



AP[®] Macroeconomics
2009 Free-Response Questions
Form B

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MACROECONOMICS

Section II

Planning Time—10 minutes

Writing Time—50 minutes

Directions: You have 50 minutes to answer all three of the following questions. It is suggested that you spend approximately half your time on the first question and divide the remaining time equally between the next two questions. In answering the questions, you should emphasize the line of reasoning that generated your results; it is not enough to list the results of your analysis. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. Use a pen with black or dark blue ink.

1. The unemployment rate in the country of Southland is greater than the natural rate of unemployment.

- (a) Using a correctly labeled graph of aggregate demand and aggregate supply, show the current equilibrium real gross domestic product, labeled Y_C , and price level in Southland, labeled PL_C .

The president of Southland is receiving advice from two economic advisers—Kohelis and Raymond—about how best to reduce unemployment in Southland.

- (b) Kohelis advises the president to decrease personal income taxes.
- How would such a decrease in taxes affect aggregate demand? Explain.
 - Using a correctly labeled graph of the short-run Phillips curve, show the effect of the decrease in taxes. Label the initial equilibrium from part (a) as point A, and the new equilibrium resulting from the decrease in taxes as point B.
- (c) Raymond advises the president to take no policy action.
- What will happen to the short-run aggregate supply curve in the long run? Explain.
 - Using a new correctly labeled graph of the short-run Phillips curve, show the effect of the change in the short-run aggregate supply you identified in part (c)(i).

2009 AP MACROECONOMICS FREE-RESPONSE QUESTIONS (FORM B)

2. In Country Z, the required reserve ratio is 10 percent. Assume that the central bank sells \$50 million in government securities on the open market.
- (a) Calculate each of the following.
 - (i) The total change in reserves in the banking system
 - (ii) The maximum possible change in the money supply
 - (b) Using a correctly labeled graph of the money market, show the impact of the central bank's bond sale on the nominal interest rate.
 - (c) What is the impact of the central bank's bond sale on the equilibrium price level in the short run?
 - (d) As a result of the price level change in part (c), are people with fixed incomes better off, worse off, or unaffected? Explain.
3. Assume that the real interest rates in both Canada and India have been 5 percent. Now the real interest rate in India increases to 8 percent.
- (a) Using a correctly labeled graph of the foreign exchange market for the Canadian dollar, show the effect of the higher real interest rate in India on each of the following.
 - (i) Supply of the Canadian dollar. Explain.
 - (ii) The value of the Canadian dollar, assuming flexible exchange rates
 - (b) Using a correctly labeled graph of the loanable funds market in Canada, show how the increase in the real interest rate in India affects the real interest rate in Canada.

STOP

END OF EXAM



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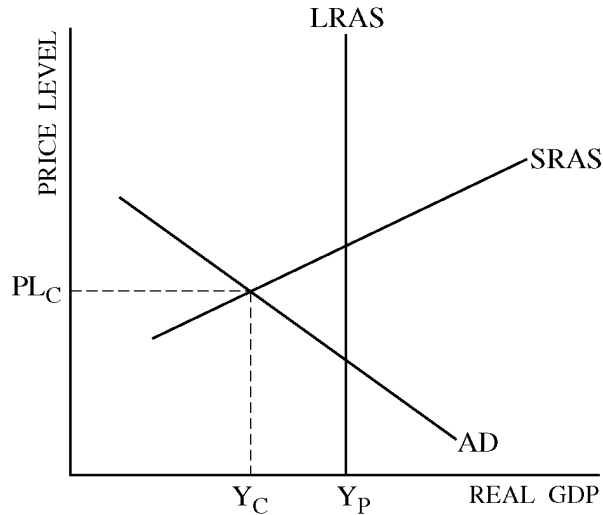
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Question 1

9 points (2 + 4 + 3)

(a) 2 points:

- One point is earned for the correctly labeled graph with vertical LRAS curve.
- One point is earned for the current equilibrium output, Y_C , and price level, PL_C , identified to the left of the LRAS curve.



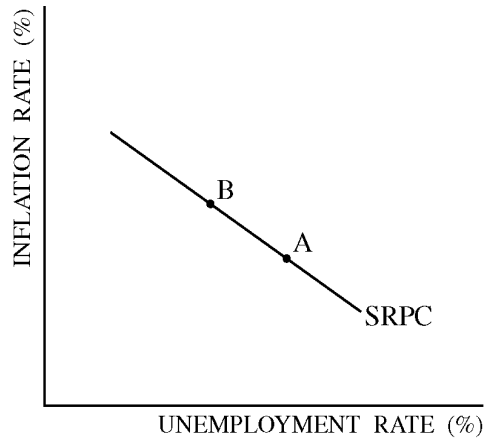
(b) 4 points:

(i) 2 points:

- One point is earned for stating that aggregate demand increases.
- One point is earned for explaining that the decrease in taxes raises disposable income and increases consumption spending.

(ii) 2 points:

- One point is earned for a correctly labeled graph of the Phillips curve.
- One point is earned for the correct initial and current positions.

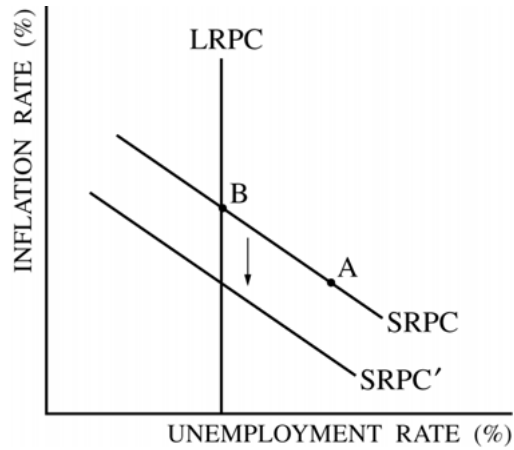


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Question 1 (continued)

(c) 3 points:

- One point is earned for stating that the short-run aggregate supply curve will shift to the right.
- One point is earned for explaining that wages will fall, businesses will hire more workers, and output will rise.
- One point is earned for showing a leftward shift of the short-run Phillips curve.



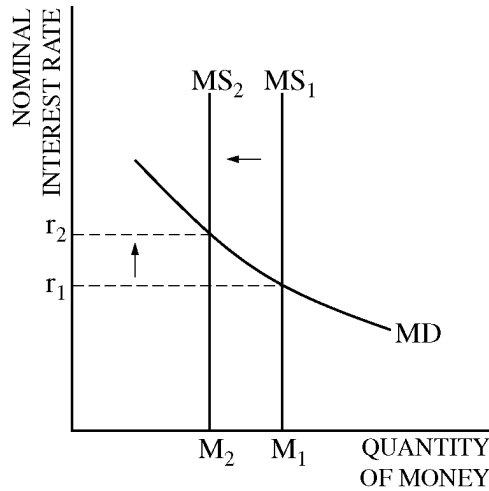
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Question 2

7 points (2 + 2 + 1 + 2)

(a) 2 points:

- One point is earned for determining the total change in reserves: \$50 million.
- One point is earned for calculating the maximum possible change in the money supply: $10 \times \$50 = \500 million.



(b) 2 points:

- One point is earned for a correctly labeled graph of the money market.
- One point is earned for showing a leftward shift of the money supply curve and an increase in the nominal interest rate.

(c) 1 point:

- One point is earned for concluding that the equilibrium price level will fall.

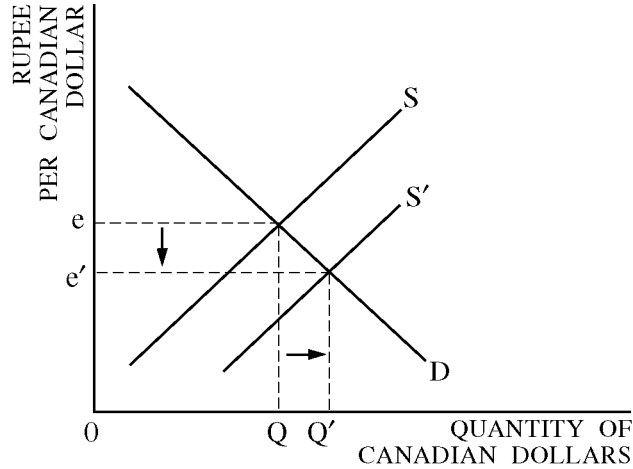
(d) 2 points:

- One point is earned for concluding that people with a fixed income would be better off.
- One point is earned for explaining that the lower price level raises real income or increases the purchasing power of the fixed income.

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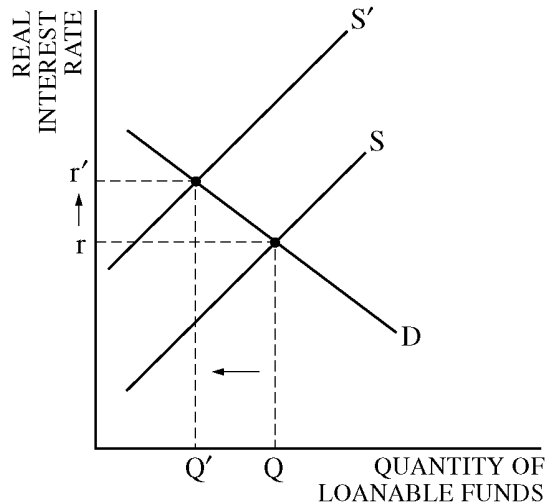
Question 3

6 points (4 + 2)



(a) 4 points:

- One point is earned for the correctly labeled graph of the foreign exchange market.
- One point is earned for showing that the supply of Canadian dollars will increase, or the supply curve will shift to the right.
- One point is earned for explaining that Canadian investors will be attracted by the higher real interest rate in India and increase their purchase of Indian financial assets.
- One point is earned for showing that the Canadian dollar depreciates against the Indian rupee.



(b) 2 points:

- One point is earned for a correctly labeled graph of the loanable funds market.
- One point is earned for showing a leftward shift of the supply curve and an increase in the interest rate.