1 Initially, the real interest rates in the United States and Japan are equal to 7 percent. The real interest rate in the United States increases to 8 percent while the real interest rate in Japan decreases to 6 percent.

(a) How and why will capital flows be affected by this change in real interest rates?

(b) Using a correctly labeled graph for the yen market, show and explain how the value of the yen will change relative to the value of the dollar.

(c) Explain how the change in the value of the yen will affect each of the following in the United States.

(i) Imports from Japan

(ii) Exports to Japan

2. Balance of payments accounts record all of a country's international transactions during a year.

(a) Two major subaccounts in the balance of payments accounts are the current account and the capital account. In which of these subaccounts will each of the following transactions be recorded?

(i) A United States resident buys chocolate from Belgium.

(ii) A United States manufacturer buys computer equipment from Japan.

(b) How would an increase in the real income in the United States affect the United States current account balance? Explain.

(c) Using a correctly labeled graph of the foreign exchange market for the United States dollar, show how an increase in United States firms' direct investment in India will affect the value of the United States dollar relative to the Indian currency (the rupee).

3 A United States firm sells $10 million worth of goods to a firm in Argentina, where the currency is the peso.

(a) How will the transaction above affect Argentina's aggregate demand? Explain.

(b) Assume that the United States current account balance with Argentina is initially zero. How will the transaction above affect the United States current account balance? Explain.

(c) Using a correctly labeled graph of the foreign exchange market for the United States dollar, show how a decrease in the United States financial investment in Argentina affects each of the following.

(i) The supply of United States dollars

(ii) The value of the United States dollar relative to the peso

(d) Suppose that the inflation rate is 3 percent in the United States and 5 percent in Argentina. What will happen to the value of the peso relative to the United States dollar as a result of the difference in inflation rates? Explain.

Assume that yesterday the exchange rate between the euro and the Singaporean dollar was 1 euro = 0.58 Singaporean dollars. Assume that today the euro is trading at 1 euro = 0.60 Singaporean dollars.

(a) How will the change in the exchange rate affect each of the following in Singapore in the short run?

(i) Aggregate demand. Explain.

(ii) The level of employment. Explain.

(b) Suppose that Singapore wants to return the exchange rate to 1 euro = 0.58 Singaporean dollars.

(i) Should the Singaporean central bank buy or sell euros in the foreign exchange market?

(ii) Instead of buying or selling euros, what domestic open-market operation can the Singaporean central bank use to achieve the same result? Explain.

5. The United States and South Korea are trading partners, and the United States has a zero current account balance. Assume now that the inflation rate in the United States decreases relative to the inflation rate in South Korea.

(a) Based on the decrease in the inflation rate in the United States, will United States exports to South Korea increase or decrease?

(b) Based on the change in United States exports in part (a), answer each of the following.

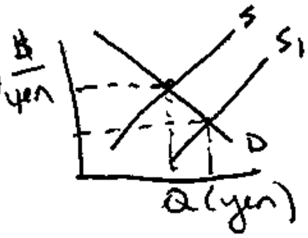
(i) Will the United States current account balance remain at zero, be in surplus, or be in deficit?

(ii) What will happen to real gross domestic product in the United States in the short run? Explain.

(c) The South Korean currency is the won. Draw a correctly labeled graph of the foreign exchange market for the United States dollar. Show the effect of the lower inflation rate in the United States on the won price per United States dollar.

Don't worry about #5

1. (a) IR ↑ in U.S. ⇒ increase in funds flowing to the U.S. from Japan → investors seek real return in U.S
↓ in Japan
decrease in funds flowing from the U.S. to Japan → lower real returns

(b) 


yen depreciates
Doller appreciates

(c) Doller appreciates → imports increase from Japan
exports reduce to Japan

net exports decrease

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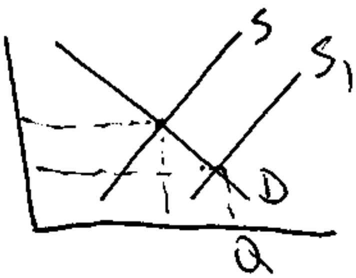
2. (i) current account (debit)
(ii) current account (debit)

(b) Income increases → causes imports to increase → imports increase → leads to a decrease in the current account

(c) 


↑ in income → people buy more stuff →
~~[illegible]~~
↑ Demand of other currency → ↑ supply of $

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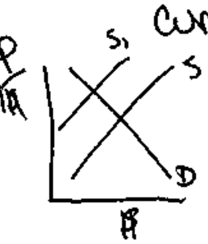
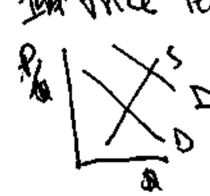
3. (a) AD decreases → purchase results in ↑ imports ↓ exports → decreased net exports

(b) Current account of the U.S. will be in surplus → credit on the current account

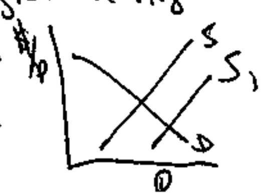
(c) 


$ appreciates
Peso depreciates

(D) ~~In~~ Price level is higher in Argentina

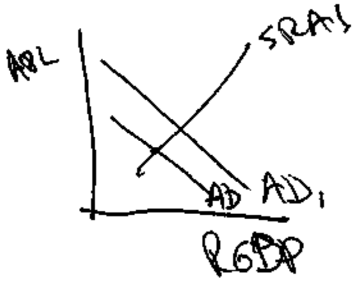



$ ↑
P ↓



4. (a) 1 euro = 0.58 \$
1 euro = 0.60 \$

Euro is appreciating
\$ is depreciating




~~ADW~~ → Depreciating \$ dollar increases net exports
AD↑

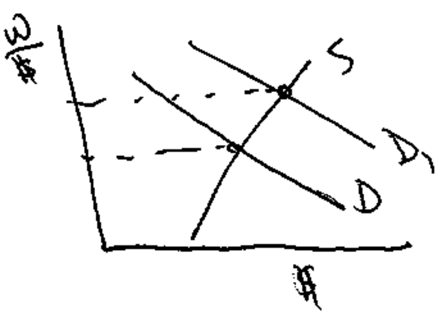
Employment increases
Unemployment decreases

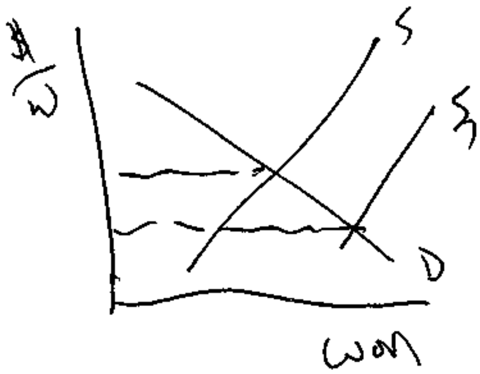
b) Wants \$ to appreciate
→ sell euros → increases supply of euros → Depreciates euro

(ii) sell gov. bonds → raises interest rate → increases Demand for (\$)

5. (a) ~~In~~ Prices lower in U.S. → ↑ in Demand for \$ → \$ appreciates → ~~↑ exports~~ ↓ m-export
(b) - Current account will be in ~~surplus~~ deficit
- rGDP ~~increases~~ decreases

(c)



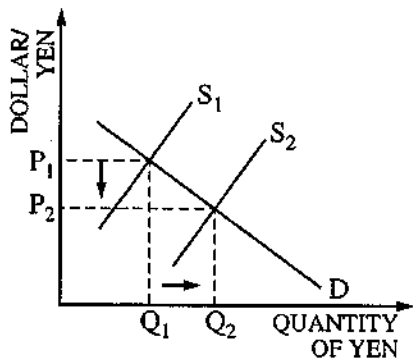
1

## Question 3

**Correct Answer:**

**Part a:** There will be an increase in funds flowing to the United States from Japan as Japanese investors seek the higher real return in the United States, increasing the supply of yen to purchase dollars. There will be a decrease in funds flowing from the United States to Japan due to the lower real returns in Japan, reducing the demand for yen by holders of dollars.

**Part b:** A correct graph would have quantity of yen on the horizontal axis and the dollar price of a yen on the vertical axis. In a correct graph, the supply of yen in the market would increase, lowering the equilibrium dollar price of a yen. The yen depreciates compared to the dollar. Alternatively, the student could show a decrease in the demand for yen, again with a depreciation of the yen. Many students inappropriately (as least for the question) tried to analyze the impact in the market for dollars.




(Alternately, the student could show a decrease in demand or both a decrease in demand and an increase in supply in the yen market graph.)

**Part c:** The depreciation of the yen or the appreciation of the dollar will increase U.S. imports from Japan and reduce U.S. exports to Japan. Since it takes fewer dollars to buy a given amount of yen, U.S. imports from Japan become cheaper in dollar terms and hence U.S. imports from Japan increase. U.S. exports become more expensive for Japanese buyers since it now takes more yen to buy a dollar after the depreciation of the yen. To receive full credit in this part of the question, the student needed to explain how an appreciation or depreciation of a currency would impact the relative price of imports or exports when compared to the domestic price level.

**Grading Rubric:**

Increase in U.S. real interest rate compared to that of Japan [2+3+2=7]

**Part a: 2 Points**

**1 point** (RESULT) financial capital flows from Japan to U.S.
(or decrease outflow from U.S. to Japan)

**1 point** (REASON) in search of greater rate of return due to higher rate in U.S. and/or lower rates in Japan
<u>must</u> have correct result to get second point for reason

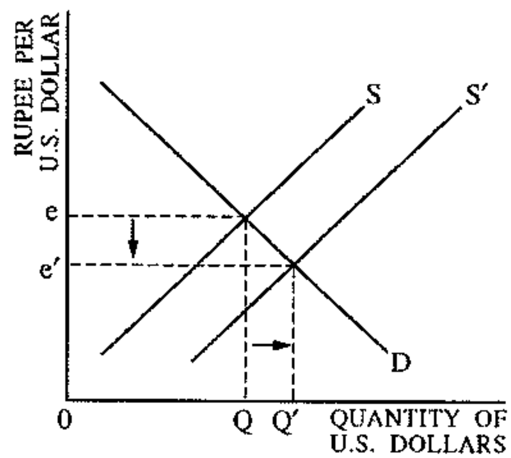
# AP® MACROECONOMICS
# 2008 SCORING GUIDELINES

## Question 2

**6 points** (2 + 2 + 2)

(a) 2 points:
- One point is earned for stating that the transaction will be recorded in the current account.
- One point is earned for stating that the transaction will be recorded in the current account.

(b) 2 points:
- One point is earned for stating that the current account balance will decrease or move toward a deficit.
- One point is earned for explaining that the increase in income causes imports to increase.




(c) 2 points:
- One point is earned for a correctly labeled graph of the foreign exchange market for the U.S. dollar.
- One point is earned for shifting the supply of U.S. dollars to the right and showing a depreciation of the dollar.

## Question 3

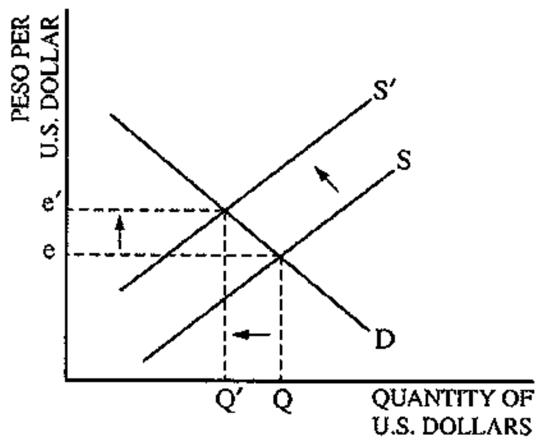
**6 points** (1 + 1 + 2 + 2)

(a) 1 point:

- One point is earned for stating that Argentina's aggregate demand will fall because the purchase results in increased imports *or* decreased net exports, which are components of aggregate demand.

(b) 1 point:

- One point is earned for stating that the United States current account will be in surplus or increases because exports are recorded as a credit in the current account.




(c) 2 points:

- One point is earned for a correctly labeled graph of the dollar market.
- One point is earned for showing a leftward shift of the supply curve and indicating that the value of the dollar against the peso increases, using arrows, labels or dotted lines.

(d) 2 points:

- One point is earned for stating that the peso will depreciate against the dollar.
- One point is earned for explaining that the higher inflation rate in Argentina makes U.S. goods less expensive (or more attractive) than Argentinean goods.

4

## Question 2

**5 points** (2 + 3)

(a) 2 points:

- One point is earned for stating that aggregate demand in Singapore will increase and for explaining that the depreciating Singaporean dollar increases Singapore's exports to European Union countries because the price of those exports — in terms of euros — decreases.
- One point is earned for stating that employment in Singapore will increase because Singapore's real GDP increases and it takes more labor to produce more goods and services.

(b) 3 points:

- One point is earned for stating that the Singaporean central bank should sell euros.
- One point is earned for stating that the Singaporean central bank should sell government bonds.
- One point is earned for explaining that the sale of government bonds raises the interest rate in Singapore and increases the demand for Singaporean dollars for financial investment purposes.

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# 2014 SCORING GUIDELINES

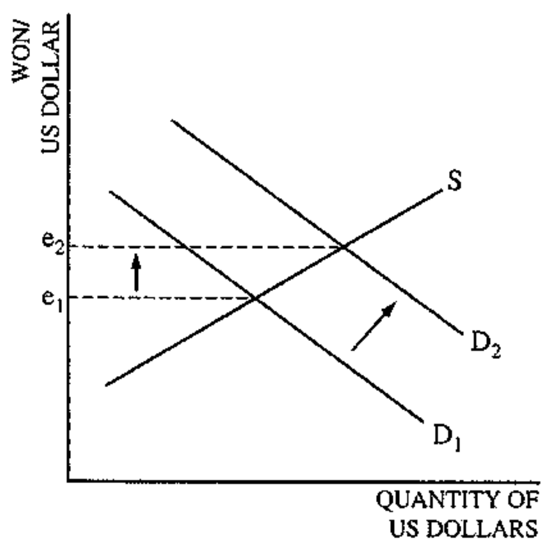
5

## Question 3

**5 points** (1+2+2)

(a) 1 point:
- One point is earned for stating that United States exports to South Korea will increase.

(b) 2 points:
- One point is earned for stating that the United States current account will be in surplus.
- One point is earned for stating that the United States gross domestic product will increase and explaining that higher U.S. exports increase AD (or that production increases to meet the increased export demand from South Korea).




(c) 2 points:
- One point is earned for drawing a correctly labeled graph of the foreign exchange market for the U.S. dollar.
- One point is earned for shifting the demand curve for the dollar to the right (and/or shifting the supply curve to the left) and showing an increase in the won price per dollar.