

## 2012 AP<sup>®</sup> MACROECONOMICS FREE-RESPONSE QUESTIONS

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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**2012 SCORING GUIDELINES**

**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.