

2016 AP® MACROECONOMICS FREE-RESPONSE QUESTIONS

MACROECONOMICS

Section II

Total Time—60 minutes

Reading Period—10 minutes

Writing Period—50 minutes

Directions: You are advised to spend the first 10 minutes reading all of the questions and planning your answers. You will then have 50 minutes to answer all three of the following questions. You may begin writing your responses before the reading period is over. 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. 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 United States economy is currently in a short-run equilibrium with the actual unemployment rate above the natural rate of unemployment.
 - (a) Draw a single correctly labeled graph with both the long-run Phillips curve and short-run Phillips curve. Label the current short-run equilibrium point P.
 - (b) Assuming no policy actions are taken, will the short-run Phillips curve shift to the right (upward), shift to the left (downward), or remain the same in the long run? Explain.
 - (c) If the Federal Reserve Bank wants to lower unemployment, what expansionary open-market operation should it use?
 - (d) How will the open-market operation you identified in part (c) affect each of the following?
 - (i) Federal funds rate. Explain.
 - (ii) Real interest rate in the short run.
 - (e) Given your answer in part (d)(ii), what is the effect on real gross domestic product (GDP) in the short run? Explain.
 - (f) Japan and the United States are major trading partners. Indicate how the change in real GDP you identified in part (e) will affect the demand for the Japanese yen in the foreign exchange market.
 - (g) Draw a correctly labeled graph of the foreign exchange market for the Japanese yen, showing the effect of the change in demand identified in part (f) on the value of the Japanese yen relative to the United States dollar.

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2. The following is the balance sheet of First Superior Bank.

Assets	Liabilities and Equity		
Reserves	\$200	Demand deposits	\$2,000
Loans	\$1,800	Equity (net worth)	\$0

Assume that the required reserve ratio is 10 percent.

- (a) What is the dollar value of new loans that First Superior Bank can make? Explain.
- (b) Mr. Smith deposits \$100 of cash in a demand deposit account in First Superior Bank. Calculate the maximum amount of new loans that First Superior Bank can now make.
- (c) As a result of Mr. Smith's \$100 cash deposit, calculate the maximum change over time in each of the following in the banking system.
- (i) Loans
 - (ii) Demand deposits
- (d) As a result of Mr. Smith's \$100 cash deposit, calculate the maximum change over time in the money supply.
- (e) Provide one reason why the actual change in money supply can be smaller than the maximum change you identified in part (d).
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3. The following table shows the number of donuts or cupcakes that John and Erica can each produce in one day.

	Donuts	Cupcakes
John	200	100
Erica	150	50

- (a) Who has the absolute advantage in producing donuts? Explain.
- (b) Who has the comparative advantage in producing donuts? Explain.
- (c) Assume that John and Erica decide to specialize according to their comparative advantages and that one cupcake is exchanged for four donuts.
- (i) Indicate whether or not specialization and trade are beneficial to John.
 - (ii) Indicate whether or not specialization and trade are beneficial to Erica.
- (d) Assume that Erica discovers a new cupcake production technique that will increase her daily production of cupcakes only. Using donuts on the horizontal axis, draw a correctly labeled production possibilities curve for Erica, before and after the technology change in cupcake production.

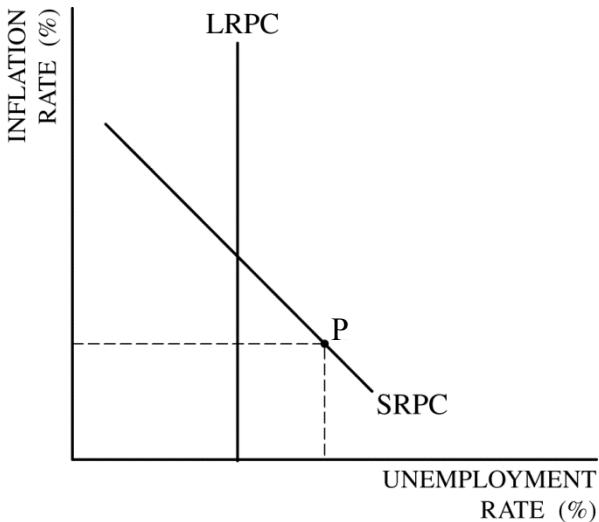
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END OF EXAM

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Question 1

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



(a) 2 points:

- One point is earned for drawing a correctly labeled graph showing a vertical LRPC and a downward sloping SRPC.
- One point is earned for showing point P on the SRPC to the right of LRPC.

(b) 1 point:

- One point is earned for stating that SRPC will shift to the left, and for explaining that producing at a level of output below full employment will create higher unemployment and lower inflationary expectations that will result in lower nominal wages and input costs.

(c) 1 point:

- One point is earned for stating that the Federal Reserve should buy bonds.

(d) 2 points:

- One point is earned for stating that the federal funds rate will decrease and for explaining that the money supply will increase, which will increase reserves and decrease the federal funds rate.
- One point is earned for stating that the real interest rate will decrease in the short run.

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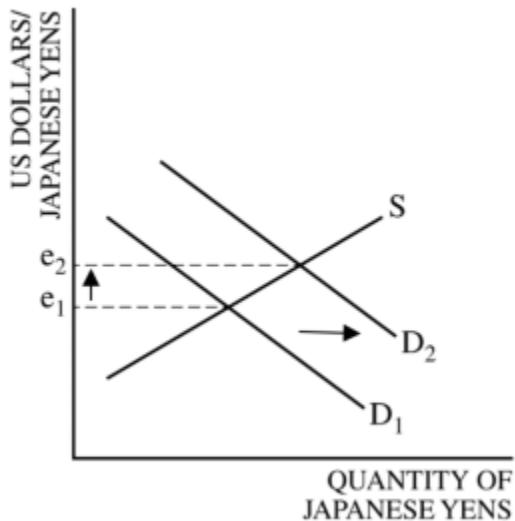
Question 1 (continued)

(e) 1 point:

- One point is earned for stating that real GDP will increase in the short run and for explaining that a decrease in the real interest rate will increase interest-sensitive spending, which includes consumption and investment in plant and equipment, resulting in an increase in aggregate demand.

(f) 1 point:

- One point is earned for stating that the demand for the Japanese yen will increase in the foreign exchange market.



(g) 2 points:

- One point is earned for drawing a correctly labeled graph of the foreign exchange market for the Japanese yen.
- One point is earned for showing a rightward shift of the demand curve for the yen and showing an increase in the dollar price of the yen (appreciating yen).