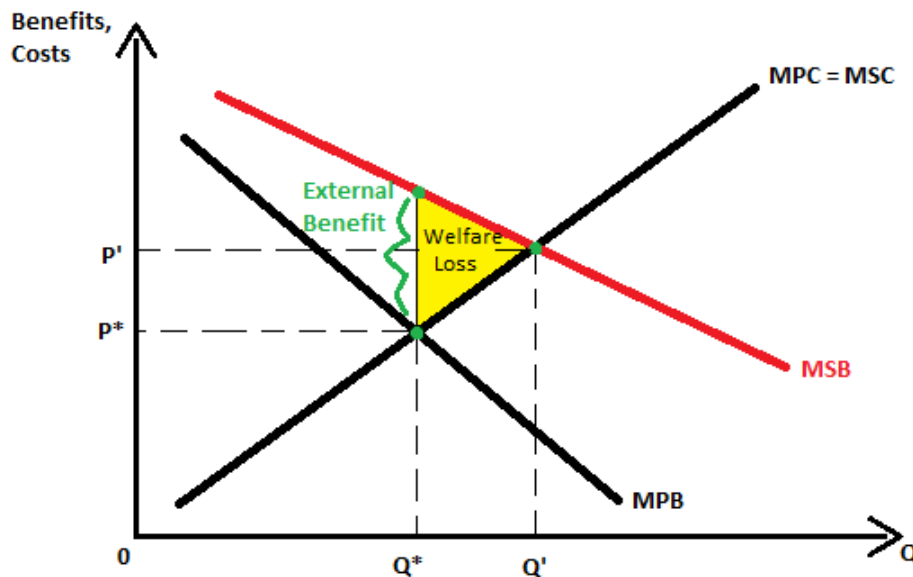
The free market equilibrium is at P* and Q*. The socially optimum equilibrium is at P' and Q'. An external benefit occurs because $MSB > MPB$, this results in a welfare loss to society *(KAA 4 marks)*.

An individual who uses health care and is treated will experience private benefits including increased life expectancy, better living standards and increased income from being able to work longer and harder *(KAA 2 marks)*. An external benefit will be experienced by firms who now have a more productive workforce so they can make more profits. Firms will also benefit because workers will take less days off work *(KAA 2 marks)*.

The effect of the consumption of healthcare depends on the magnitude of the benefits. As over 1 million patients will be treated every 36 hours (extract 1) the private benefits are potentially large *(E 2 marks)*. It is difficult to measure and attach a monetary value of the private and external benefits of healthcare. It may not be possible to measure the private benefit of an individual feeling better from healthcare. This could lead to the under-provision of healthcare because there is asymmetric information, the government do not know how beneficial healthcare is to people *(E 2 marks)*. Also, the opportunity cost of spending more on healthcare may outweigh the private and external benefits. The government may need to decrease spending on education or raise taxes to pay for the NHS *(E 2 marks)*.

*E) To what extent does the information provided suggest evidence of government failure? (14)

Government failure occurs when government intervention leads to an inefficient allocation of resources *(KAA 1 mark)*. An example of government failure is the increase in bureaucracy. This is evident in the faster increase in NHS managerial staff over nurses and doctors (extract1). More doctors and nurses and nurses should be employed because they are the ones who actually treat patients rather than fill in forms *(KAA 2 marks)*. Another example of government failure is the decrease in the number of hospital beds (figure 1). Between 1997-2008, the number of hospital beds fell from roughly 200,000 to 170,000 (figure 1). This suggests an inefficient allocation of resources and that less healthcare is being provided *(KAA 2 marks)*. A further example of government failure is the decrease in productivity. An index of the productivity of NHS workers shows a fall from 100 to 96 between 1997-2007 (figure 3). An unproductive NHS workforce means healthcare will be allocated inefficiently *(KAA 2 marks)*. A last example of government failure is opportunity cost. The government have increased spending on the NHS but resources may have been allocated more efficiently if the government had increased spending on roads or schools *(KAA 2 marks)*.

However, there may not be government failure because patients are being treated quicker in hospitals. The average length of stay in hospitals has decreased from 8.8 to 6.3 days (extract 1) *(E 2 marks)*. Although the productivity of NHS workers has decreased this does not mean that the quality of healthcare has fallen. Hospitals may be providing even better quality healthcare services, making people even healthier than before. Also, the productivity of NHS workers was rising between 2005-2007, this trend may continue *(E 2 marks)*. Additionally, the government have identified what has to be done to increase NHS efficiency. The government have identified the need to decrease purchasing costs, reduce staff sickness, cutting IT investment, making better use of buildings and reducing energy consumption *(E 2 marks)*.

10) A) With reference to the first paragraph of Extract 1, explain the cause of the decrease in copper prices between April and December 2008. Illustrate your answer with a supply and demand diagram. (4)

The price of copper fell because demand fell. Demand for copper fell because of the global recession and also due to less demand from China (extract 1) *(KAA 1 mark)*.
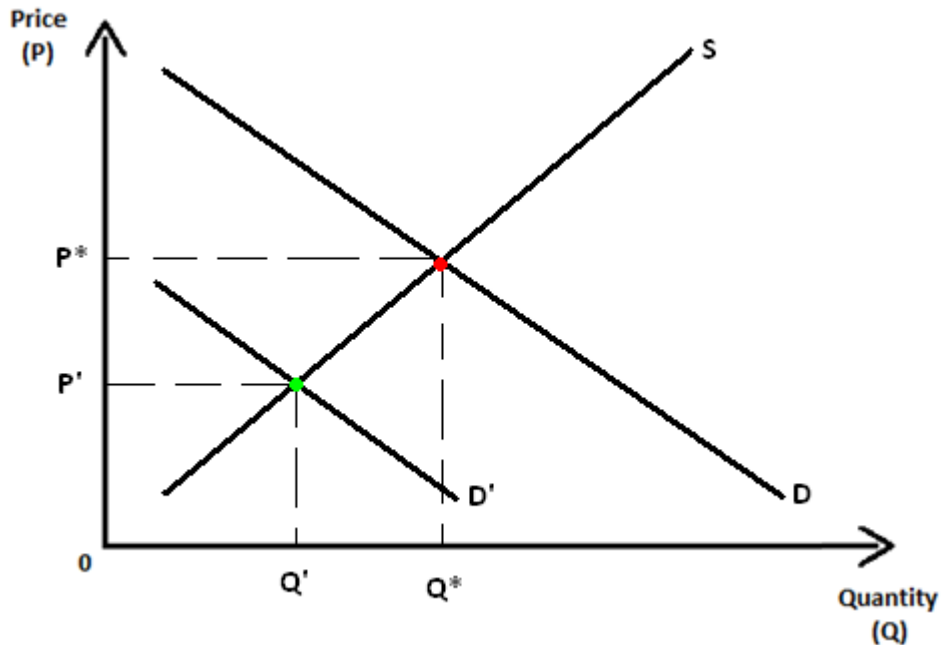

Demand shifts left from D to D', price falls from P* to P' and quantity falls from Q* to Q' *(KAA 3 marks)*.

B) With reference to Extract 1, explain whether you think copper is a normal good or an inferior good. (6)

Income elasticity of demand (YED) measures the responsiveness of demand for a good due to a change in income *(KAA 1 mark)*. A normal good is one in which, as incomes rise, demand rises *(KAA 1 mark)*. A normal good has a positive YED *(KAA 1 mark)*. An inferior good is one in which, as incomes rise, demand falls *(KAA 1 mark)*. An inferior good has a negative YED *(KAA 1 mark)*. Copper is likely to be a normal good because during the recession copper demand fell *KAA 2 marks)*.

C) With reference to the information provided and your own KAA, assess whether the supply of copper is likely to be price elastic or price inelastic. (10)

Price elasticity of supply (PES) measures the responsiveness of supply to a change in price *(KAA 1 mark)*. If PES is inelastic, a change in price leads to a less than proportionate change in quantity supplied *(KAA 1 mark)*.
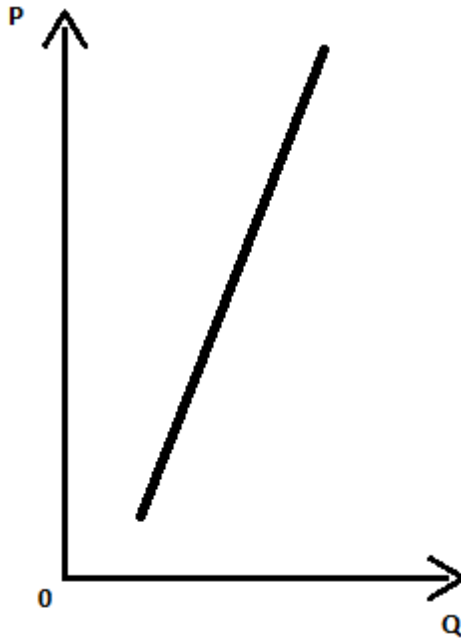

An inelastic supply curve is steep *(KAA 1 mark)*.

Copper is likely to have an inelastic PES because the planning time for building the Pebble Mill copper mine is very lengthy and it faces protests from locals (extract 2) *(KAA 2 marks)*. Also, it may take a long time to train the workforce to mine, so supply may not change much in the short-run *(KAA 2 marks)*. Furthermore, it takes a lot of inputs to produce copper, a lot of railway lines and maybe the construction of a dam. This means it takes a long time for copper supply to adjust *(KAA 2 marks)*.

However, copper may be made to have an elastic PES if copper is stockpiled. As price changes it will then be easier for copper supply to respond because copper can be supplied from a stockpile *(E 2 marks)*. Ultimately, copper is a finite resource, its supply will eventually run out and thus its PES is inelastic *(E 2 marks)*.

*D) Evaluate the likely economic effects of a guaranteed minimum price scheme to reduce fluctuations in the price of copper. Illustrate your answer with a supply and demand diagram. (14)

A minimum price is a price floor set by the government, the market price cannot fall below it. The government must buy up any excess supply at this minimum price *(KAA 2 marks)*.
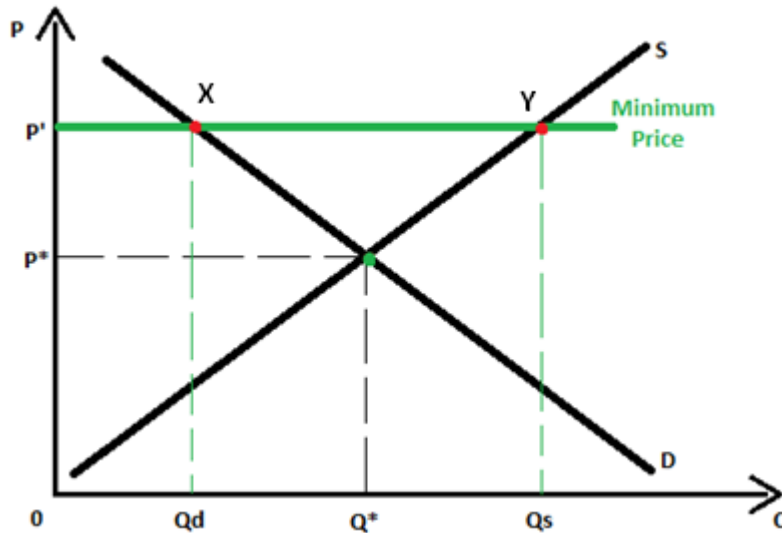

A minimum price causes price to rise to P', quantity demanded to fall to Qd and quantity supplied to rise to Qs. Resultantly there is excess supply $Qs - Qd$. The government must spend a total of XYQdQs *(KAA 4 marks)*.

One effect is an increase in profits for copper producers. Copper producers receive a higher price for their output and can sell more than before so their revenue and profits should rise *(KAA 2 marks)*. Another effect is that investment should rise. Copper producers will receive a guaranteed minimum price so copper prices fluctuate less. Copper prices are more stable, making it easier for copper producers to plan and thus invest *(KAA 2 marks)*.

However, the minimum price scheme will not be effective if it is set slightly above equilibrium. Moreover, the minimum price scheme will have no effect if it is set below equilibrium *(E 2 marks)*. Also, the minimum price scheme will stop prices fluctuating below the minimum price but not above it. So it may not help create enough price stability to help investment *(E 2 marks)*. Finally, it may be very costly for the government to buy up the surplus copper. The government may not have the funds to do this on a consistent basis. Even if they can, there may be an opportunity cost of lost spending on other sectors of the economy for example health and education *(E 2 marks)*.

*E) Using the concept of external costs, assess the possible economic effects of building the Pebble Mill copper mine in Alaska, referred to in extract 2. Use an appropriate diagram in your answer. (14)

A negative externality is an uncompensated cost imposed on third parties not directly involved in a market transaction *(KAA 2 marks)*.
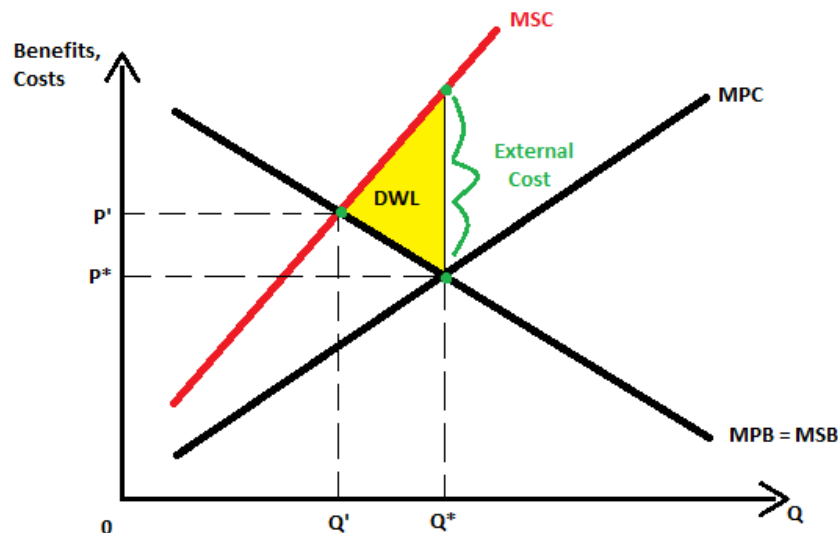
The free market equilibrium is at P* and Q*. The socially optimum equilibrium is at P' and Q'. A negative externality occurs because $MSC > MPC$, this results in a welfare loss to society *(KAA 4 marks)*.

Building the copper mine will cause an external cost because it may lead to pollution and harm locals. Maybe air pollution harms innocent third party communities who then suffer ill health *(KAA 2 marks)*. Also, the fishing and canning industries will lose $400 million (extract 2). Maybe building the copper mine causes water pollution that kills fish. Maybe people who would be employed as fishermen are employed at the copper mine. Both of these will harm the fishing industry *(KAA 2 marks)*.

As the fishing and canning industries will suffer an estimated $400 million loss, the magnitude of the external cost is significant. The fishing industry could potentially be destroyed in the future *(E 2 marks)*. It is difficult to attach a monetary value to, and thus estimate, external costs. It would be difficult to measure the impact that building the copper mine has on the stock of fish in local waters *(E 2 marks)*. Maybe the external costs will be outweighed by the external benefits. Building the copper mine will likely generate jobs for locals, exports to improve the country's current account and tax revenue for the government to improve Alaska's infrastructure *(E 2 marks)*.

Model Answers Unit 1 January 2012

9) A) With reference to figure 1 and the second paragraph in extract 1, explain the causes of the increase in price of beef. Use a supply and demand diagram in your answer. (6)

The price of beef increased because supply shifted left. This was caused by the rise in the price of cattle feed *(KAA 1 mark)* and the drought in Australia *(KAA 1 mark)*. Each of these caused production costs to increase and thus supply to decrease *(KAA 1 mark)*.
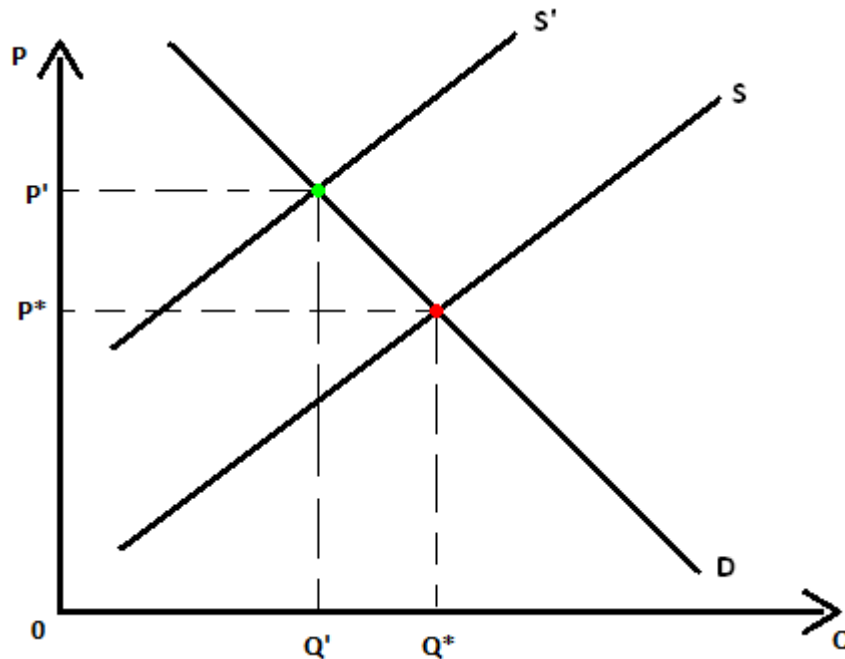
Supply shifts left from S to S', price rises from P* to P' and quantity falls from Q* to Q' *(KAA 4 marks)*.

B) Using cross price elasticity of demand, discuss the likely relationship between the price of beef and the demand for chicken and fish. (6)

Cross price elasticity of demand (XED) measures the responsiveness of demand for good A to a change in price f good B *(KAA 1 mark)*. Chicken and fish are substitutes *(KAA 1 mark)* thus they have a positive XED *(KAA 1 mark)*. As beef prices rose, fast food restaurants promoted chicken burgers and fish fillets (extract 1) *(KAA 1 mark)*. However, beef may be weak substitutes with chicken and fish because beef is a red meat whilst chicken and fish are white meats *(E 2 marks)*.

C) Assess whether beef and beef burgers are likely to be normal goods or inferior goods. (8)

Income elasticity of demand (YED) measures the responsiveness of demand for a good to a change in income *(KAA 1 mark)*. A normal good is one in which, as incomes rise, demand rises *(KAA 1 mark)*. A normal good has a positive YED *(KAA 1 mark)*. An inferior good is one in which, as incomes rise, demand falls *(KAA 1 mark)*. An inferior good has a negative YED *(KAA 1 mark)*. Beef burgers are likely to be inferior goods because during the recession consumers switched to cheaper burger bars (extract 1) *(KAA 2 marks)*. However, whether beef is a normal or inferior good depends on its quality. Luxury beef may be a normal good whilst lower quality beef may be an inferior good *(E 2 marks)*.

*D) Using the concepts of external costs and market failure, examine the possible economic effects of farmers 'burning more rainforest to turn land into cattle ranches and into fields for growing crops'. (Extract 2, lines 5-6). Use an appropriate diagram in your answer. (14)

An external cost is an uncompensated cost imposed on third parties not directly involved in a market transaction *(KAA 2 marks)*. Market failure occurs when the price mechanism leads to an inefficient allocation of resources *(KAA 1 mark)*.
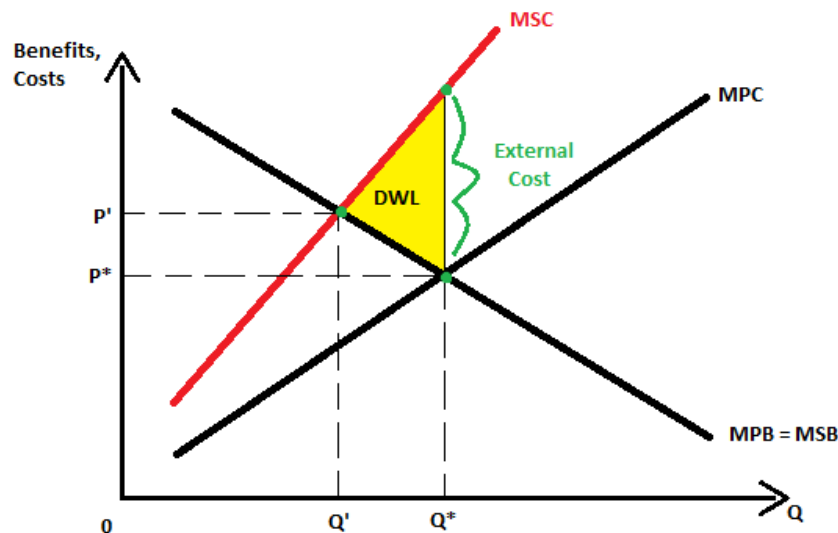

The free market equilibrium is at P* and Q*. The socially optimum equilibrium is at P' and Q'. A negative externality occurs because $MSC > MPC$, this results in a welfare loss to society *(KAA 4 marks)*.

Destroying the rainforest will lead to an external cost because, with less trees, there will be an increase in carbon dioxide in the atmosphere and thus global warming will speed up. This will have a negative impact on all the innocent third parties around the globe *(KAA 2 marks)*. Another external cost will be the loss of animals in the rainforest and the decrease in biodiversity as certain plants may become extinct *(KAA 2 marks)*.

As 400 million tonnes of carbon dioxide will be released into the atmosphere, the magnitude of the external cost is significant. Global warming could potentially destroy the earth in the future *(E 2 marks)*. It is difficult to attach a monetary value to, and thus estimate, external costs. It would be difficult to measure the impact that burning down the rainforest has on the lives of those on the other side of the planet *(E 2 marks)*. Maybe the external costs will be outweighed by the external benefits. Burning down the rainforest will create jobs for locals and increase farm land for beef so beef prices should eventually fall and poverty may fall *(E 2 marks)*.

*E) Discuss the possible economic effects of the government providing subsidies to support sustainable development projects such as those referred to in Extract 2. (14)

Sustainable development means future generations have access to resources and can continue their own development *(KAA 1 mark)*. A subsidy is a grant given by the government to firms to decrease their production costs and encourage production *(KAA 2 marks)*.
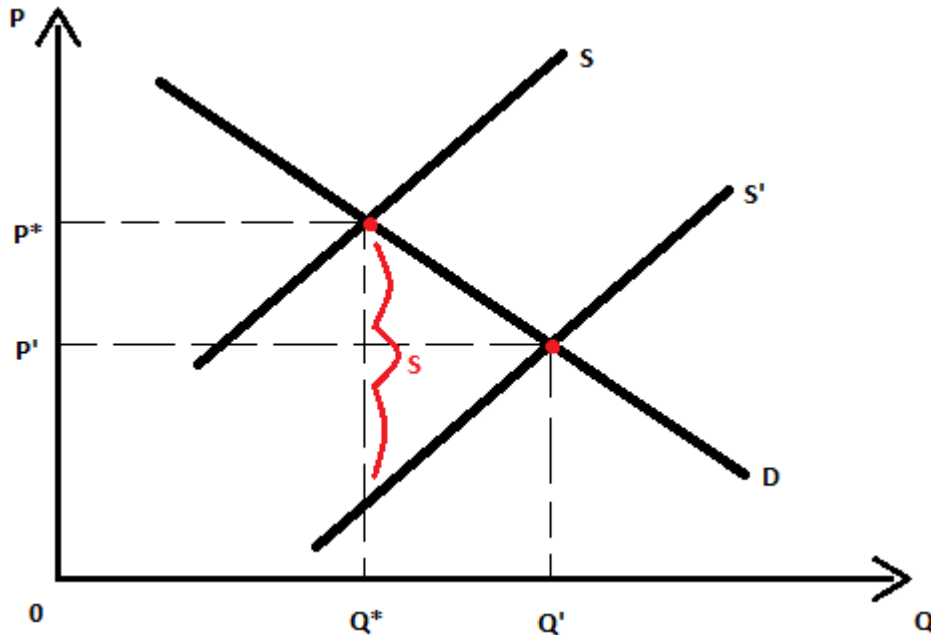

A subsidy shifts the supply curve right from S to S', causes price to fall from P* to P' and causes quantity to rise from Q* to Q' *(KAA 3 marks)*.

A subsidy will increase both consumer surplus and producer surplus *(KAA 1 mark)*. Moreover, a subsidy to replant trees will benefit locals because there will be a reduction in deforestation, less carbon emissions and thus less external costs *(KAA 2 marks)*.

However, government failure could manifest and undermine the sustainable development project. Maybe the Brazilian government is corrupt and thus the subsidies do not go to those who will make the best use of them *(E 2 marks)*. Also, the subsidy may create an opportunity cost because the government may need to decrease spending on education or healthcare or increase taxes to pay for the subsidy *(E 2 marks)*. Additionally, the subsidy could lead to the sustainable development project becoming reliant on subsidies. This will cause the project to become inefficient and dependent on future subsidies *(E 2 marks)*.

10) A) With reference to the last paragraph of Extract 1, explain why house prices fell in September 2010. Illustrate your answer with a supply and demand diagram. (6)

House prices fell by 3.6% in September 2010 (extract 1) *(KAA 1 mark)*. House prices fell because rising unemployment and limited wage growth (extract 1) caused a decrease in demand for houses *(KAA 2 marks)*.
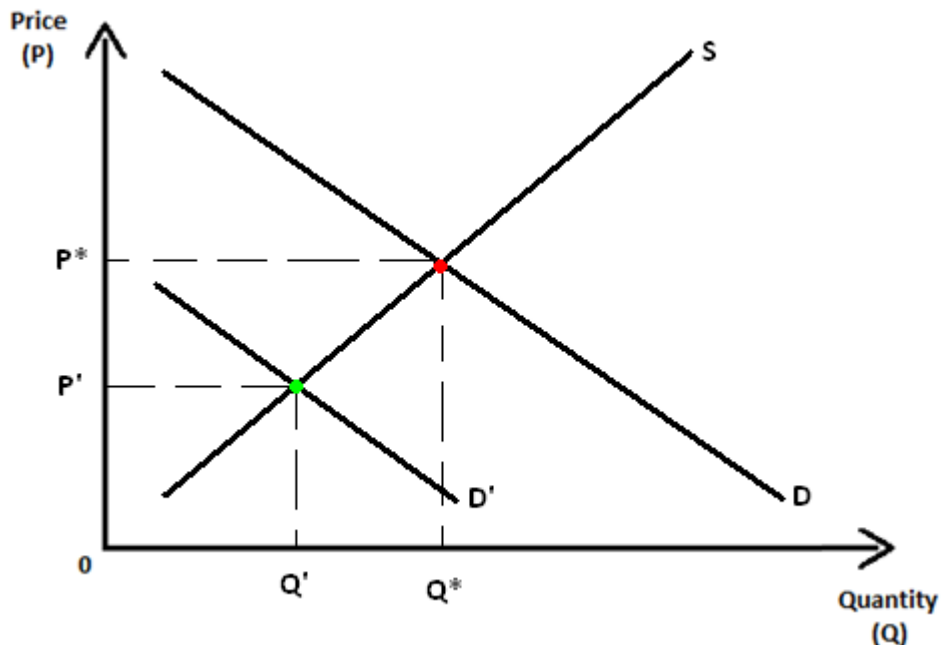
Demand shifts left from D to D', price falls from P* to P' and quantity falls from Q* to Q' *(KAA 3 marks)*.

B) With reference to Extract 1 and Figure 2, assess the likely impact of falling house prices on house-building firms. (8)

An impact may be a fall in profits. Lower house prices means house-building firms must sell their newly built houses for a lower price and thus make less profit. Some house-building firms may even make a loss and leave the industry *(KAA 2 marks)*. 6 of the7 largest house-building firms suffered a fall in share prices (figure 2) *(KAA 1 mark)*. House-building firms lost more than £1 billion in share value *(KAA 1 mark)*. Another effect is rising unemployment. House-building firms suffered lower demand for houses and, because labour is a derived demand, firms will require less construction workers to build houses so unemployment rises *(KAA 2 marks)*. The effect of falling house prices depends on its magnitude. A small fall in house prices may not have much effect. Although, the fall of 3.6% in September 2010 alone (extract 1) means the magnitude is large and will have a significant effect on house-building firms *(E 2 marks)*.

C) Discuss whether the supply of new housing is likely to be price elastic or price inelastic. (6)

Price elasticity of supply (PES) measures the responsiveness of supply to a change in price *(KAA 1 mark)*. Supply of new housing is likely to be inelastic in the short-run because it takes time to build houses. The foundations must first be built, then the structure of the house and then the utilities etc *(KAA 2 marks)*. Additionally, firms may first need to obtain planning permission to build a house, this may be a long bureaucratic process *(KAA 2 marks)*. But, if there are many unemployed construction workers then PES may be elastic because house-building firms can quickly hire new construction workers to build houses *(E 2 marks)*.

*D) To what extent might falling house prices help 'first-time buyers to get on to the property ladder' (*Extract 2, lines 3 and 4*)? (14)

Lower house prices means housing is more affordable so first-time buyers who may be young with only a little bit of savings may be able to buy their first house and get on the property ladder. Because house prices are expected to fall a further 10% in 2011 (extract 1), it should make it much easier for first-time buyers to get on the property ladder *(KAA 2 marks)*. Lower house prices also means a lower mortgage so more first-time buyers should be able to afford a house. Between 2007-2010, monthly mortgage repayments have fallen from 50% to 35% of average take home pay (figure 3) *(KAA 2 marks)*. Moreover, lower house prices means lower interest rates, so mortgage repayments should be even lower meaning it should be even more easier for first-time buyers to get on the property ladder *(KAA 2 marks)*. Furthermore, lower house prices should help those first-time buyers who have parental support to help them with a cash deposit or to act as a guarantee on a mortgage *(KAA 2 marks)*.

However, lower house may make it harder for first-time buyers to get on the property ladder because banks require a higher cash deposit. This means it will take longer for first-time buyers to save up for a deposit on a house *(E 2 marks)*. Banks may also fail to pass on lower interest rates to first-time buyers. Banks are not required to cut interest rates for first-time buyers so it may not become any easier for them to get on the property ladder *(E 2 marks)*. Finally, falling house prices indicates a recession and rising unemployment, making it more difficult for first-time buyers to get on the property ladder because banks will not lend to people who may become unemployed as they are at risk of default *(E 2 marks)*.

*E) Discuss the likely economic effects of 'a 30% cut in government subsidies for new build affordable homes' (Extract 2, line 7). Use an appropriate diagram in your answer. (14)

A subsidy is a grant given by the government to producers to lower costs and increase production *(KAA 1 mark)*. Reducing subsidies means house-building firms' costs rise *(KAA 1 mark)*.
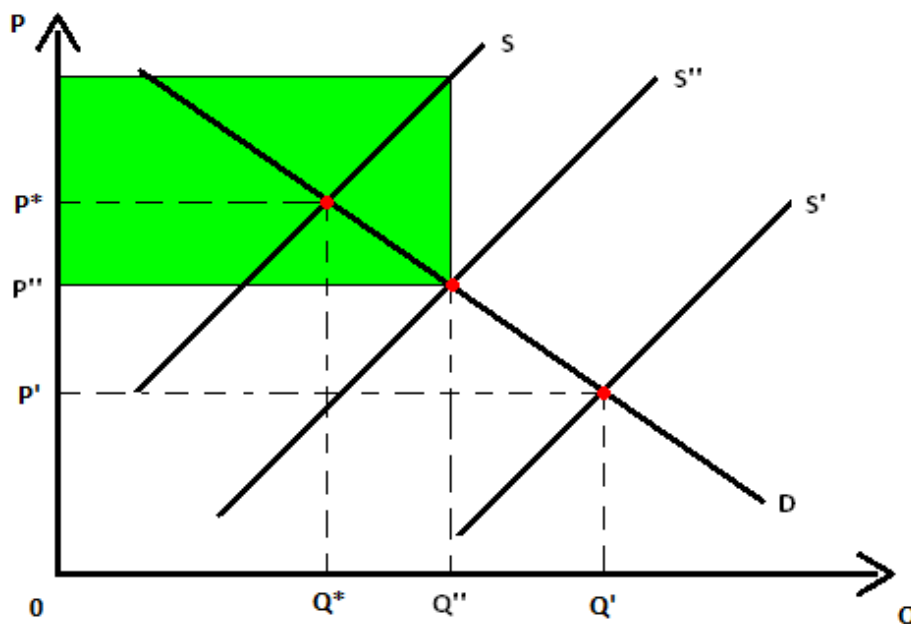
A cut in the subsidy shifts supply left from S' to S'', price rises from P' to P'' and quantity falls from Q' to Q''. The shaded area is government spending on the subsidy *(KAA 4 marks)*.

A cut in subsidies will cause house prices to rise and decrease the quantity of new housing so it becomes harder for first-time buyers to buy a house. As house prices are higher, mortgage repayments will be higher and maybe out of reach for first-time buyers *(KAA 2 marks)*. Also, higher house prices may decrease the geographical mobility of labour as it will be even more costly for workers to move between different areas to find work *(KAA 2 marks)*.

The effects depend on the magnitude of the cut in the subsidy. A small cut in the subsidy will have limited impact. Although, a 30% cut is large so it will have a significant effect for example, it may become extremely difficult for first-time buyers to get on the property ladder *(E 2 marks)*. Also, the effects depend on the speed in which the government cut the subsidy. If the government cut the subsidy gradually over a number of years then it may not have much of an effect because agents will have time to adjust *(E 2 marks)*. Moreover, some people will benefit. For example, homeowners who want to sell their house will receive a higher price. Other homeowners will benefit from a wealth effect because, as house prices rise, homeowners can take out larger loans and increase their consumption *(E 2 marks)*.