



AP[®] Macroeconomics 2012 Free-Response Questions

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MACROECONOMICS

Section II

Planning Time—10 minutes

Writing Time—50 minutes

Directions: You have 10 minutes to read all of the questions in this booklet, to sketch graphs, to make notes, and to plan your answers. You will then 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. Assume that the country of Rankinland is currently in recession.
 - (a) Assume that Rankinland produces only food and clothing. Draw a correctly labeled production possibilities curve for Rankinland. Show a point that could represent the current output combination and label it A.
 - (b) Assume that the Central Bank of Rankinland pursues an expansionary monetary policy.
 - (i) Identify the open-market operation that the Central Bank would use.
 - (ii) Draw a correctly labeled money market graph and show the short-run effect of the expansionary monetary policy on the nominal interest rate.
 - (iii) Assuming no change to the price level, what happens to the real interest rate as a result of the expansionary monetary policy? Explain.
 - (iv) Given your answer to part (b)(iii) regarding the real interest rate, what happens to the real gross domestic product (GDP) in the short run? Explain.
 - (c) Suppose Rankinland has a current account deficit. Rankinland's currency is called the bera.
 - (i) What will initially happen to the current account deficit in Rankinland solely due to the change in the real GDP from part (b)(iv) ? Explain.
 - (ii) What will happen to the international value of the bera solely due to the change in the real GDP from part (b)(iv) ? Explain.

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2. The following is a simplified balance sheet for Mi Tierra Bank in the United States.

Mi Tierra Bank			
Assets		Liabilities	
Required reserves	\$10,000	Demand deposits	\$100,000
Excess reserves	\$5,000		
Loans	\$85,000	Owner's equity	\$ 0

- (a) What is the reserve requirement?
- (b) Assume that Luis withdraws \$5,000 in cash from his checking account at Mi Tierra Bank.
- (i) By how much will Mi Tierra Bank's reserves change based on Luis' withdrawal?
 - (ii) What is the initial effect of the withdrawal on the M1 measure of money supply? Explain.
 - (iii) As a result of the withdrawal, what is the new value of excess reserves on the balance sheet of Mi Tierra Bank based on the reserve requirement from part (a) ?
- (c) Assume that the next day John withdraws from Mi Tierra Bank an amount that exceeds the bank's excess reserves. Assuming that no loans are called in, how can Mi Tierra Bank cover its required reserves?
3. Assume the economy of Andersonland is in a long-run equilibrium with full employment. In the short run, nominal wages are fixed.
- (a) Draw a correctly labeled graph of short-run aggregate supply, long-run aggregate supply, and aggregate demand. Show each of the following.
- (i) Equilibrium output, labeled Y_1
 - (ii) Equilibrium price level, labeled PL_1
- (b) Assume that there is an increase in exports from Andersonland. On your graph in part (a), show the effect of higher exports on the equilibrium in the short run, labeling the new equilibrium output and price level Y_2 and PL_2 , respectively.
- (c) Based on your answer in part (b), what is the impact of higher exports on real wages in the short run? Explain.
- (d) As a result of the increase in exports, export-oriented industries in Andersonland increase expenditures on new container ships and equipment.
- (i) What component of aggregate demand will change?
 - (ii) What is the impact on the long-run aggregate supply? Explain.

STOP

END OF EXAM



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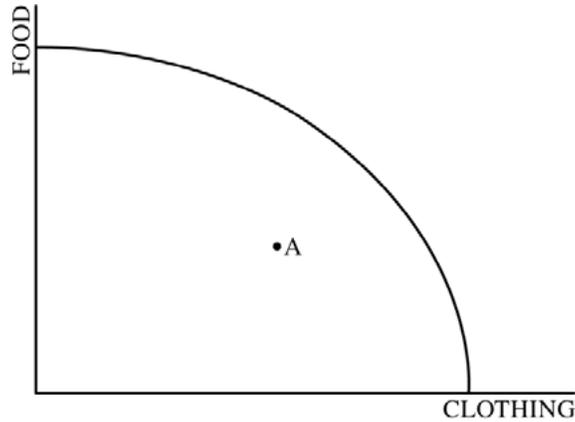
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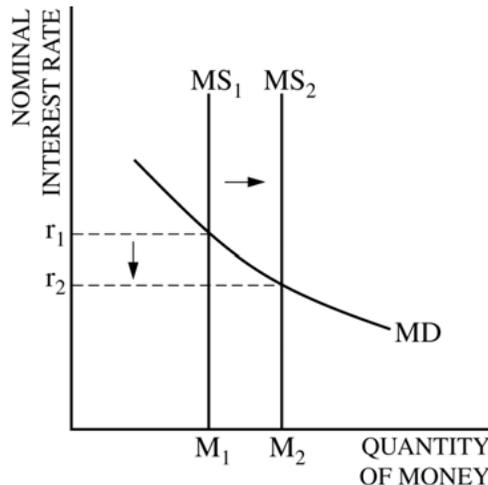
Question 1

12 Points (2 + 6 + 4)



(a) 2 points:

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



(b) 6 points:

- One point is earned for identifying the buying of bonds as the correct open-market operation to use.
- One point is earned for drawing a correctly labeled graph of the money market.
- One point is earned for showing a rightward shift of the money supply curve, resulting in a lower interest rate.
- One point is earned for stating that the real interest rate will fall.
- One point is earned for explaining that with the price level remaining constant, when the nominal interest rate falls, the real interest rate also falls.
- One point is earned for stating that the real GDP will increase in the short run and explaining that investment or consumption increases, causing aggregate demand to increase.

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Question 1 (continued)

(c) 4 points:

- One point is earned for stating that the current account deficit will increase.
- One point is earned for explaining that the increase in real GDP increases income, which causes imports to increase and net exports to decrease.
- One point is earned for stating that the international value of the bera will decrease.
- One point is earned for explaining that the decline in the international value of the bera is due to an increase in the supply of the bera.

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Question 2

5 points (1 + 3 + 1)

(a) 1 point:

- One point is earned for calculating the correct reserve requirement of 10 percent (\$10,000/\$100,000).

(b) 3 points:

- One point is earned for stating that total bank reserves will decrease by \$5,000.
- One point is earned for stating that the \$5,000 withdrawal has no effect on the M1 measure of the money supply because it only changes the composition of M1 between cash and demand deposits.
- One point is earned for stating that the new value of the excess reserves is \$500.

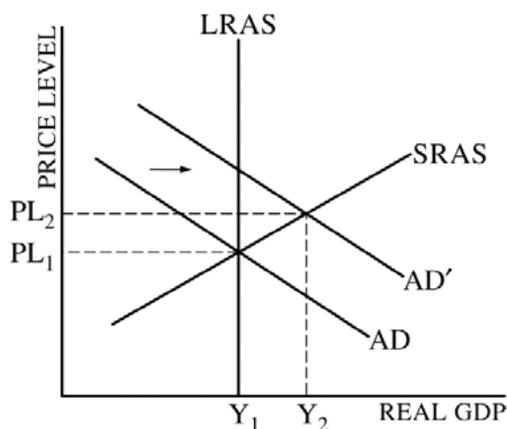
(c) 1 point:

- One point is earned for stating that the bank can borrow from the Federal Reserve or from another bank.

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Question 3

6 points (2 + 1 + 1 + 2)



(a) 2 points:

- One point is earned for drawing a correctly labeled graph and showing the AD and SRAS curves and PL_1 .
- One point is earned for showing a vertical LRAS curve at the output Y_1 through the intersection of the SRAS and AD curves.

(b) 1 point:

- One point is earned for showing a rightward shift of the aggregate demand curve and showing Y_2 and PL_2 .

(c) 1 point:

- One point is earned for stating that real wages will fall because the price level has increased and the nominal wages are fixed in the short run.

(d) 2 points:

- One point is earned for stating that the investment component of AD will change.
- One point is earned for stating that the long-run aggregate supply curve will shift to the right because the capital stock has increased.