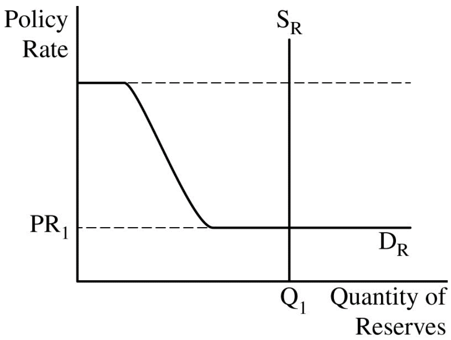
Question 2: Short — 5 points

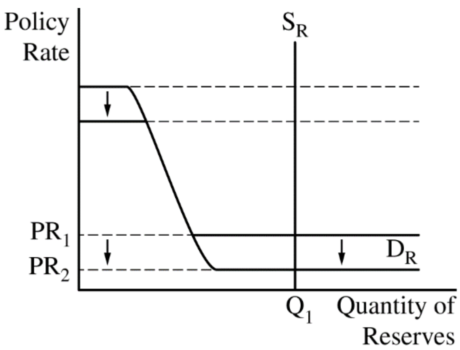
A
Point 1 — State that the central bank of Country L would buy bonds. **1 point**

B
Point 2 — State that the central bank of Country A would decrease its administered interest rates or decrease interest on reserves. **1 point**

C
Point 3 — Draw a correctly labeled graph of the reserve market with the supply curve intersecting the demand curve in the range of ample reserves. **1 point**

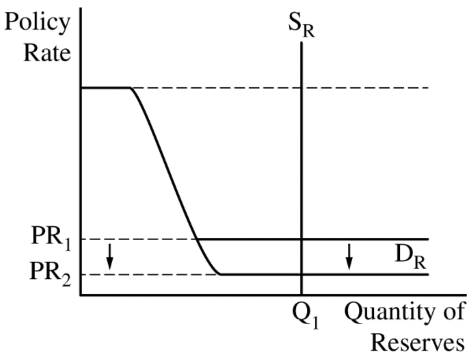


Point 4 — The graph must show a decrease in the administered interest rates, resulting in a decrease in the policy rate. **1 point**



OR

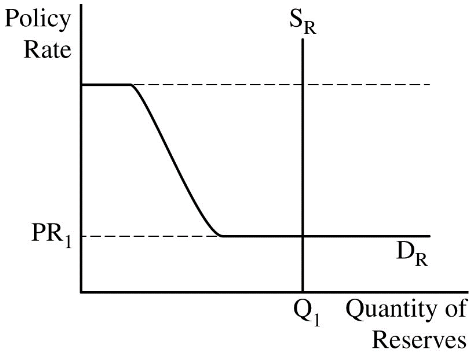
The graph must show a decrease in the lower bound of the demand curve for reserves, resulting in a decrease in the policy rate.



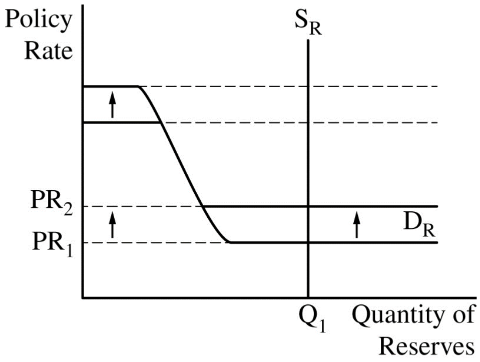
D Point 5	State that short-run aggregate supply will increase until it reaches full employment and explain that the increase in short-run aggregate supply in the long run will be caused by a decrease in input prices (e.g., nominal wages) and/or inflationary expectations.	**1 point**

Question 2: Short — 5 points

A Point 1	State that the central bank would increase its administered interest rates or increase interest on reserves.	**1 point**
B Point 2	Draw a correctly labeled graph of the reserve market with the supply curve intersecting the demand curve in the range of ample reserves.	**1 point**

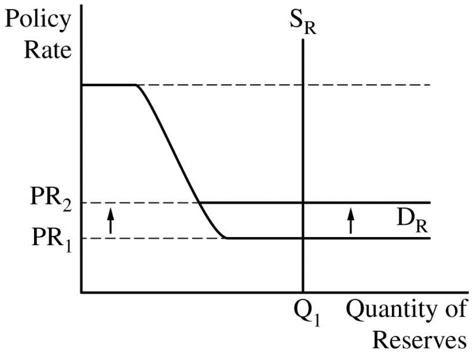


Point 3	The graph must show an increase in the administered interest rates, resulting in an increase in the policy rate.	**1 point**



OR

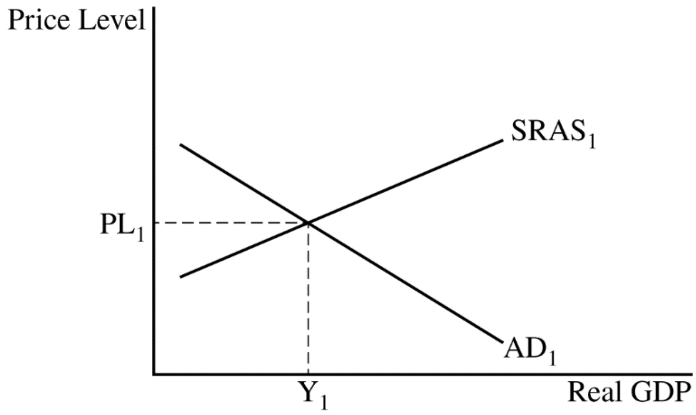
The graph must show an increase in the lower bound of the demand curve for reserves, resulting in an increase in the policy rate.



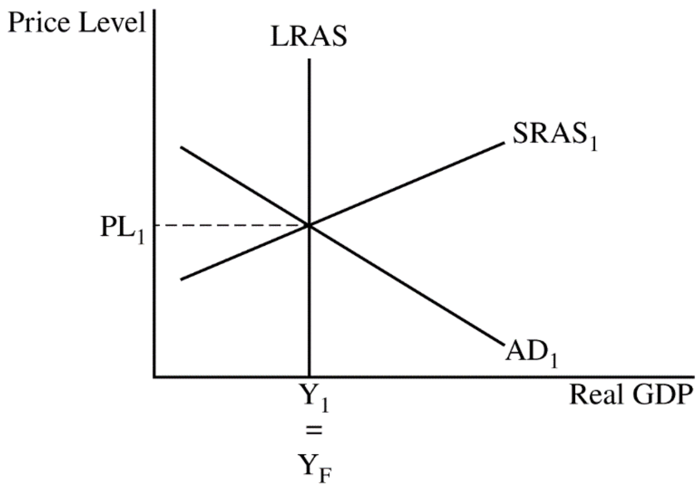
C (i) Point 4	State that the price of previously issued bonds will decrease.	**1 point**
(ii) Point 5	State that the price level will decrease and explain that the increase in interest rates will decrease interest-sensitive spending (consumption, investment, or net exports), which will decrease aggregate demand.	**1 point**

Question 1: Long **10 points**

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



For the second point, the graph must show a vertical long-run aggregate supply (LRAS) curve at equilibrium real output $Y_1 = Y_F$. **1 point**

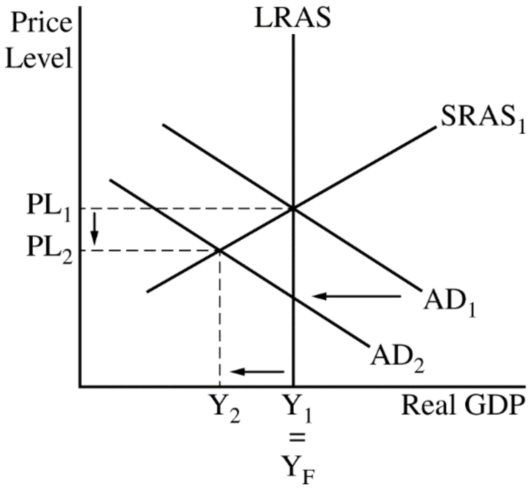


Total for part (a) 2 points

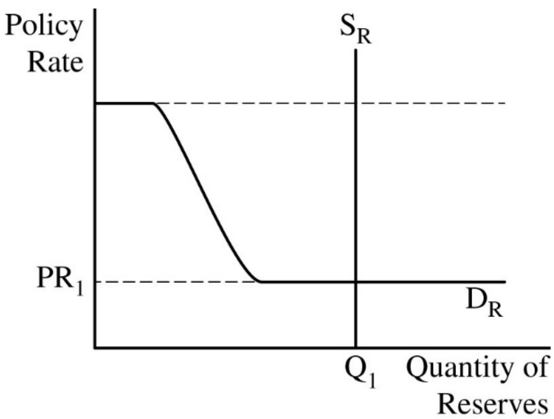
(b) (i) Calculate the marginal propensity to consume as 0.4 and show your work. **1 point**

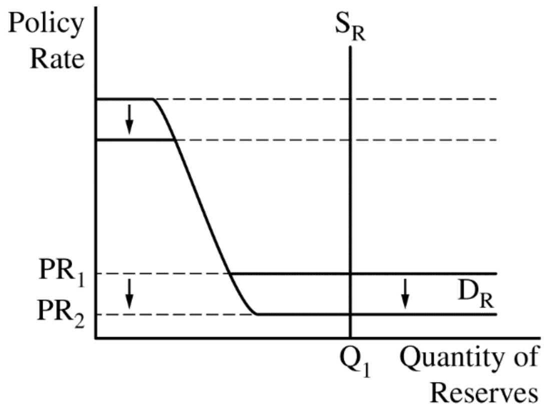
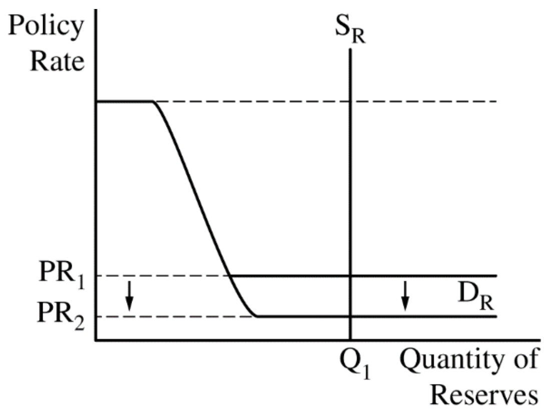
$$\text{MPC} = \frac{\Delta \text{ Consumer Spending}}{\Delta \text{ Disposable Income}} = \frac{\$100{,}000 - \$110{,}000}{\$110{,}000 - \$135{,}000} = \frac{-\$10{,}000}{-\$25{,}000} = 0.4$$

(ii)	On the graph from part (a), show the short-run effect of the decrease in consumer spending as a leftward shift of the AD curve, resulting in a decrease in the price level to PL_2 and a decrease in real output to Y_2.	**1 point**



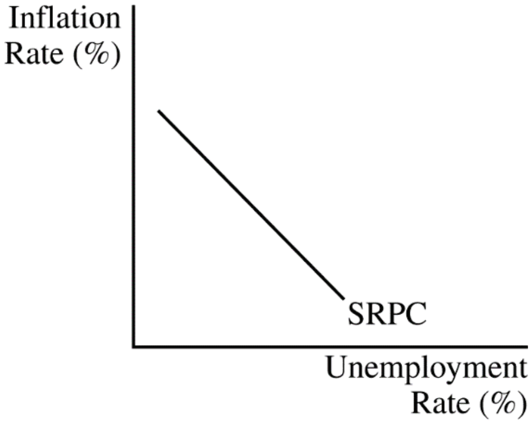
	Total for part (b)	**2 points**
(c)	Explain that input prices (e.g., nominal wages) and/or inflationary expectations will decrease, causing SRAS to increase until it reaches full employment.	**1 point**
(d)	State that the central bank would decrease its administered interest rates or decrease interest on reserves.	**1 point**
(e)	Draw a correctly labeled graph of the reserve market with the supply curve intersecting the demand curve in the range of ample reserves.	**1 point**



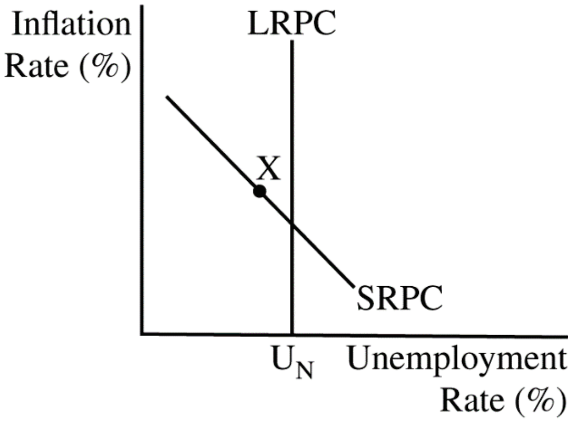
	For the second point, the graph must show a decrease in the administered interest rates, resulting in a decrease in the policy rate.  OR For the second point, the graph must show a decrease in the lower bound of the demand curve for reserves, resulting in a decrease in the policy rate. 	**1 point**
	Total for part (e)	**2 points**
(f)	For the first point, state that the quantity of national savings would decrease and the unemployment rate would decrease.	**1 point**
	For the second point, explain that the decrease in nominal interest rates will increase interest-sensitive spending (consumption, investment, or net exports), causing an increase in aggregate demand and real output.	**1 point**
	Total for part (f)	**2 points**
	Total for question 1	**10 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**

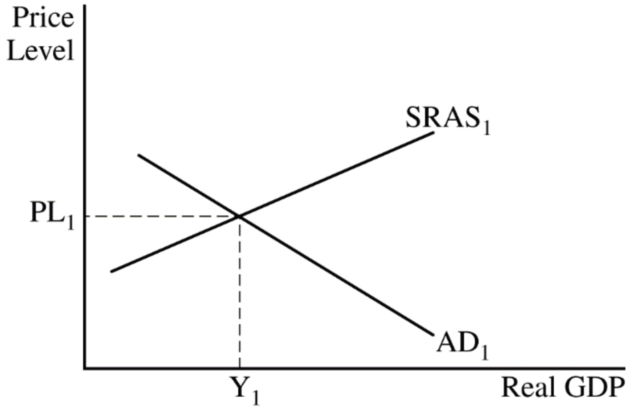
(c) State that there will be an increase in the flow of international financial capital into Noralandia and explain that international investors will seek higher returns on financial capital in Noralandia. **1 point**

(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**

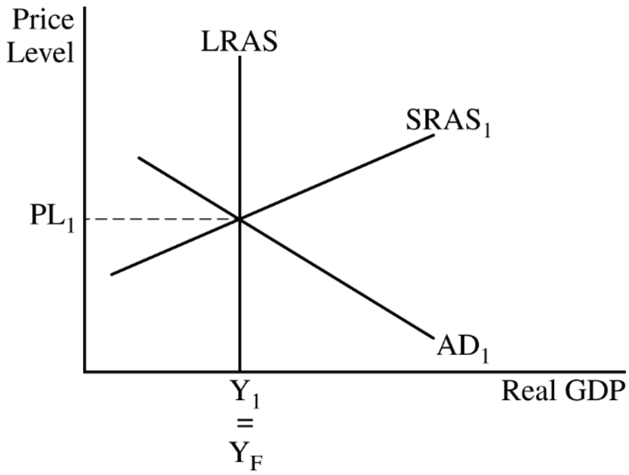
Total for question 2 **5 points**

Question 3: Short — 5 points

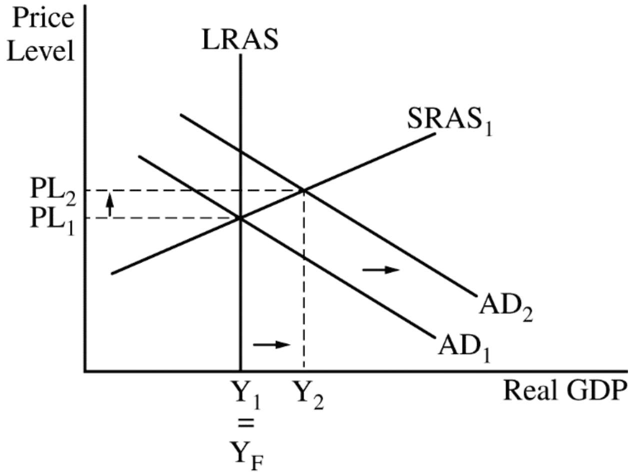
(a) Draw a correctly labeled aggregate demand–aggregate supply graph that shows PL_1 and Y_1 at the intersection of aggregate demand and short-run aggregate supply. **1 point**



For the second point, the graph must show a vertical long-run aggregate supply curve at equilibrium real output $Y_1 = Y_F$. **1 point**



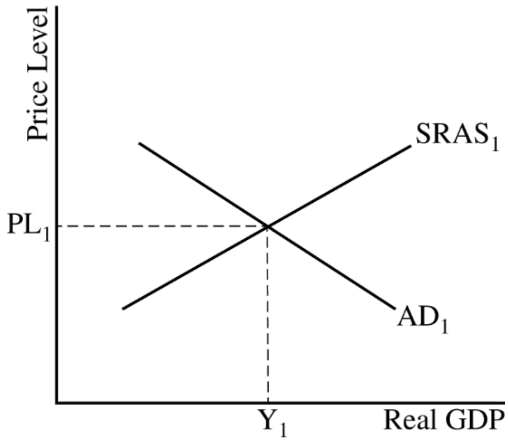
Total for part (a) — 2 points

(b)	On the graph from part (a), show the short-run effect of the increase in consumer confidence as a rightward shift of the aggregate demand curve, resulting in an increase in real output, labeled Y_2, and an increase in the price level, labeled PL_2. 	**1 point**
(c)	State that the central bank would increase its administered interest rates or increase interest on reserves.	**1 point**
(d)	State that real output will decrease and explain that the increase in interest rates will decrease interest-sensitive spending (consumption, investment, or net exports), which decreases aggregate demand.	**1 point**
	Total for question 3	**5 points**

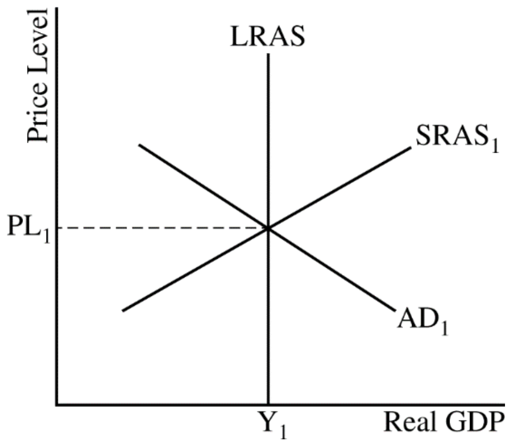
Question 1: Long — 10 points

(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**

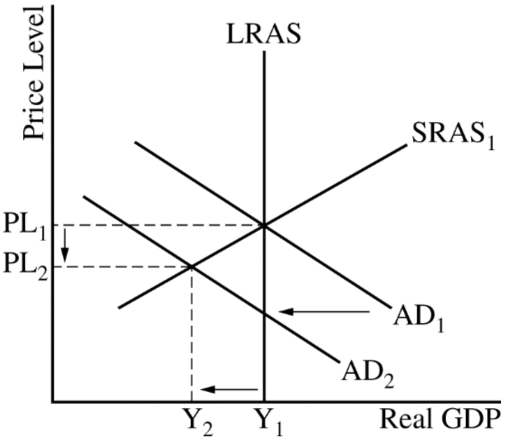


For the second point, the graph must show a vertical LRAS curve at equilibrium real output Y_1. **1 point**



Total for part (b) — 2 points

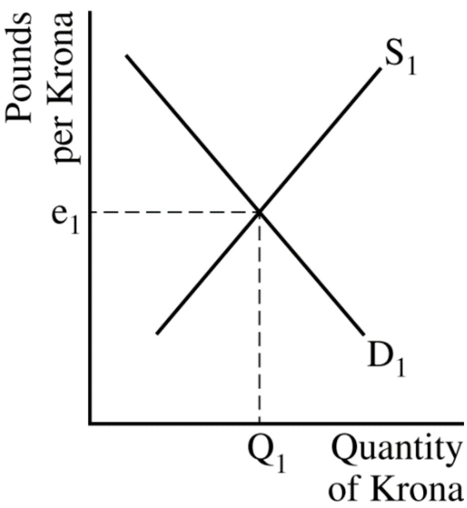
(c) On the graph from part (b), show the impact of the decrease in imports with a leftward shift of the AD curve, a decrease in real output to Y_2, and a decrease in the price level to PL_2. **1 point**



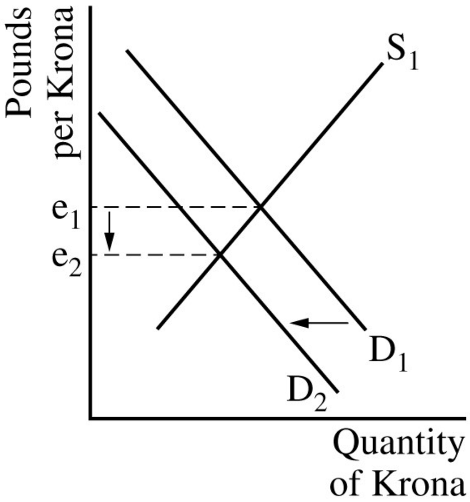
(d) State that policymakers would be more concerned about cyclical unemployment than inflationary pressures and explain that the decline in exports to the United Kingdom lowered real output below full employment, resulting in unemployment above the natural rate of unemployment. **1 point**

(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**



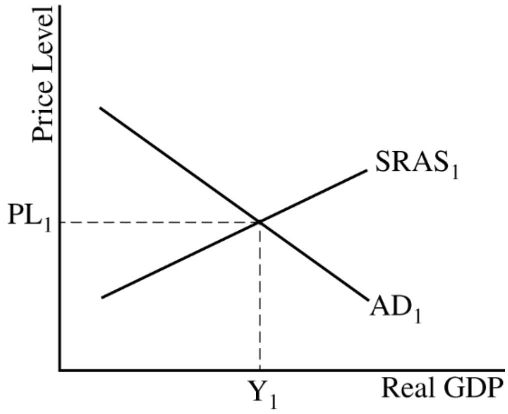
	For the second point, the graph must show a leftward shift of the demand curve for the krona, resulting in a decrease in the value of the krona.	**1 point**



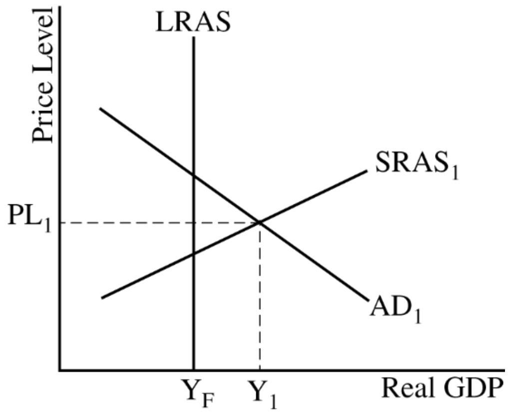
	Total for part (f)	**2 points**
(g)	State that Sweden's central bank should sell bonds.	**1 point**
(h)	Explain that selling bonds would decrease the money supply and increase interest rates in Sweden, which would increase financial capital inflows into Sweden and increase the demand for the krona, thereby leading to an appreciation of the krona.	**1 point**
	Total for question 1	**10 points**

Question 1: Long — 10 points

(a)	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**

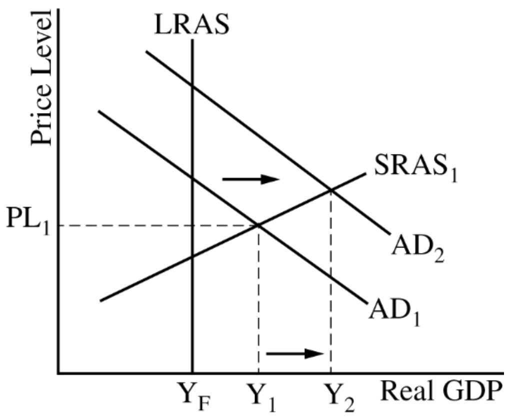


For the second point, the graph must show a vertical LRAS curve to the left of Y_1 and label the full employment output Y_F. — **1 point**

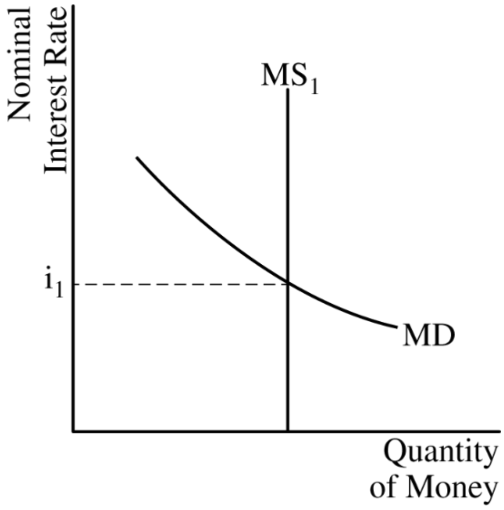


Total for part (a)	**2 points**

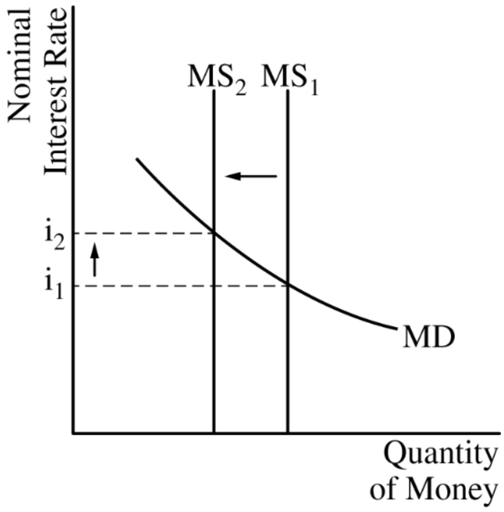
(b)	On the graph from part (a), show the impact of the government's action with a rightward shift of the AD curve and an increase in short-run equilibrium real output labeled Y_2.	**1 point**



(c)	**(i)**	State that the natural rate of unemployment will not change.	**1 point**
	(ii)	State that nominal interest rates will increase and explain that this is because the increase in real output will increase the demand for money.	**1 point**
		Total for part (c)	**2 points**
(d)		State that the central bank should sell bonds.	**1 point**
(e)		Draw a correctly labeled graph of the money market.	**1 point**



For the second point, the graph must show a leftward shift in the money supply curve, resulting in a higher nominal interest rate. **1 point**



		Total for part (e)	**2 points**
(f)		State that Smithland's currency will appreciate and explain that this is because there will be financial capital inflows as foreign investors seek higher returns in Smithland, which will increase the demand for Smithland's currency or decrease the supply of Smithland's currency.	**1 point**

(g)	State that Smithland's imports will increase and explain that this is because the appreciation of Smithland's currency means that foreign goods will be relatively less expensive.	**1 point**
	Total for question 1	**10 points**

2018

AP Macroeconomics

Scoring Guidelines

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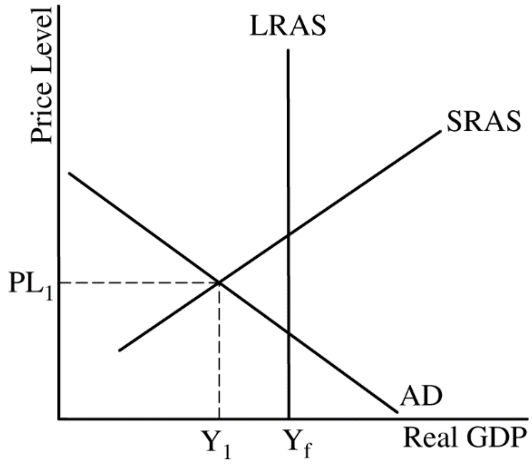
2018 SCORING GUIDELINES

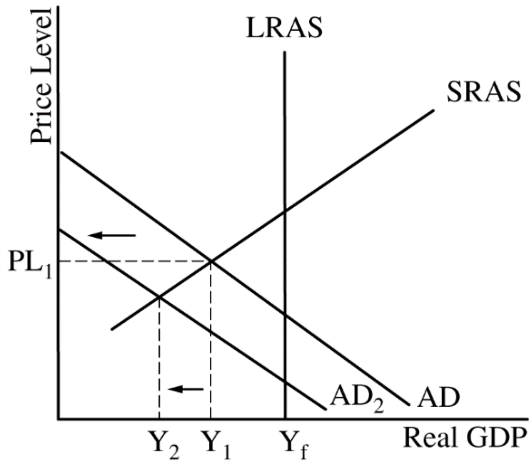
Question 1

10 points (2 + 3 + 2 + 3)



(a) 2 points:

- One point is earned for drawing a correctly labeled graph for aggregate demand (AD) and short-run aggregate supply (SRAS), showing PL_1 and Y_1 at the intersection of AD and SRAS.
- One point is earned for drawing a vertical LRAS curve to the right of Y_1.

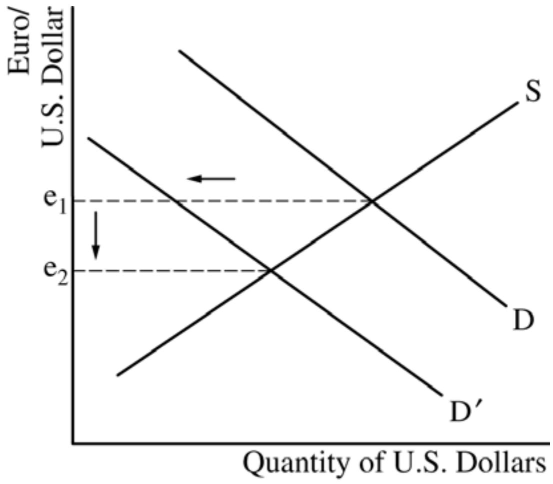


(b) 3 points:

- One point is earned for stating that United States exports will decrease and for explaining that the fall in income in the euro zone reduces the demand for United States goods.
- One point is earned for showing a leftward shift of the aggregate demand (AD) curve and showing lower United States real output on the graph.
- One point is earned for stating that unemployment in the U.S. will increase.

2018 SCORING GUIDELINES

Question 1 (continued)



(c) 2 points:

- One point is earned for stating that the euro will appreciate against the U.S. dollar because the supply of euros decreases OR because the dollar depreciates against the euro, the euro must appreciate.
- One point is earned for drawing a correctly labeled graph of the foreign exchange market for dollars and for showing a leftward shift in the demand curve for the dollar, which would result in a depreciation of the dollar.

(d) 3 points:

- One point is earned for stating that the U.S. aggregate demand will increase.
- One point is earned for stating that the U.S. price level will increase.
- One point is earned for stating that the change in the interest rate is indeterminate and for explaining that the combination of expansionary fiscal and monetary policies has opposite effects on interest rates (the expansionary fiscal policy will increase the interest rate, as government borrows to finance its spending, and the expansionary monetary policy will increase the money supply and decrease the interest rate).

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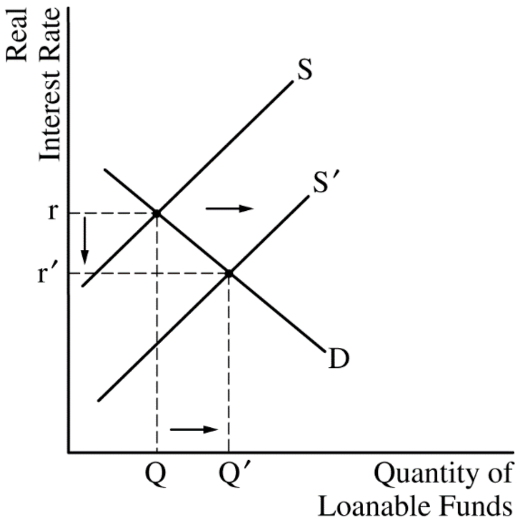
2018 SCORING GUIDELINES

Question 2

5 points (1 + 2 + 2)

(a) 1 point:

- One point is earned for stating that private savings will increase.



(b) 2 points:

- One point is earned for drawing a correctly labeled graph of the loanable funds market showing a downward sloping demand curve and an upward sloping supply curve.

- One point is earned for showing a rightward shift in the supply curve (increased private savings) and for showing a decrease in the equilibrium real interest rate.

(c) 2 points:

- One point is earned for stating that aggregate demand will increase and for explaining that the decrease in the real interest rate will result in an increase in interest-sensitive spending (consumption or investment or net exports).

- One point is earned for stating that potential real gross domestic product (GDP) will increase as a result of an increase in capital formation brought about by the increase in investment spending (or because capital formation increased the long-run aggregate supply).

2018 SCORING GUIDELINES

Question 3

5 Points (1 + 1 + 1 + 2)

(a) 1 point:

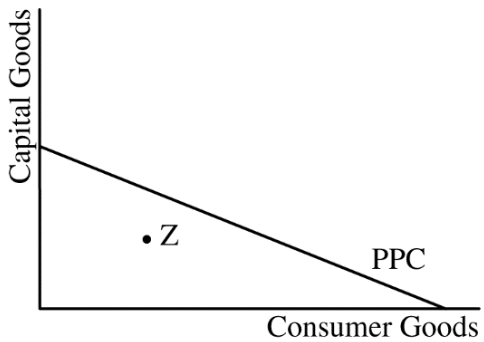
- One point is earned for stating that neither country has a comparative advantage in producing consumer goods and for explaining that the opportunity cost of producing 1 unit of consumer goods is the same for both countries (which is 1/2 a unit of capital goods).

(b) 1 point:

- One point is earned for correctly calculating the unemployment rate as 10 percent (20,000/200,000 × 100 = 10%).

(c) 1 point:

- One point is earned for correctly calculating the labor force participation rate as 66.67 percent (200,000/300,000 × 100 = 66.67%).



(d) 2 points:

- One point is earned for drawing a correctly labeled graph of the production possibilities curve (PPC).
- One point is earned for correctly showing point Z below the PPC.

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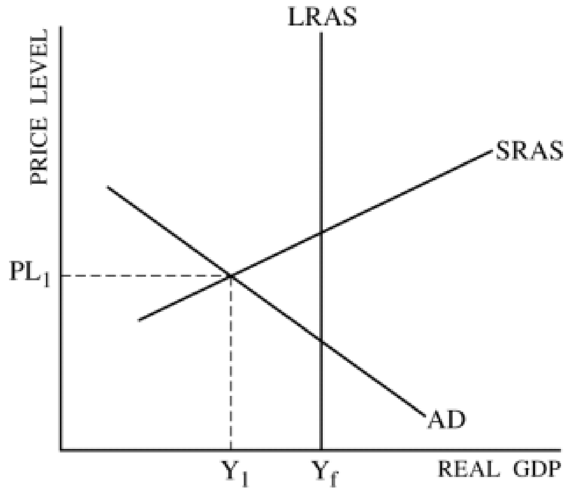
2015 SCORING GUIDELINES

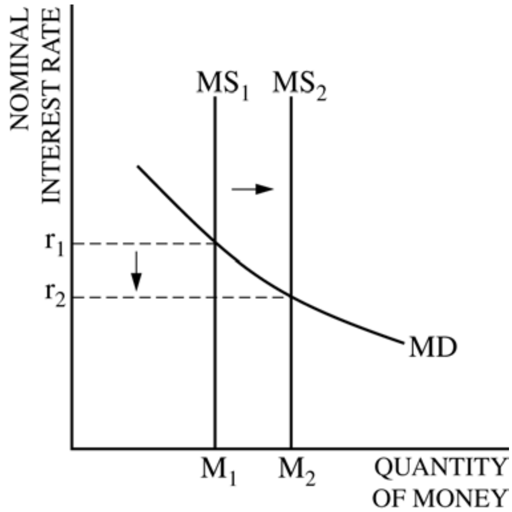
Question 1

10 points (2+1+2+3+2)



(a) 2 points:
- One point is earned for drawing a correctly labeled graph showing AD, SRAS, Y_1 and PL_1.
- One point is earned for drawing a vertical LRAS at Y_f to the right of Y_1.

(b) 1 point:
- One point is earned for stating that the Federal Reserve should target a lower federal funds rate.



(c) 2 points:
- One point is earned for drawing a correctly labeled money market graph.
- One point is earned for shifting the money supply curve to the right and showing a decrease in the nominal interest rate.

2015 SCORING GUIDELINES

Question 1 (continued)

(d) 3 points:

- One point is earned for calculating the minimum required change in government spending: \$60 billion (\$300/5=\$60).
- One point is earned for stating that the minimum required change in taxes will be greater than the minimum required change in government spending.
- One point is earned for explaining that the tax multiplier (mpc/mps = 0.8/0.2 = 4) is smaller than the government spending multiplier (1/mps = 1/0.2 = 5) because part of the initial increase in disposable income caused by the decrease in income tax will be saved rather than spent.

(e) 2 points:

- One point is earned for stating that aggregate demand will increase and for explaining that lower income tax rates will increase disposable income and/or consumption and investment.
- One point is earned for stating that long-run aggregate supply will stay the same because lowering income taxes will increase consumption and/or investment, or there is no change in inputs.
  OR
  One point is earned for stating that long-run aggregate supply will increase in the long run because lowering taxes will increase savings and investment in physical capital, or because of increased incentives to work.
  OR
  One point is earned for stating that long-run aggregate supply will decrease in the long run because lowering taxes leads to a crowding out of private investment.

2015 SCORING GUIDELINES

Question 2

5 points (1+1+2+1)

(a) 1 point:

- One point is earned for stating that Country Y has an absolute advantage in producing solar panels.

(b) 1 point:

- One point is earned for calculating the opportunity cost of a furnace for Country Y: 2 solar panels per furnace.

(c) 2 points:

- One point is earned for stating that Country X has the comparative advantage in producing furnaces.
- One point is earned for explaining that Country X has a lower opportunity cost of producing furnaces than Country Y.

(d) 1 point:

- One point is earned for stating that Country X should produce solar panels domestically.

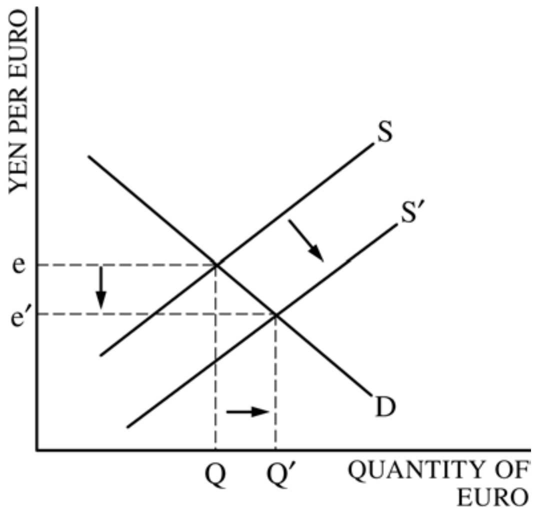
2015 SCORING GUIDELINES

Question 3

6 points (2+3+1)

(a) 2 points:

- One point is earned for stating that the real interest rate in Japan will increase in the short run because the supply of loanable funds will decrease or the demand for loanable funds will increase.
- One point is earned for stating that private domestic investment in plant and equipment in Japan will decrease.



(b) 3 points:

- One point is earned for drawing a correctly labeled graph of the foreign exchange market for the euro.
- One point is earned for showing that the supply curve for euros shifts to the right and for concluding that the yen price of the euro decreases.
- One point is earned for explaining that the European purchases of Japanese financial assets will increase due to the relatively higher rate of return in Japan.

(c) 1 point:

- One point is earned for stating that European Central Bank should buy euros.