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2. The economies of Country L and Country A are currently in short-run equilibrium at output levels below full employment. Both countries intend to use monetary policy to close their output gaps. Country L has a banking system with limited reserves, and Country A has a banking system with ample reserves.
- A. What open-market operation would Country L implement to move the economy toward full employment in the short run?
  - B. What specific monetary policy action would Country A implement to move the economy toward full employment in the short run?
  - C. Draw a correctly labeled graph of the reserve market in Country A, and show the effect of the monetary policy action identified in part B on the policy rate.
  - D. Assume instead that no policy actions are taken in Country A and that the economy remains in short-run equilibrium at an output level below full employment. Will short-run aggregate supply in Country A increase, decrease, or remain the same as the economy self-adjusts in the long run? Explain.

3. The table provided shows the quantities and unit prices of shirts, bread, and pants, the only three goods produced in the country of Middleland in 2021 and 2022. Assume that 2021 was the base year.

	Shirts	Bread	Pants
Unit Prices in 2021	\$11	\$4	\$12
Unit Prices in 2022	\$10	\$5	\$15
Quantities Produced in 2021 and 2022	50	70	30

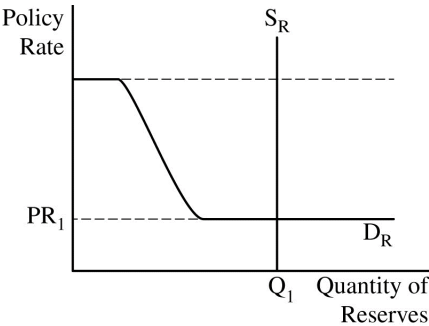
- A. Was the real GDP in 2021 in Middleland greater than, less than, or equal to the nominal GDP in 2021? Explain.
- B. Calculate the real GDP in Middleland in 2022. Show your work.
- C. Assume that Middleland was in short-run equilibrium in 2022 and that POTENTIAL real GDP was \$1,150 in 2022. Draw a correctly labeled graph of the aggregate demand, short-run aggregate supply, and long-run aggregate supply curves for Middleland in 2022, and show each of the following.
- The equilibrium real output and price level, labeled  $Y_1$  and  $PL_1$ , respectively
  - The full-employment output, labeled  $Y_F$
- D. Assume the marginal propensity to consume in Middleland is 0.8. Calculate the minimum change and state the direction of change in government spending required to close the output gap in the short run in Middleland. Show your work.

**STOP**  
**END OF EXAM**

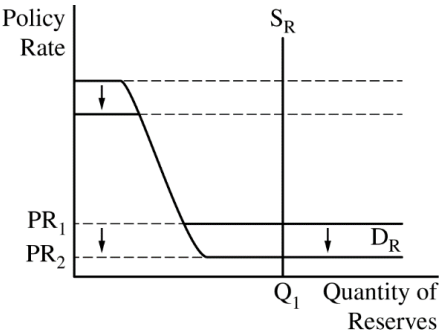
Question 2: Short

5 points

A	State that the central bank of Country L would buy bonds.	1 point
Point 1		
B	State that the central bank of Country A would decrease its administered interest rates or decrease interest on reserves.	1 point
Point 2		
C	Draw a correctly labeled graph of the reserve market with the supply curve intersecting the demand curve in the range of ample reserves.	1 point
Point 3		

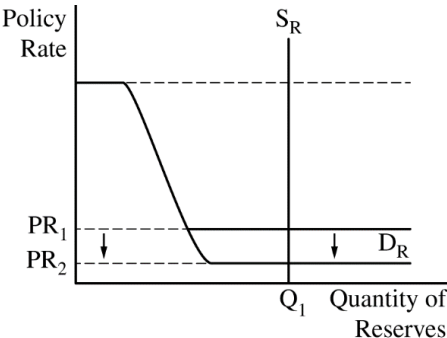


Point 4	The graph must show a decrease in the administered interest rates, resulting in a decrease in the policy rate.	1 point
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OR

The graph must show a decrease in the lower bound of the demand curve for reserves, resulting in a decrease in the policy rate.



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<b>D</b>	State that short-run aggregate supply will increase until it reaches full employment and	<b>1 point</b>
Point 5	explain that the increase in short-run aggregate supply in the long run will be caused by a decrease in input prices (e.g., nominal wages) and/or inflationary expectations.	

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