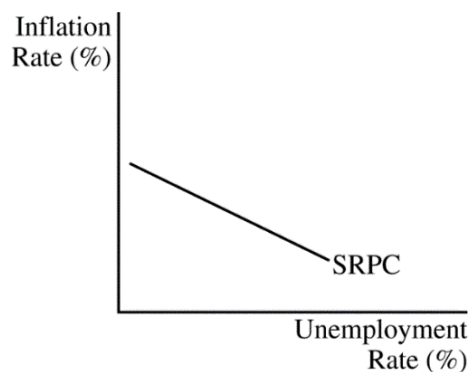


Question 1: Long**10 points****A** State that the actual unemployment rate is 10%.**1 point**

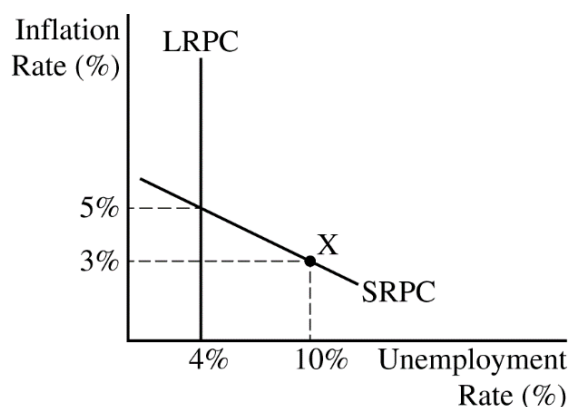
Point 1

B Draw a correctly labeled graph of the short-run Phillips curve (SRPC).**1 point**

Point 2



Point 3 The graph must include a vertical long-run Phillips curve (LRPC) at the natural rate of unemployment (4%), the expected inflation rate (5%) at the intersection of the SRPC and the LRPC, and a point labeled X on the SRPC to the right of the LRPC at the actual unemployment rate (10%) and the actual inflation rate (3%).

1 point

C State an increase in government spending, a decrease in taxes, or an increase in transfer payments.

1 point

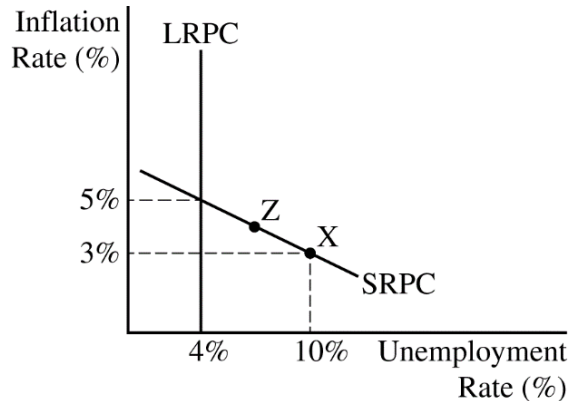
Point 4

D (i) State that the government budget will move into deficit and explain that government outlays exceed revenue. **1 point**

Point 5

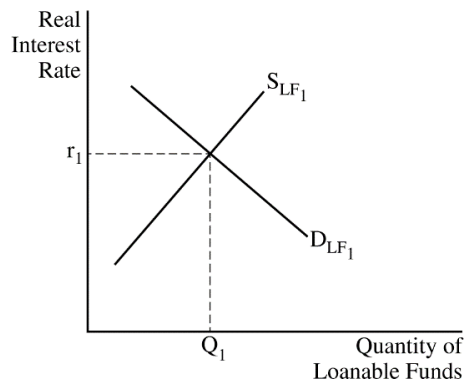
(ii) On the graph from part B, show a point labeled Z on the SRPC to the left of point X. **1 point**

Point 6

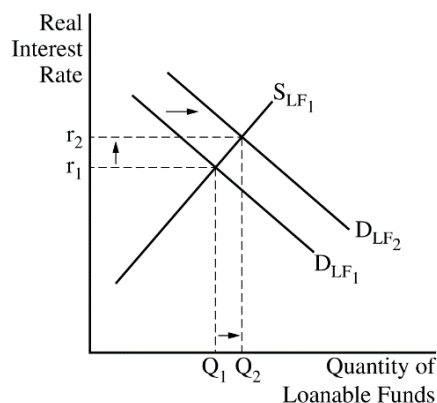


(iii) Draw a correctly labeled graph of the loanable funds market. **1 point**

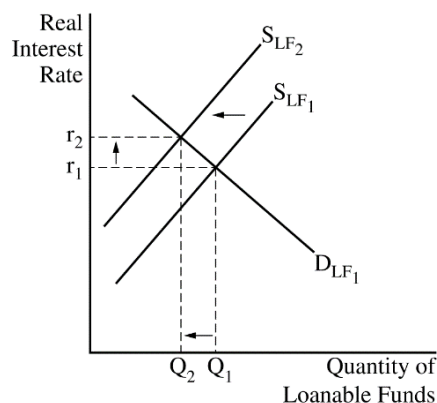
Point 7



Point 8 The graph must show an increase in the demand for loanable funds (or a decrease in the supply of loanable funds), resulting in an increase in the equilibrium real interest rate. **1 point**



OR



E State that Barrikos' capital and financial account (CFA) will move into surplus and explain that international investors will seek higher returns on financial capital in Barrikos, which will increase financial capital inflows into Barrikos. **1 point**

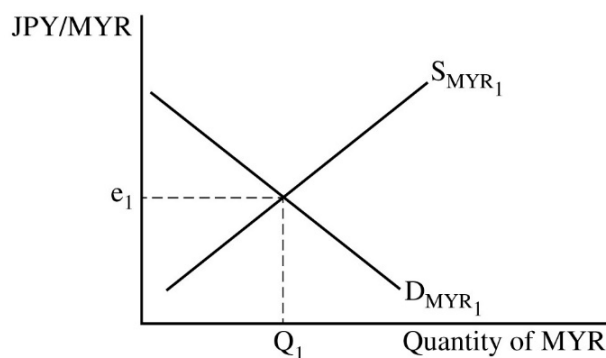
Point 9

F State that Barrikos' currency will appreciate and explain that demand for the currency will increase (or the supply of the currency will decrease). **1 point**

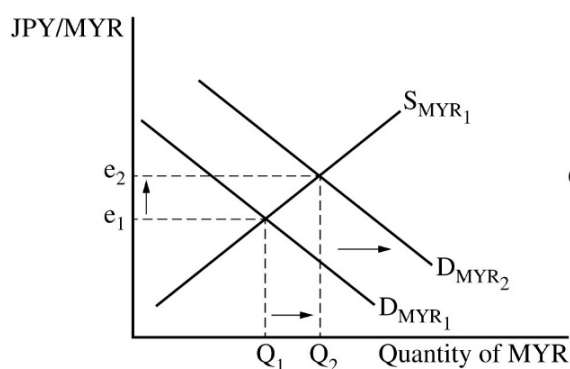
Point 10

Question 3: Short**5 points**

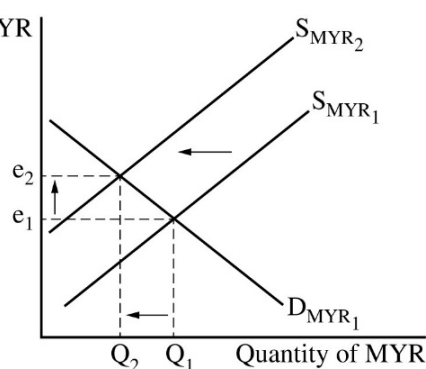
- (a) State an increase in government spending, a decrease in taxes, or an increase in transfer payments. **1 point**
- (b) State that the real interest rate will increase and explain that government borrowing will increase, which will increase the demand for loanable funds (or decrease the supply of loanable funds). **1 point**
- (c) Draw a correctly labeled graph of the foreign exchange market for the ringgit. **1 point**



For the second point, the graph must show an increase in the demand for the ringgit (or a decrease in the supply of the ringgit), resulting in an appreciation of the ringgit. **1 point**



OR

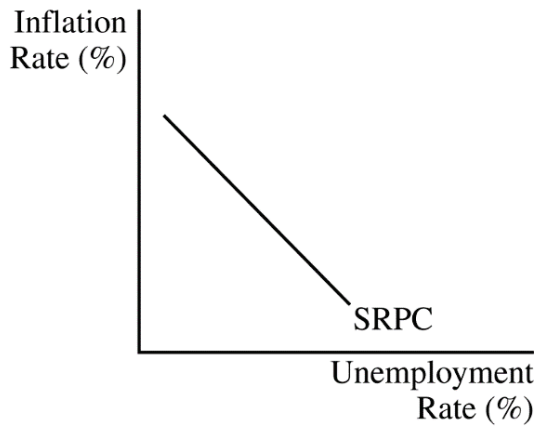
**Total for part (c) 2 points**

- (d) State that Malaysia's imports will increase and explain that the appreciation of the ringgit will make Japanese goods relatively less expensive than they were before. **1 point**

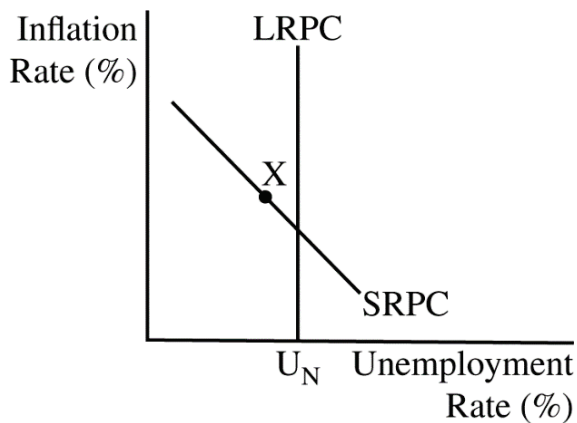
Total for question 3 5 points

Question 2: Short**5 points**

- (a)**
- Draw a correctly labeled graph of the short-run Phillips curve (SRPC).

1 point

For the second point, the graph must include a correctly labeled long-run Phillips curve (LRPC) and show point X on the SRPC to the left of the LRPC.

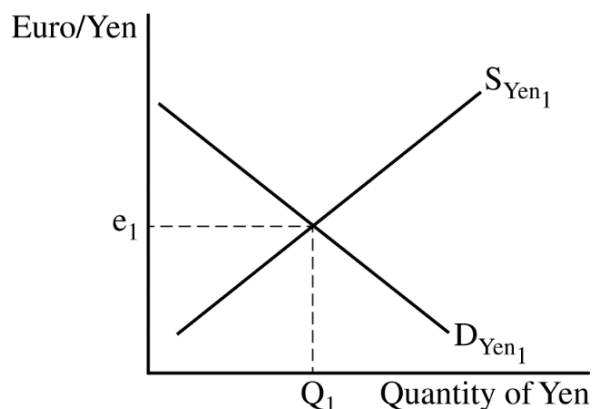
1 point**Total for part (a) 2 points**

- (b)** State that the central bank would increase its administered interest rates or increase interest on reserves. **1 point**
- (c)** State that there will be an increase in the flow of international financial capital into Noralandia and explain that international investors will seek higher returns on financial capital in Noralandia. **1 point**
- (d)** State that Noralandia's currency will appreciate and explain there will be an increase in the demand for Noralandia's currency (or a decrease in the supply of Noralandia's currency). **1 point**

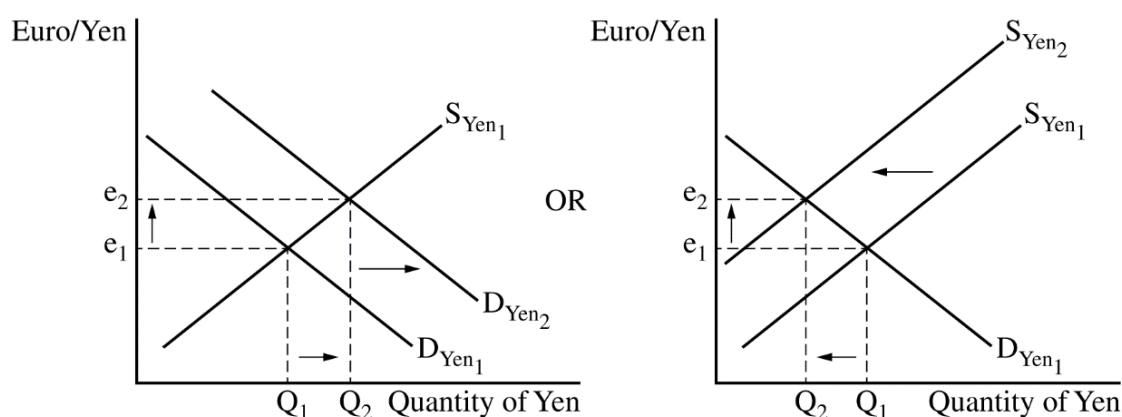
Total for question 2 5 points

Question 3: Short**5 points**

- (a) State that the price of the coat is 12,000 yen. **1 point**
- (b) State that net financial capital flows from Italy to Japan will increase. **1 point**
- (c) Draw a correctly labeled graph of the foreign exchange market for the Japanese yen. **1 point**



For the second point, the graph must show a rightward shift in the demand curve for yen (or a leftward shift in the supply curve of yen), resulting in an appreciation of the yen.

1 point**Total for part (c) 2 points**

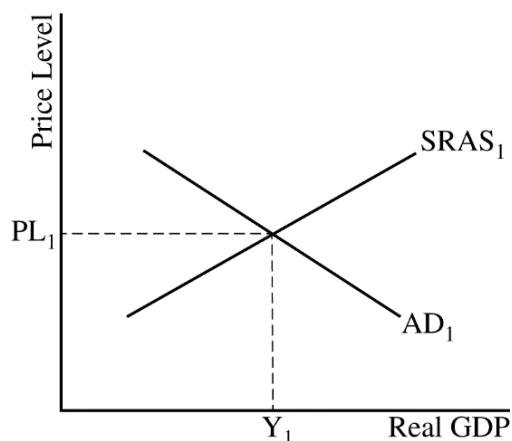
- (d) State that Italy's exports will increase and explain that the appreciation of the yen makes Italian goods relatively less expensive than Japanese goods and/or makes Japanese goods relatively more expensive than Italian goods. **1 point**

Total for question 3 5 points

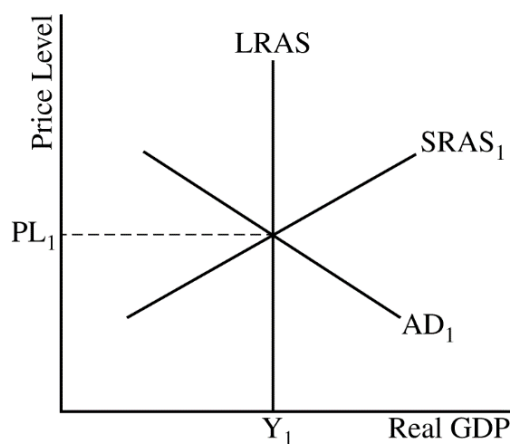
Question 1: Long**10 points**

(a) State that the Swedish capital and financial account is in deficit and explain that the current account is in surplus and the sum of the current account and the capital and financial account must equal zero ($CA + CFA = 0$). **1 point**

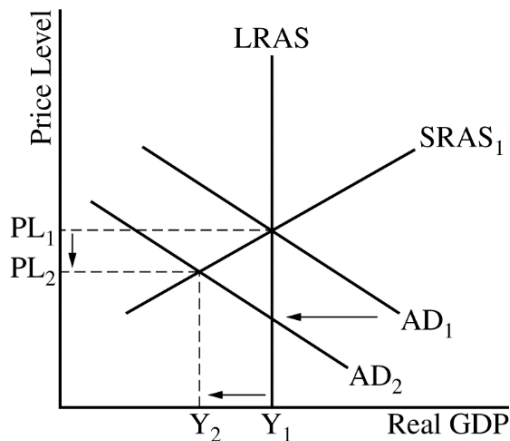
(b) Draw a correctly labeled aggregate demand–aggregate supply graph that shows PL_1 and Y_1 at the intersection of AD and SRAS. **1 point**



For the second point, the graph must show a vertical LRAS curve at equilibrium real output Y_1 . **1 point**

**Total for part (b)****2 points**

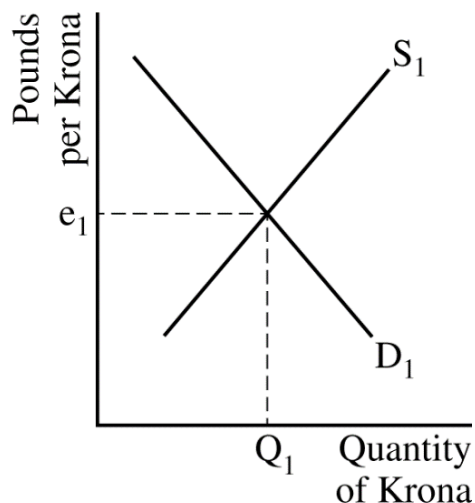
- (c) On the graph from part (b), show the impact of the decrease in imports with a leftward shift of the AD curve, a decrease in real output to Y_2 , and a decrease in the price level to PL_2 . **1 point**



- (d) State that policymakers would be more concerned about cyclical unemployment than inflationary pressures and explain that the decline in exports to the United Kingdom lowered real output below full employment, resulting in unemployment above the natural rate of unemployment. **1 point**

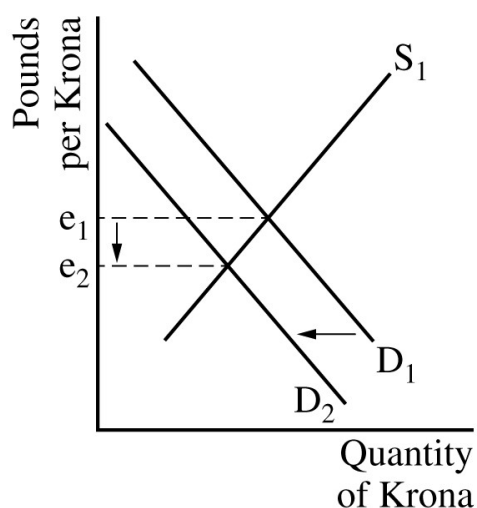
- (e) State that the Swedish central bank should buy bonds. **1 point**

- (f) Draw a correctly labeled graph of the foreign exchange market for the krona. **1 point**



For the second point, the graph must show a leftward shift of the demand curve for the krona, resulting in a decrease in the value of the krona.

1 point



Total for part (f) 2 points

(g) State that Sweden's central bank should sell bonds.

1 point

(h) Explain that selling bonds would decrease the money supply and increase interest rates in Sweden, which would increase financial capital inflows into Sweden and increase the demand for the krona, thereby leading to an appreciation of the krona.

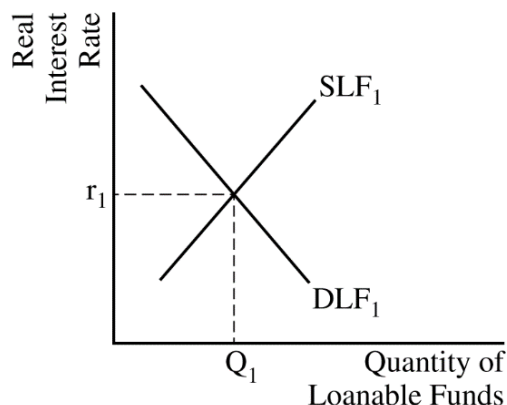
1 point

Total for question 1 10 points

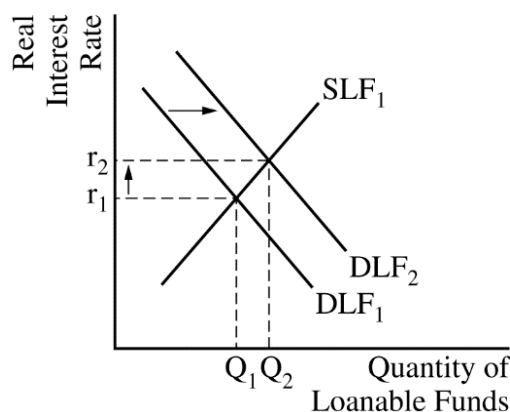
Question 2: Short**5 points**

(a) State that the country could implement one of the following fiscal policy actions: increase government spending, increase transfer payments, or decrease taxes. **1 point**

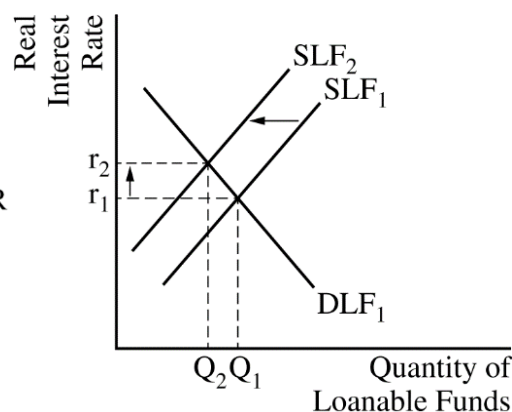
(b) Draw a correctly labeled graph of the loanable funds market. **1 point**



For the second point, the graph must show a rightward shift in the demand for loanable funds curve (or a leftward shift in the supply of loanable funds curve), resulting in an increase in the equilibrium real interest rate.

1 point

OR

**Total for part (b) 2 points**

(c) (i) State that net exports will decrease and explain that the increase in the real interest rate will increase the demand for the country's currency, which will cause the country's currency to appreciate and make domestic goods relatively more expensive than foreign goods, thereby decreasing exports. **1 point**

(ii) State that the stock of physical capital will decrease and explain that the increase in the real interest rate will discourage investment spending in physical capital. **1 point**

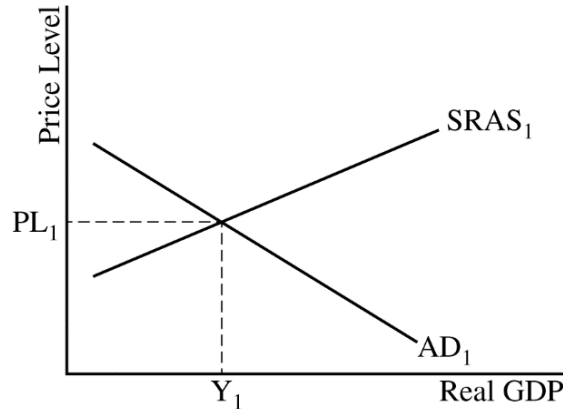
Total for part (c) 2 points**Total for question 2 5 points**

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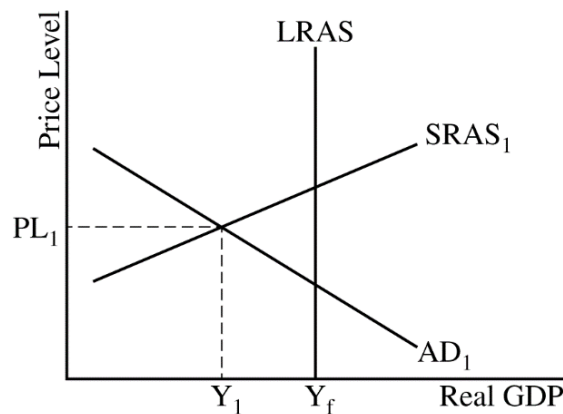
AP[®] Macroeconomics

Scoring Guidelines

Set 1

2019 SCORING GUIDELINES**Question 1****10 Points (2 + 2 + 2 + 2 + 2)****(a) 2 points**

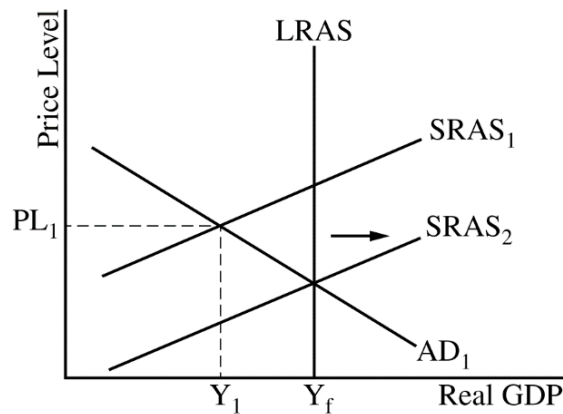
- One point is earned for drawing a correctly labeled graph showing a downward sloping aggregate demand (AD) curve, an upward sloping short-run aggregate supply (SRAS) curve, the equilibrium output level labeled Y_1 , and the equilibrium price level labeled PL_1 .



- One point is earned for drawing a correctly labeled vertical long-run aggregate supply (LRAS) curve with full employment output labeled Y_f to the right of the short-run equilibrium output level, Y_1 .

(b) 2 points

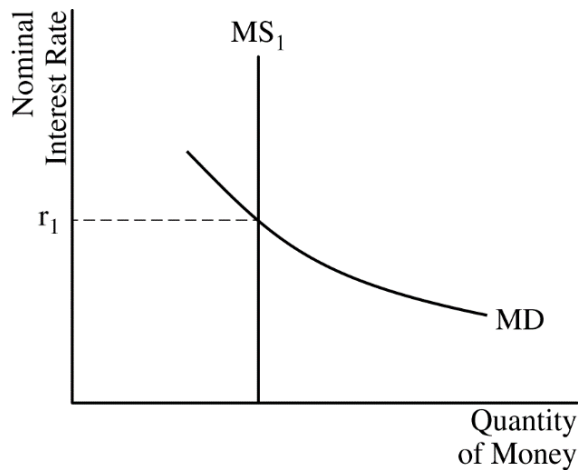
- One point is earned for explaining that nominal wages, input prices, or expected inflation will decrease, causing the SRAS curve to shift to the right until real GDP reaches full employment at Y_f .

2019 SCORING GUIDELINES**Question 1 (continued)**

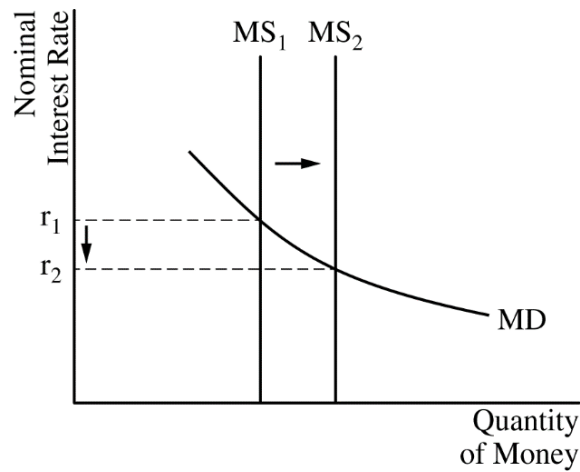
- One point is earned for showing a rightward shift in the SRAS curve intersecting the AD curve and LRAS curve at Y_f .

(c) 2 points

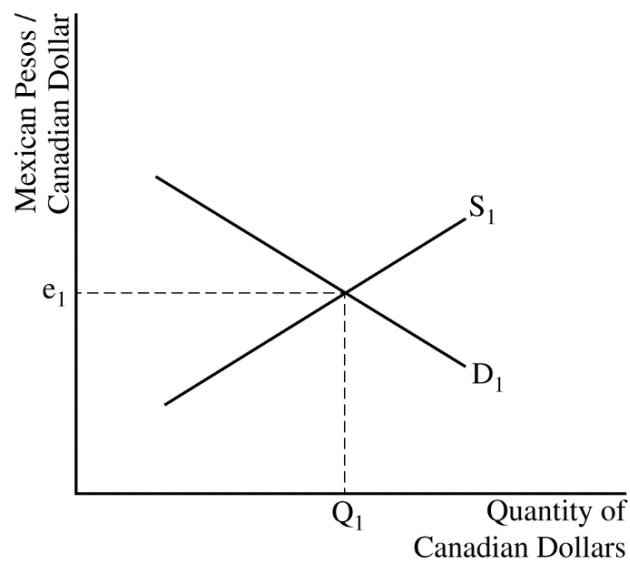
- One point is earned for correctly calculating the minimum change in government spending required to change aggregate demand by the amount of the output gap as an increase of \$8 billion ($= \frac{\$40 \text{ billion}}{5}$).
- One point is earned for correctly calculating the minimum change in taxes required to change aggregate demand by the amount of the output gap as a decrease of \$10 billion ($= \frac{\$40 \text{ billion}}{-4}$).

(d) 2 points

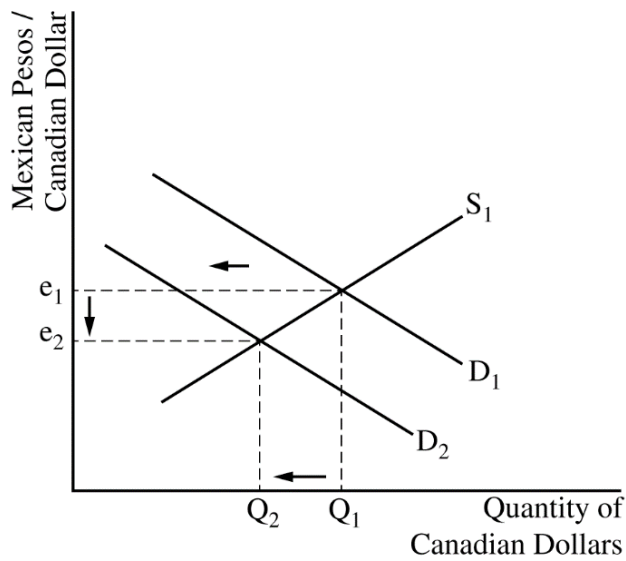
- One point is earned for drawing a correctly labeled graph of the money market.

2019 SCORING GUIDELINES**Question 1 (continued)**

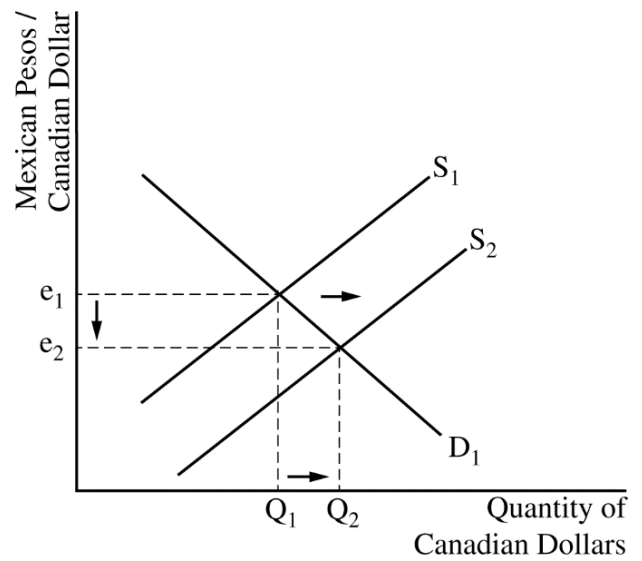
- One point is earned for showing a rightward shift in the money supply curve, resulting in a lower nominal interest rate.

(e) 2 points

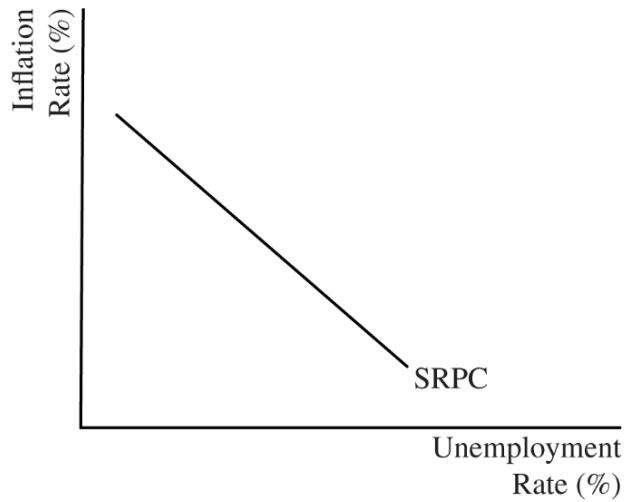
- One point is earned for drawing a correctly labeled graph of the foreign exchange market for the Canadian dollar.

2019 SCORING GUIDELINES**Question 1 (continued)**

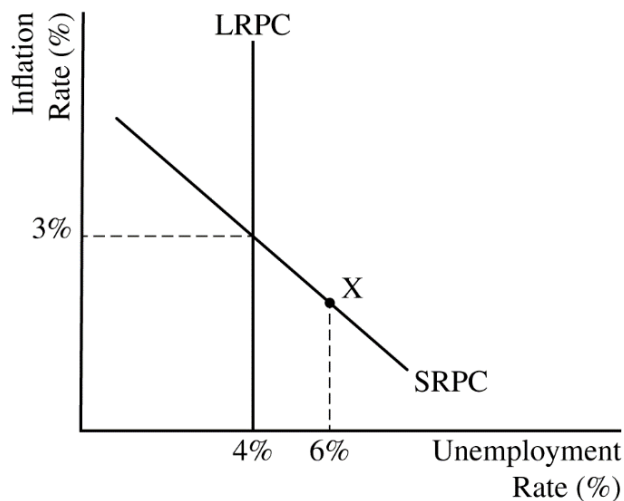
OR



- One point is earned for showing a leftward shift of the demand curve for Canadian dollars (or a rightward shift of the supply curve of Canadian dollars) and for showing that the Canadian dollar will depreciate against the Mexican peso.

2019 SCORING GUIDELINES**Question 2****5 Points (2 + 1 + 1 + 1)****(a) 2 points**

- One point is earned for drawing a correctly labeled graph showing the short-run Phillips curve (SRPC).



- One point is earned for drawing the long-run Phillips curve (LRPC) showing the short-run equilibrium, labeled as point X, on the SRPC to the right of the LRPC, and for plotting the numbers in the correct places on the graph.

(b) 1 point

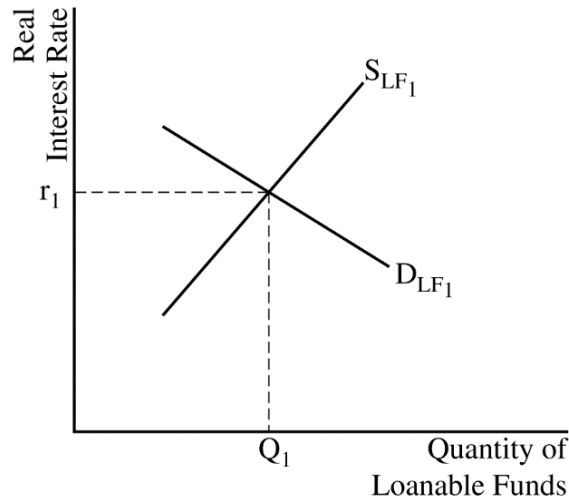
- One point is earned for stating that the actual inflation rate is less than the expected inflation rate.

2019 SCORING GUIDELINES**Question 2 (continued)****(c) 1 point**

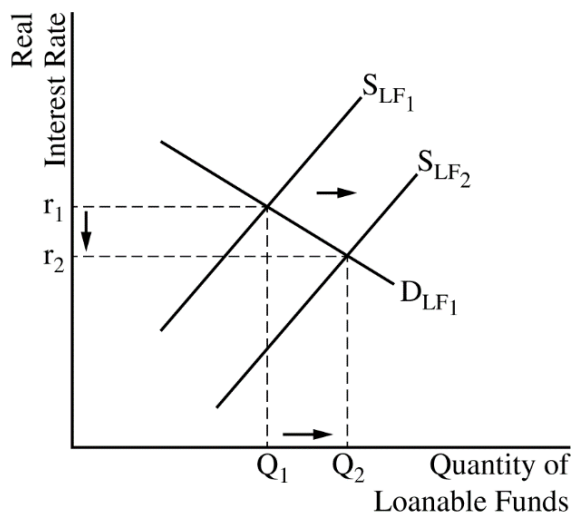
- One point is earned for stating that lenders will be better off and for explaining the real value of the loans that will be repaid will be higher than expected **OR** for explaining the relationship between the nominal and the real interest rates using the Fisher equation.

(d) 1 point

- One point is earned for stating that the natural rate of unemployment will not change in the long run.

2019 SCORING GUIDELINES**Question 3****5 Points (2 + 1 + 2)****(a) 2 points**

- One point is earned for drawing a correctly labeled graph of the loanable funds market and identifying the equilibrium real interest rate and quantity of loanable funds.



- One point is earned for showing a rightward shift of the supply curve for loanable funds and for showing a lower equilibrium real interest rate.

(b) 1 point

- One point is earned for stating that Econland's purchases of foreign assets will increase and for explaining that Econland's investors will seek higher returns in other countries, which increases Econland's demand for foreign assets.

2019 SCORING GUIDELINES**Question 3 (continued)****(c) 2 points**

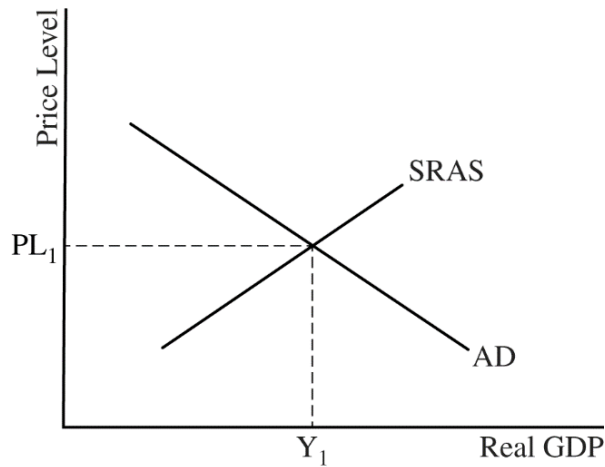
- One point is earned for stating that Econland's currency will depreciate.
- One point is earned for stating that Econland's central bank would buy its currency in the foreign exchange market.

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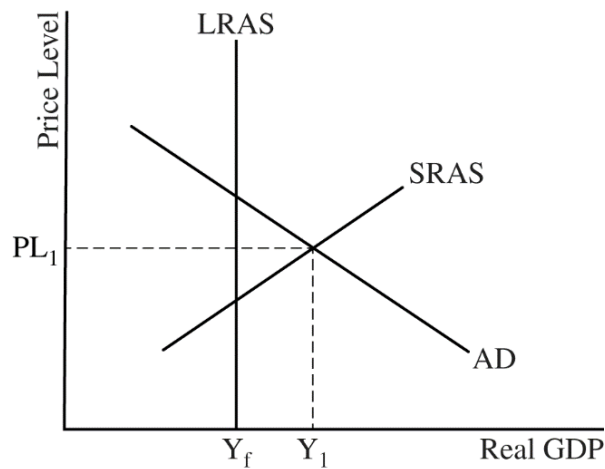
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Scoring Guidelines

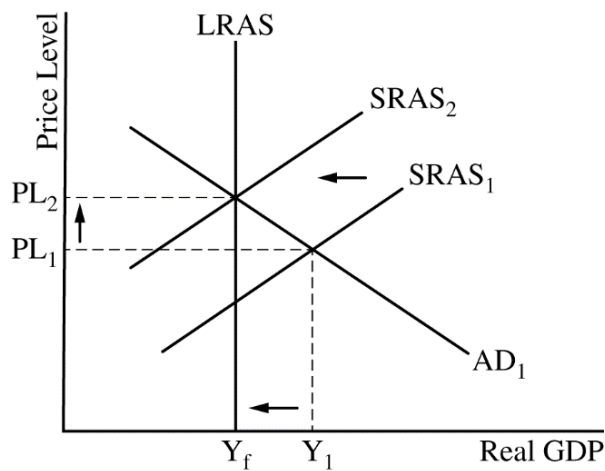
Set 2

2019 SCORING GUIDELINES**Question 1****10 points (2 + 2 + 3 + 2 + 1)****(a) 2 points**

- One point is earned for drawing a correctly labeled graph showing a downward sloping aggregate demand (AD) curve, an upward sloping short-run aggregate supply (SRAS) curve, the equilibrium output level labeled Y_1 , and the equilibrium price level labeled PL_1 .



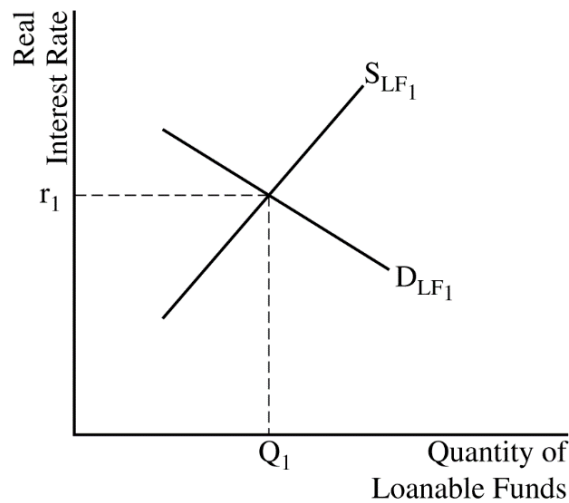
- One point is earned for drawing a correctly labeled vertical long-run aggregate supply (LRAS) curve with full employment output labeled Y_f to the left of the short-run equilibrium output level, Y_1 .

2019 SCORING GUIDELINES**Question 1 (continued)****(b) 2 points**

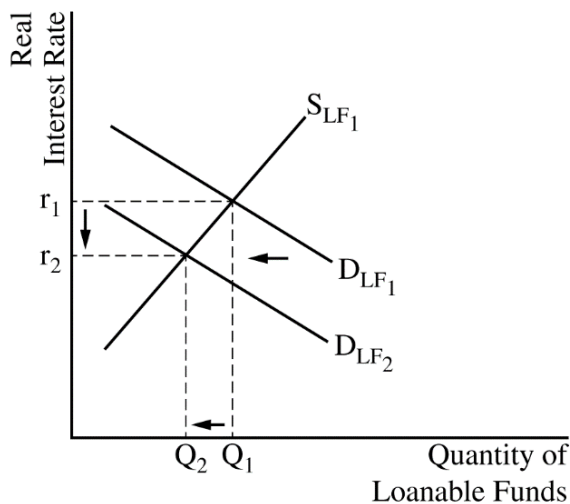
- One point is earned for showing a leftward shift in the SRAS curve and for showing PL_2 higher than PL_1 .
- One point is earned for explaining that the SRAS curve will shift to the left due to the increase in input prices, nominal wages, or inflationary expectations.

(c) 3 points

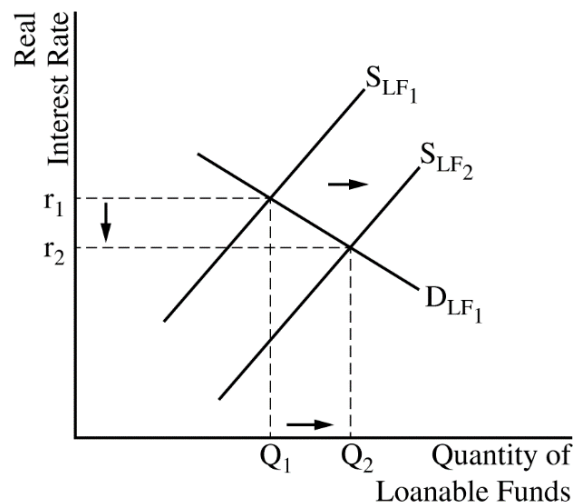
- One point is earned for stating a decrease in government spending, a decrease in transfer payments, or an increase in taxes.
- One point is earned for stating that the unemployment rate will increase and the natural rate of unemployment will not change.
- One point is earned for stating that the automatic adjustment will produce a higher price level than the fiscal policy.

2019 SCORING GUIDELINES**Question 1 (continued)****(d) 2 points**

- One point is earned for drawing a correctly labeled graph of the loanable funds market.



OR



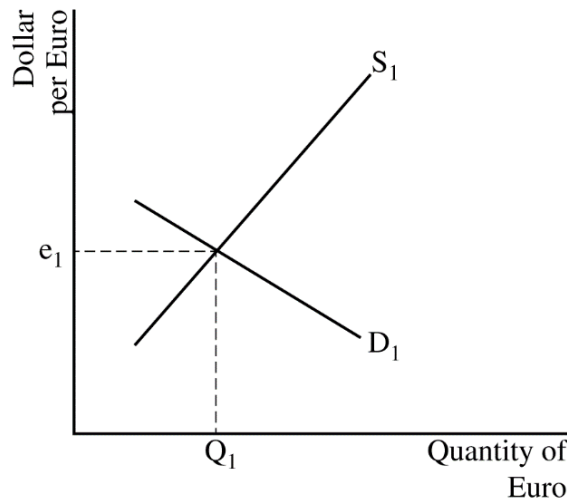
- One point is earned for showing a leftward shift of the demand for loanable funds curve (or a rightward shift in the supply of loanable funds curve) and a decrease in the real interest rate.

(e) 1 point

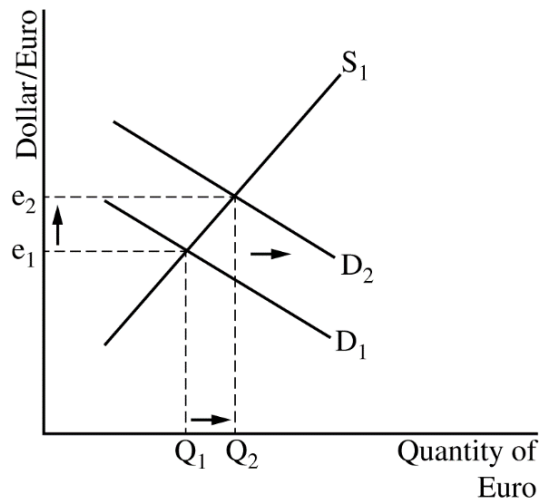
- One point is earned for stating that the LRAS curve will shift to the right and for explaining that the lower real interest rate will lead to increased capital formation due to increased investment spending.

2019 SCORING GUIDELINES**Question 2****5 points (1 + 2 + 2)****(a) 1 point**

- One point is earned for stating that the U.S. current account will be in deficit and for explaining that an increase in the U.S. real GDP increases the U.S.'s demand for European goods and services, which increases imports.

(b) 2 points

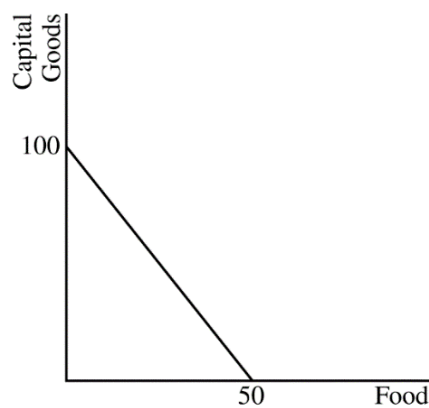
- One point is earned for drawing a correctly labeled graph of the foreign exchange market for the euro.



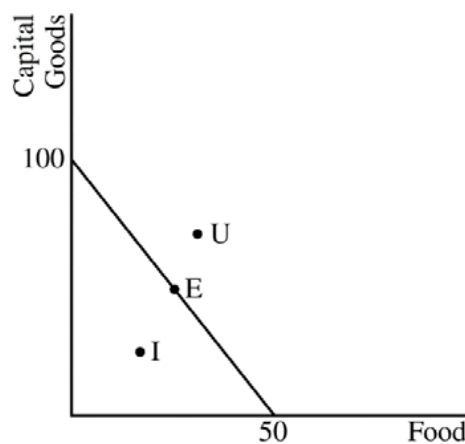
- One point is earned for shifting the demand curve for the euro to the right and showing an increase in the value of the euro relative to the U.S. dollar.

2019 SCORING GUIDELINES**Question 2 (continued)****(c) 2 points**

- One point is earned for stating that the demand for the dollar will decrease and for explaining that capital flows from the European Union to the U.S. will decrease.
- One point is earned for stating that the dollar will depreciate.

2019 SCORING GUIDELINES**Question 3****5 points (1 + 1 + 1 + 1 + 1)****(a) 1 point**

- One point is earned for drawing a correctly labeled production possibilities curve (PPC) for Sweden with food on the horizontal axis, capital goods on the vertical axis, and the relevant numerical values plotted.

**(b) 1 point**

- One point is earned for showing point I inside the PPC, point E on the PPC, and point U outside the PPC.

(c) 1 point

- One point is earned for stating that Sweden's economic growth rate will slow or be reduced.

2019 SCORING GUIDELINES**Question 3 (continued)****(d) 1 point**

- One point is earned for stating that Norway has a comparative advantage in the production of capital goods and for explaining that it has the lowest opportunity cost in producing capital goods (the opportunity cost of producing one unit of capital goods in Norway is $1/4$ a unit of food and in Sweden is $1/2$ a unit of food).

(e) 1 point

- One point is earned for stating a number between 20 and 40 units of capital.