



Scoring Guidelines

Question 1: Long

1. Assume in the country of Zeetoland the expected inflation rate is 4%, the unemployment rate is 5%, the natural rate of unemployment is 6%, and the equilibrium real interest rate is 3%.
 - (a) Draw a correctly labeled graph of the long-run aggregate supply, short-run aggregate supply, and aggregate demand curves, and show each of the following.
 - (i) Current output, labeled Y_1
 - (ii) Current price level, labeled PL_1
 - (iii) Full employment output, labeled Y_F
 - (b) The central bank is concerned about the buildup of inflationary pressures and wants to take a preemptive action to fight inflation. Identify one monetary policy action the central bank would take.
 - (c) Based on the monetary policy action identified in part (b), will Zeetoland experience financial capital outflows or inflows? Explain.
 - (d) Draw a correctly labeled graph of the foreign exchange market for Zeetoland's currency, the zeet, and show the effect of the monetary policy action identified in part (b) on the demand and the exchange rate for the zeet.
 - (e) Based on the change in the exchange rate in part (d), what will happen to Zeetoland's net exports? Explain.
 - (f) Assume instead the government of Zeetoland increases income taxes. On your graph in part (a), show the impact of the government's action in the short run on real output, labeled Y_2 , and the price level, labeled PL_2 .
 - (g) Based solely on the change in real output in part (f), what will happen to the demand for money in Zeetoland?
 - (h) Based on your answer to part (g), what will happen to nominal interest rates in Zeetoland?

Scoring Guidelines for Question 1: Long

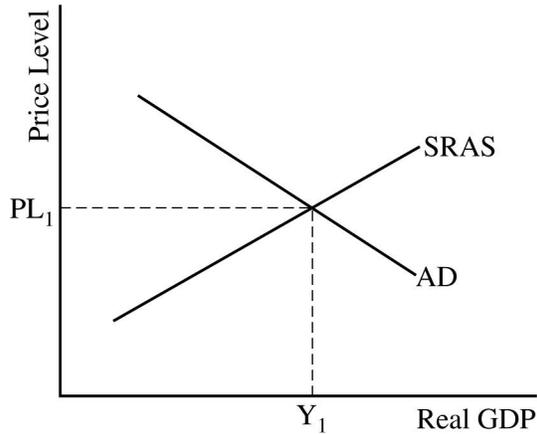
10 points

Learning Objectives: MOD-2.G POL-1.D MKT-3.D MKT-5.G MKT-5.C MKT-5.E MKT-5.F POL-1.A

- (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
4.A

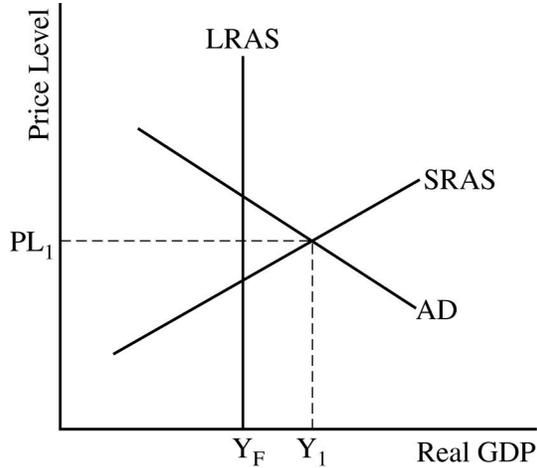
Task type: Create graphs or visual representations



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
4.B

Task type: Create graphs or visual representations



Total for part (a) 2 points

(b) Identify one of the following actions:

- Selling bonds
- Increasing the discount rate
- Increasing the required reserve ratio

Task type: Make assertions

1 point

2.A

(c) State that Zeetoland will experience financial capital inflows and explain that higher interest rates will attract financial capital from other countries. (Both parts are required to earn the point.)

Task type: Explain

1 point

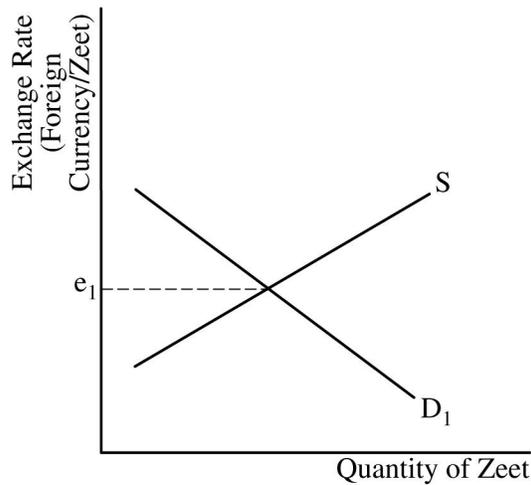
3.A

(d) Draw a correctly labeled graph of the foreign exchange market for the zeet.

Task type: Create graphs or visual representations

1 point

4.A

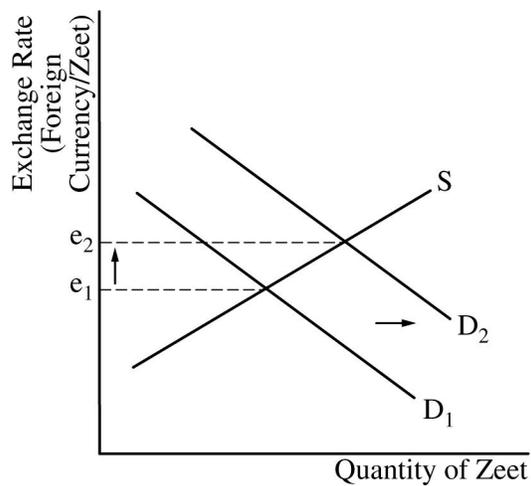


For the second point, the graph must show a rightward shift in the demand curve for the zeet and an increase in the exchange rate (an appreciation in the currency).

Task type: Create graphs or visual representations

1 point

4.C

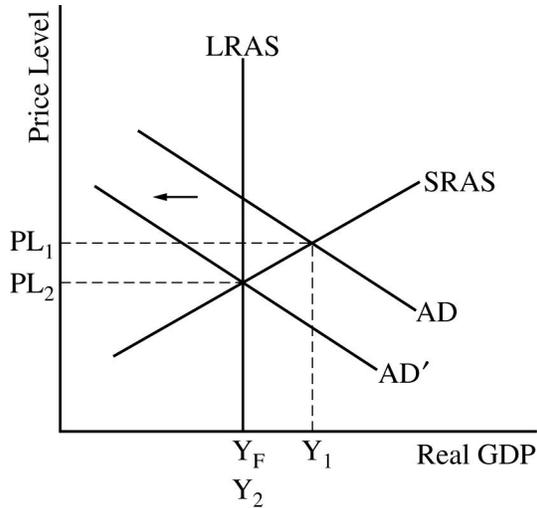


Total for part (d)

2 points

- (e) State that Zeetoland's net exports will decrease and explain that the appreciation of the zeet will make Zeetoland's exports relatively expensive to those of other countries. (Both parts required.) **1 point**
Task type: Explain **3.A**

- (f) On the graph from part (a), show the impact of the government's action and label the resulting real output Y_2 and the resulting price level PL_2 . **1 point**
 The graph must show a leftward shift in the aggregate demand curve and a decrease in the price level and real output. Note that the economy does not have to go back to full employment, as shown in the graph below. All leftward shifts in the AD curve are accepted, whether they are to the left of, to the right of, or at full employment.
Task type: Create graphs or visual representations



- (g) State that the demand for money will decrease. **1 point**
Task type: Make assertions **3.A**

- (h) State that nominal interest rates will decrease. **1 point**
Task type: Make assertions **3.A**

Total for question 1 10 points

Question 2: Short

2. Country X has a fractional reserve banking system. The reserve requirement is 25%, and the banks in Country X hold no excess reserves. Assume Mary deposits \$100,000 in Bank A in Country X.
- (a) Calculate the maximum amount of loans that Bank A could make as a result of Mary's deposit. Show your work.
 - (b) Calculate the maximum possible change in demand deposits in the banking system of Country X as a result of Mary's deposit. Show your work.
 - (c) Is the maximum possible change in the money supply in the banking system of Country X greater than, less than, or equal to the maximum possible change in demand deposits identified in part (b) as a result of Mary's deposit? Explain.
 - (d) Draw a correctly labeled graph of the money market. Show the effect of the change in the money supply identified in part (b) on the nominal interest rate.

Scoring Guidelines for Question 2: Short

5 points

Learning Objectives: POL-2.A MKT-3.B MKT-3.D

(a) Calculate the maximum amount of loans that Bank A can make as a result of the deposit as \$75,000 and show your work: **1 point**
3.C

$$\text{Total reserves} - \text{required reserves} = (\$100,000 - (0.25 \times \$100,000)) = \$75,000$$

Task type: Perform numerical analysis

(b) Calculate the maximum increase in demand deposits as \$400,000 and show your work: **1 point**
3.C

$$\$100,000 \times \left(\frac{1}{0.25} \right) = \$400,000$$

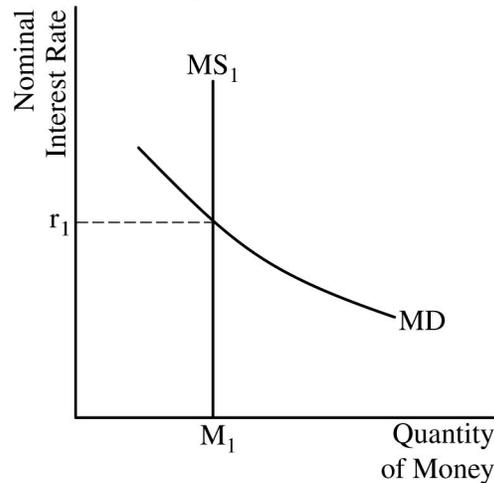
Task type: Perform numerical analysis

(c) State that the maximum change in the money supply is less than the maximum change in demand deposits and explain that this is because with Mary's deposit the circulating currency decreases, or because the \$100,000 is no longer part of the currency in circulation. **1 point**
3.A

Task type: Explain

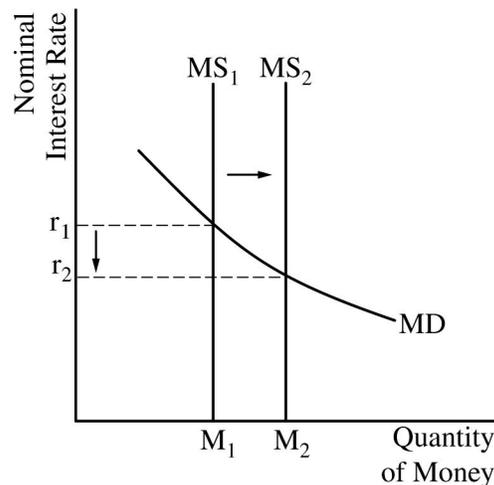
(d) Draw a correctly labeled graph of the money market. **1 point**
4.A

Task type: Create graphs or visual representations



For the second point, the graph must show a shift in the money supply curve to the right and a decrease in the nominal interest rate. **1 point**
4.C

Task type: Create graphs or visual representations



Total for part (d) 2 points

Total for question 2 5 points