

# **EXAMINATION**

September 2006

## **Subject CT7 — Economics Core Technical**

### **EXAMINERS' REPORT**

#### **Introduction**

The attached subject report has been written by the Principal Examiner with the aim of helping candidates. The questions and comments are based around Core Reading as the interpretation of the syllabus to which the examiners are working. They have however given credit for any alternative approach or interpretation which they consider to be reasonable.

M A Stocker  
Chairman of the Board of Examiners

November 2006

## Comments

Comments on solutions presented to individual questions for this September 2006 paper are given below.

### **Questions 1–26**

*This section was generally well answered but there were a significant amount of wrong responses to questions 1 and 2.*

### **Question 27**

*This question was generally well answered but significant numbers did not label the axes well.*

### **Question 28**

*Parts (i) and (ii) were generally well answered. It should be noted that elasticity calculations of  $-1$ ,  $-0.8$  (or  $1$  and  $0.8$ ) were allowed as correct answers.*

*Part (iii) caused some problems. Many candidates simply calculated the change in the Total Revenue i.e.  $-\text{£}100$  rather than the Marginal Revenue per unit.*

### **Question 29**

*Most candidates did well some of the better candidates recognised that negative marginal utility might occur and that this can be shown using the Total Utility diagram.*

### **Question 30**

*Generally well answered.*

### **Question 31**

*Part (i) was answered well. Diagrams were usually clear and accurate, the most common error related to failure to recognise that  $AVC1$  gets close to  $AC1$  as output rises.*

*Part (ii) was in general poorly answered, primarily because of a failure to recognise the incompatibility between Economies of Scale necessitating large firms and the assumption that each firm in Perfect Competition would account for a very small share of the market. Many candidates wrongly seemed to believe it had something to do with being restricted to normal profits in the long run.*

### **Question 32**

*Generally well answered.*

### **Question 33**

*Generally well answered.*

**Question 34**

*Generally well answered with most candidates getting good marks.*

**Question 35**

*Parts (i), (ii) and (iii) were generally well answered.*

*Part (iv) was poorly answered.*

**Question 36**

*Generally well answered.*

*In part (iii) a significant number of candidates answered that the euro was expected to depreciate when the correct answer is that the euro is expected to appreciate.*

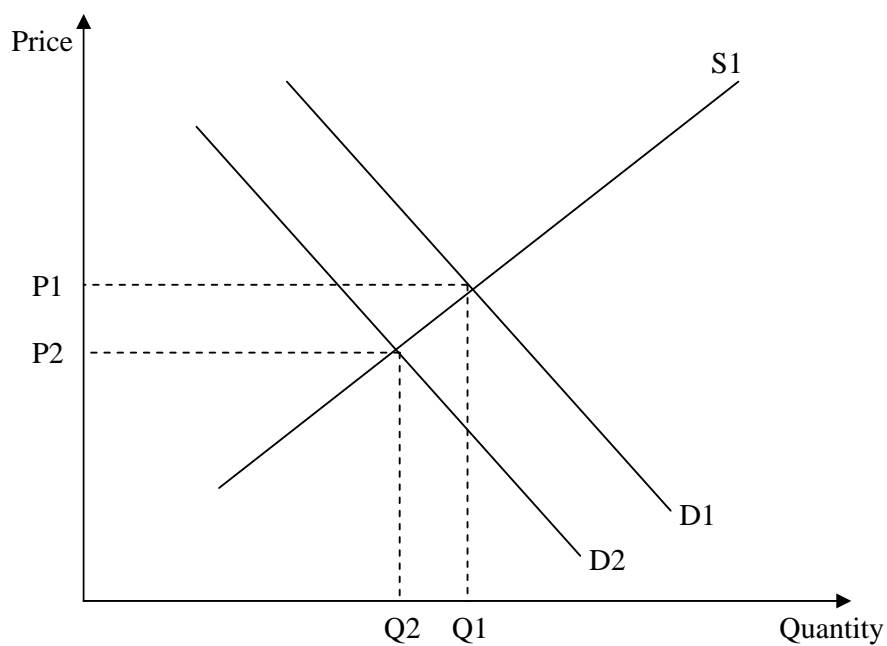
**Question 37**

*Part (i) Overall, answers to this part of the paper were disappointing. Monetary and Fiscal policies were usually clearly defined and some disadvantages (especially crowding out effects) were recognised and explained. Fiscal policy was often dealt with more thoroughly. Those that did attempt to discuss problems arising in an open economy often produced superficial or inaccurate comments. A large number of answers made no reference to exchange rates at all despite the fact that exchange rate changes are significantly affected by changes in monetary and fiscal policy. Only the very best candidates referred to the problems associated with time lags and the business cycle.*

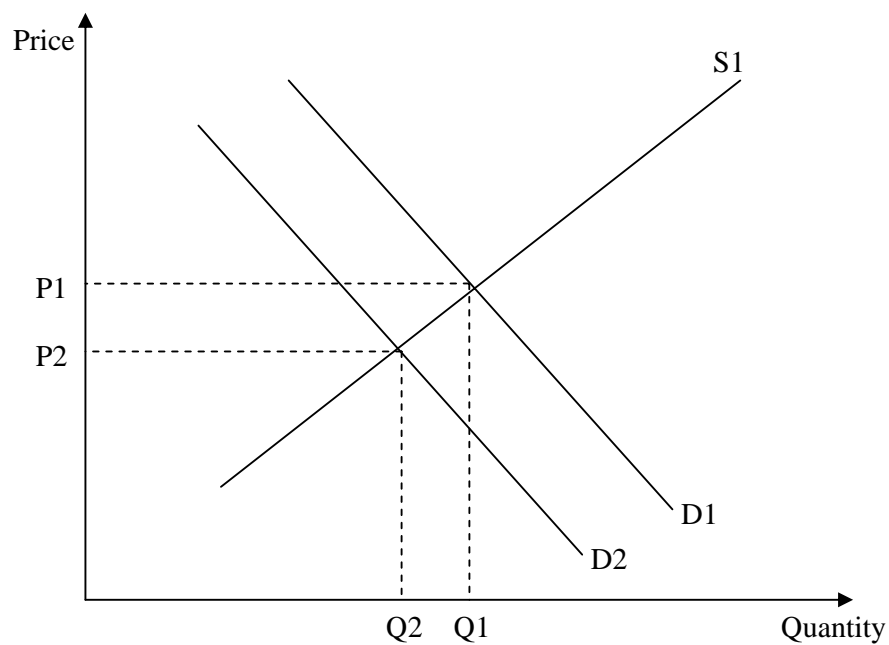
*Part (ii) answers tended to lack depth. Many candidates did not explain what the current account was in their answers. Most marks were gained for devaluation discussion which incorporated both Marshall Learner condition and the J-curve effect. Tight fiscal and monetary policies were often dealt with in a very cursory manner. Far too many candidates discussed a whole range of microeconomic measures thus gaining no marks and wasting valuable time. The question specifically asked candidates to look at macroeconomic measures.*

|           |   |
|-----------|---|
| <b>1</b>  | A |
| <b>2</b>  | C |
| <b>3</b>  | C |
| <b>4</b>  | B |
| <b>5</b>  | D |
| <b>6</b>  | C |
| <b>7</b>  | D |
| <b>8</b>  | B |
| <b>9</b>  | B |
| <b>10</b> | C |
| <b>11</b> | C |
| <b>12</b> | C |
| <b>13</b> | B |
| <b>14</b> | C |
| <b>15</b> | B |
| <b>16</b> | A |
| <b>17</b> | D |
| <b>18</b> | B |
| <b>19</b> | B |
| <b>20</b> | B |
| <b>21</b> | A |
| <b>22</b> | D |
| <b>23</b> | C |
| <b>24</b> | C |
| <b>25</b> | C |
| <b>26</b> | A |

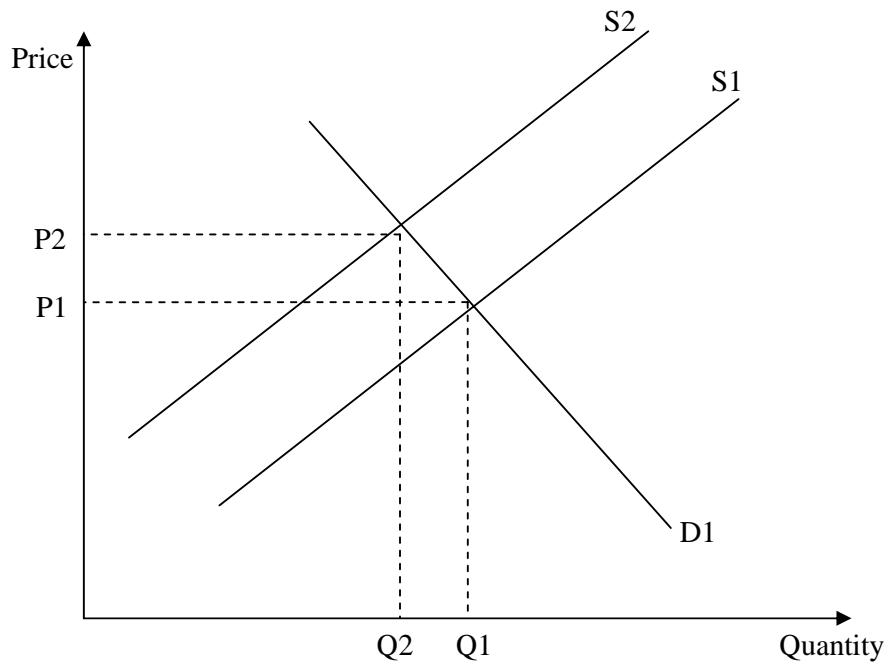
- 27** (i) A shift to the left of the demand curve from D1 to D2



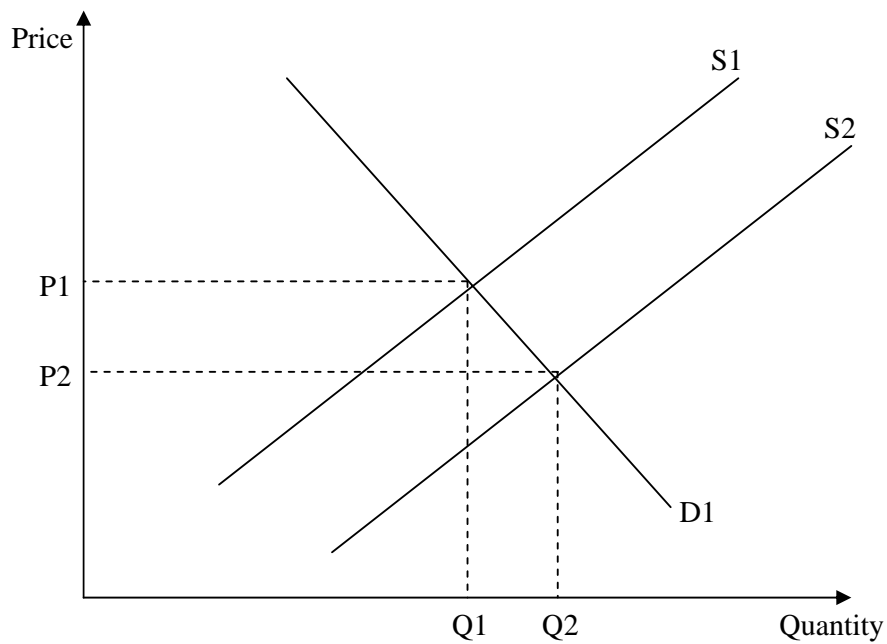
- (ii) A shift to the left of the demand curve from D1 to D2



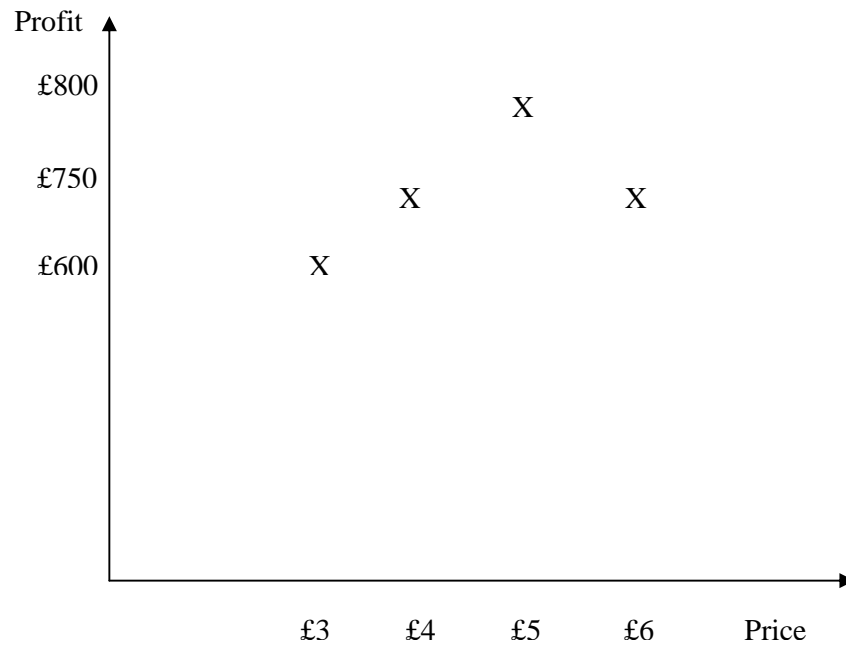
- (iii) A shift the left of the supply curve from S1 to S2



- (iv) A shift to the right of the supply curve from S1 to S2



28 (i)



(ii) The price elasticity of demand is given by:

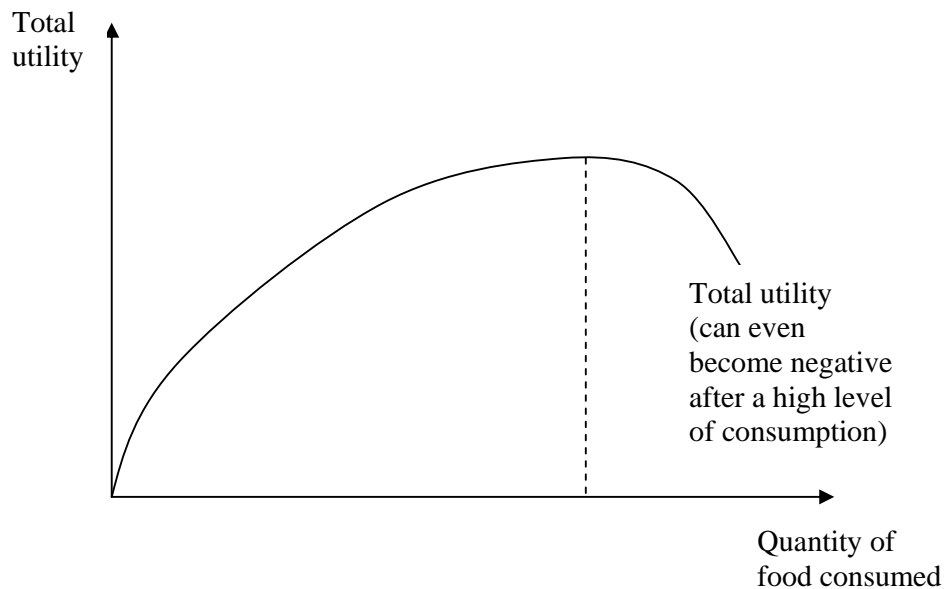
$$\frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$$

$$= -0.2/0.25 = -0.8$$

Answers of 0.8 are also acceptable.

(iii) Marginal revenue from £5 to £6 =  $-\text{£}100/-50 = \text{£}2$

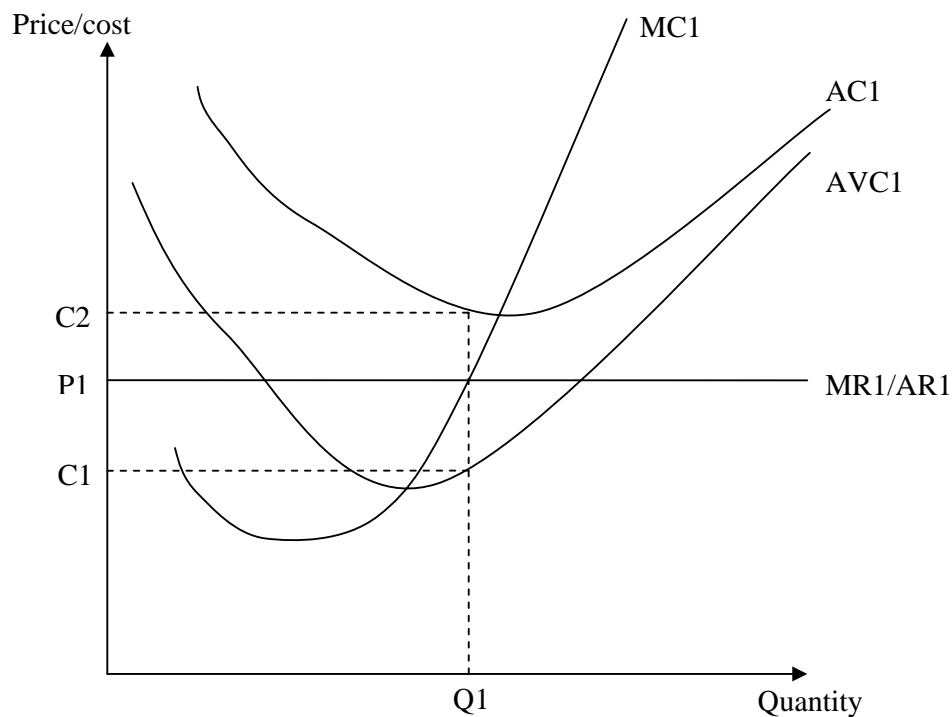
- 29** (i) The law of diminishing marginal utility applies to consumption. According to the law of diminishing marginal utility as a consumer consumes more of a good (for example food) the marginal utility from each extra unit consumed will decline and may eventually even become negative.
- (ii) This law of diminishing marginal utility implies that the total utility curve for consumption of food would be humped shaped rising at a decreasing rate as consumption of food increases. If too much food is consumed the consumer might suffer from negative marginal utility so the total utility may start to decline.



- 30** (i) Adverse selection refers to the fact that people who know that they are particularly bad risks are more inclined to take out insurance than those who know that they are good risks.
- (ii) Risk aversion implies that an economic agent will only take on increased risk if there is a sufficient increase in expected rate of return to compensate. By contrast, agents that are risk neutral do not require an increase in the expected rate of return when taking on increased risk.

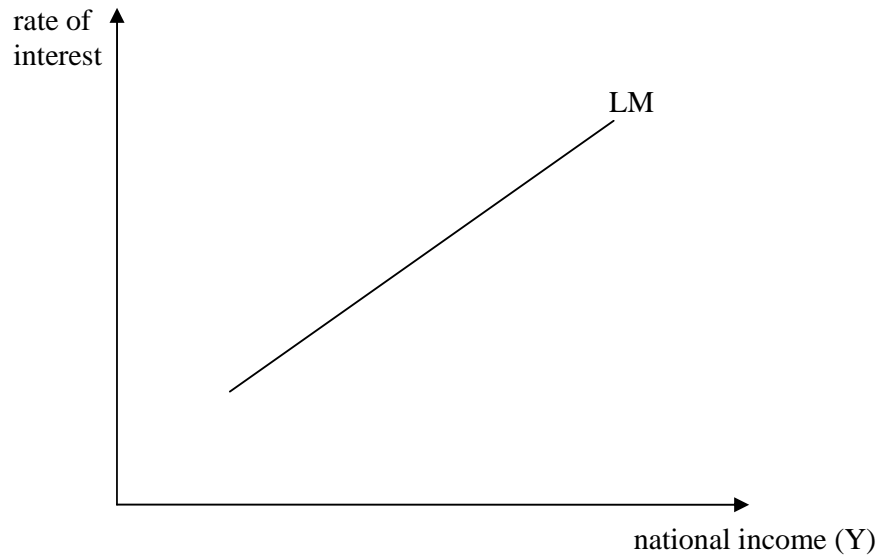


- 31** (i) A profit maximising firm will continue to operate in the short run provided its total revenue exceeds its total variable costs. This will mean that the firm will be able to have lower losses than not operating since it will be able to make some contribution to its fixed costs of production.



- (ii) Economies of scale mean a decreasing long run average cost curve. However a falling long run average cost curve means that it makes sense for production to be concentrated in only one or a few firms as larger output leads to lower costs of production. This is incompatible with perfect competition which requires the existence of many competing firms.

- 32** (i) The LM curve for a closed economy shows different combinations of the rate of interest and level of income for which the money market is in equilibrium, that is, money demand equals money supply.



- (ii) There are several factors that could shift the LM curve to the right.
1. An increase in the money supply through an open market operation.
  2. A fall in the general level of prices which will increase the real money supply.
  3. A fall in money demand requiring a higher level of national income to raise money demand so that it is equal to the money supply.

**33** (i)  $Y = C + I + G$   
 $Y = 10 + 0.75Y + 20 + 40$   
 $0.25Y = 70$   
 $Y = 280$

(ii)  $Y = C + S$   
 $S = -10 + 0.25Y$   
 $S = -10 + 70 = 60$

(iii)  $\text{Injections} = I + G = 60$

(iv)  $Y = C + I + G$   
 $Y = 10 + 0.75Y + 20 + 50$   
 $0.25Y = 80$   
 $Y = 320$

- 34** (i) Money multiplier =  $(1 + C_p)/(C_p + C_b)$   
Broad money supply = money multiplier  $\times$  monetary base  
Broad money supply =  $3 \times 200 = \text{£}600$  million
- (ii)  $300/3 = \text{£}100$  million
- (iii) 8 per cent
- (iv) Broad money supply =  $2.8 \times 200 = \text{£}560$  million
- 35** (i) Country A  
(ii) No  
(iii) Country B  
(iv) No
- 36** (i) terms of trade  
(ii) goods  
(iii) appreciate, three  
(iv) inversely (or negatively)
- 37** (i) Fiscal policy is a distinct aggregate demand tool as compared to monetary policy. An expansionary fiscal policy can come about either through an increase in government expenditure (financed by increases in taxes and/or increased government borrowing) or by a decrease in taxes. In the case of an increase in government spending financed by government borrowing, the cash received from the bond sales is re-injected into the economy via the increased government spending leaving no overall change in the money supply. When examining the effects of a fiscal expansion students are expected to talk about and explain the multiplier in an open economy context.
- In response to an expansionary fiscal policy national income and therefore employment will increase in the short run. Higher government expenditure will add directly to aggregate demand. Lower taxes will increase consumption and the effect of the higher PSBR will be increased by the multiplier effect.
- The main arguments that have been given against the use of an active fiscal policy include the following:
- (a) Unpredictability — the effects of a fiscal expansion are difficult to estimate and there is a danger that it could lead to overheating of the economy.
- (b) Time lags — the time delay necessary for fiscal policy to work is not known with certainty and there is a danger that fiscal expansion may overheat an economy that is already moving out of recession.

- (c) Crowding out effects — there are a number of crowding out effects that limit the effectiveness of fiscal policy:
- Interest rate effects — a fiscal expansion which is financed by government borrowing will lead to higher interest rates due to the depressing effect on bond prices. The higher interest rate will then hit investment and consumer expenditure.
  - Tax effects — an increase in government expenditure which is financed by taxation will hit consumer and firms investment expenditure.
  - Expectational effects — an increase in government expenditure financed by borrowing will lead to expectations of future increases in taxes. This will lead to increased saving and reduced investment by firms.
- (d) Fiscal policy is not as flexible an instrument as monetary policy since both expenditure and tax sides are generally determined annually.
- (e) An expansionary fiscal policy that raises output may also lead to an increase in import volumes which will may lead to balance of payments problems and/or a depreciating currency which can lead to inflation.

An expansionary monetary policy is achieved via an open market operation. It involves a purchase of Treasury bills by the central bank which increases the money supply held by the public and reduces the stock of Treasury bills held by the public. The effect is to raise Treasury bill prices and lower the short term interest rate. The fall in the domestic interest rate should give some spur to consumption and investment. However, an expansionary monetary policy may raise inflation expectations and thereby raise longer term interest rates which may adversely affect longer term investment.

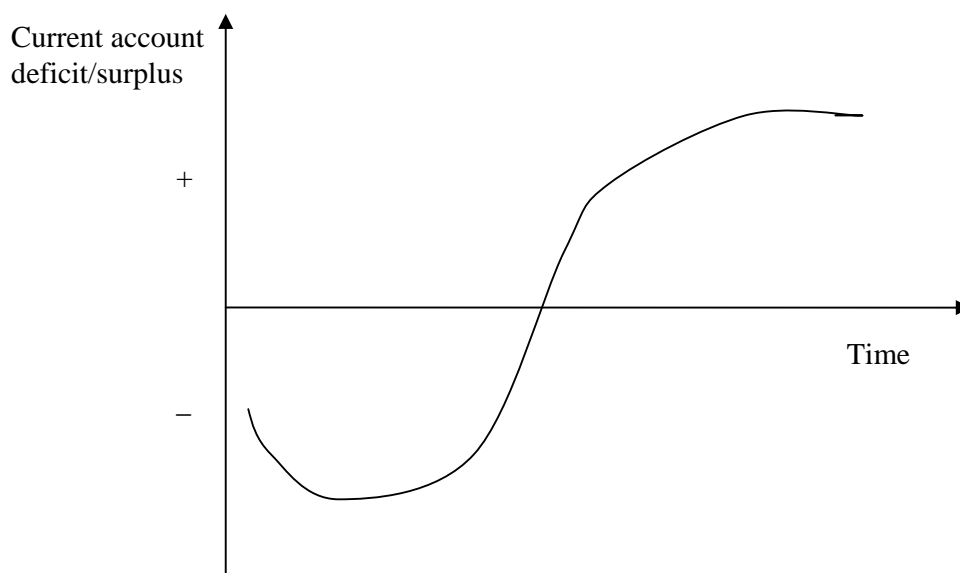
One of the major problems with an expansionary monetary policy is that it may lead to inflationary pressures. If the country has a fixed exchange rate, the currency will come under pressure in the foreign exchange market and the current account position will worsen. This will necessitate purchases of the currency in the foreign exchange market. These purchases will have to continue until the initial increase in the money stock is reversed if the peg is to be maintained. If the country has a floating exchange rate it is likely that the exchange rate may depreciate in the short run by an even greater percentage than the initial rise in the money stock (“overshooting” its long run equilibrium value). This will ensure that the expansion in the money stock will quickly lead to inflation.

- (ii) There is no easy way to tackle a current account deficit. A current account deficit means that a country's expenditure on goods/services vis-a-vis the rest of the world is greater than its revenue from exports of goods/services from the rest of the world.

Devaluation is certainly a useful tool in the medium to long term in helping to correct a current account deficit. This is because a devaluation makes exports more competitive as measured in the foreign currency and imports more expensive as measured in the domestic currency. According to the Marshall Lerner condition provided the sum of the elasticity of demand for exports and imports is greater than unity then a devaluation will improve the current account.

In the short run, devaluation is less likely to be effective in correcting a current account deficit since elasticities of demand for imports and exports are lower in the short run. Imports cost more in the domestic currency while import volumes do not decline sufficiently and exports earn less with exports not increasing sufficiently. Indeed, empirical evidence tends to suggest that the elasticities of demand for imports and exports in the short run are so low that the current account initially deteriorates. The idea of an initial deterioration in the current account followed by a subsequent improvement is known as the J-curve effect depicted in the figure below:

### The J-curve



One major problem with devaluation is that by making imports more expensive it could spark off wage and price pressures which to some extent will undermine the increased competitiveness one might otherwise have expected. In addition, the effectiveness of devaluation will be undermined if other trading competitors devalue their currencies so as maintain their international competitiveness.

There are other means that a government can use than devaluation to correct a current account deficit. These include tighter fiscal and monetary policies. The current account which ignoring transfers is given by exports minus imports ( $X - M$ ) has its counterpart in either domestic investment ( $I$ ) being greater than domestic savings ( $S$ ) and/or government expenditure on goods and services ( $G$ ) exceeding tax revenue ( $T$ ) as given by the equation below:

$$(X - M) = (S - I) + (T - G)$$

A tighter monetary policy by raising the domestic interest rate will discourage consumption (encourage savings) and reduce investment so helping to improve the first bracketed expression on the right hand side. Tighter fiscal policy in the form of a rise in taxes or cut in government expenditure will reduce national income and with it expenditure on imports also helping to improve the current account. Devaluation is by no means the only mechanism for improving the current account and its relative effectiveness as compared to fiscal and monetary policies will depend upon the structural parameters of the particular economy under consideration. However, there can be little doubt that a combination of devaluation supported by tighter fiscal and monetary policies will be the most effective means of tackling a current account deficit although this may have adverse consequences for employment and output.

## **END OF EXAMINERS' REPORT**