3. Lizland is a small island nation, and its currency is the Lizland crown (LIZ). The economy of Lizland is in short-run macroeconomic equilibrium with a 600 million crown recessionary gap.

Part A

Policymakers in Lizland are considering taking action to close the recessionary gap in the short run.

i. The central bank of Lizland is considering implementing monetary policy. The banking system of Lizland has ample reserves. Identify a specific monetary policy action the central bank of Lizland would implement to close the recessionary gap in the short run.

ii. The government of Lizland is also considering changing its spending, and the marginal propensity to consume is 0.75. Calculate the minimum change in government spending and identify the direction of the change required to fully close the 600 million crown recessionary gap in the short run. Show your work.

Part B

Assume that the government of Lizland decides to change its spending as calculated in part A (ii). Based solely on this change, will the price level in Lizland increase, decrease, or remain the same in the short run? Explain.

Part C

The nations of Lizland and Andoh are trading partners with flexible exchange rates. The currency of Andoh is the Andoh note (AND). Draw a correctly labeled graph of the foreign exchange market for the Lizland crown (LIZ). Based solely on the change in the price level in part B, show the change in the international value of the Lizland crown on your graph.

STOP

END OF EXAM

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.

i. The equilibrium real output and price level, labeled Y_1 and PL_1, respectively

ii. 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

1. Assume that the economy of Barrikos is in short-run equilibrium, with its economic data summarized in the table provided. The government budget is balanced, and the capital and financial account (CFA) balance is zero.

Cyclical unemployment rate	6%
Natural unemployment rate	4%
Structural unemployment rate	1%
Actual inflation rate	3%
Expected inflation rate	5%

A. What is the numerical value of the actual unemployment rate in Barrikos?

B. Using the relevant numerical values, draw a correctly labeled graph of the short-run and long-run Phillips curves for Barrikos. Indicate the current short-run equilibrium with a point labeled X. Plot the relevant numerical values on the graph.

C. Based on your graph in part B, identify one specific fiscal policy action that the government of Barrikos would take to move the economy toward long-run equilibrium.

D. Assume that the fiscal policy action identified in part C is implemented.

i. Will the government budget in Barrikos move into surplus, move into deficit, or remain balanced? Explain.

ii. Assume there is no change in inflationary expectations. On your graph in part B, show a possible new short-run equilibrium point, labeled Z, that would result from the fiscal policy action identified in part C.

iii. Draw a correctly labeled graph of the loanable funds market, and show the effect of the fiscal policy action identified in part C on the real interest rate.

E. Barrikos has an open economy and a flexible exchange rate. Based solely on the change in the real interest rate in Barrikos shown on your graph in part D (iii), will Barrikos' capital and financial account (CFA) balance move into surplus, move into deficit, or remain the same? Explain.

F. Based on the change in Barrikos' capital and financial account (CFA) balance identified in part E, what will happen to the international value of Barrikos' currency? Explain.

3. Assume that Nepal is in long-run macroeconomic equilibrium and has an open economy.

A. Draw a correctly labeled graph of the aggregate demand, short-run aggregate supply, and long-run aggregate supply curves for Nepal, and show each of the following.

i. The current equilibrium real output and price level, labeled Y_1 and PL_1, respectively

ii. The full-employment output, labeled Y_F

B. Nepal and Thailand are trading partners. Assume that Thailand experiences an increase in real income. On your graph in part A, show the short-run effect of the increase in real income in Thailand on real output and the price level in Nepal, labeling the new short-run equilibrium real output Y_2 and the new short-run equilibrium price level PL_2.

C. Assume that at the short-run equilibrium shown on your graph in part B, Nepal is experiencing a 400 million rupee output gap. Policymakers in Nepal want to use discretionary fiscal policy to return the economy to full employment, and the marginal propensity to consume is 0.75. Calculate the minimum change and state the direction of change in government spending required to completely close the output gap in the short run. Show your work.

D. Assume instead that no discretionary policy actions are taken. Explain how automatic stabilizers in the short run would reduce the effect of the change in real output shown on your graph in part B.

STOP

END OF EXAM

AP Macroeconomics: **2024 Set 1**

3. Assume Malaysia's economy is in a recession and its government currently has a balanced budget.

(a) Identify a specific fiscal policy action that the government of Malaysia would implement to address the recession.

(b) How will the fiscal policy action identified in part (a) affect the real interest rate in Malaysia? Explain.

(c) Malaysia and Japan are trading partners with flexible exchange rates. Malaysia's currency is the ringgit (MYR), and Japan's currency is the yen (JPY). Draw a correctly labeled graph of the foreign exchange market for the ringgit relative to the yen. Show the effect of the change in the real interest rate identified in part (b) on the international value of the ringgit.

(d) As a result of the change in the value of the ringgit shown in part (c), will Malaysia's imports increase, decrease, or remain the same? Explain.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

STOP

END OF EXAM

3. Assume that Jamaica has a cyclical unemployment rate of 4% and a balanced capital and financial account (CFA).

   (a) Identify a specific fiscal policy action that Jamaica's government would take to bring its economy to full employment.

   (b) Based solely on the short-run change in real output resulting from the fiscal policy action identified in part (a), what will happen to Jamaica's net exports? Explain.

   (c) Assume that Jamaica and Turkey are trading partners with flexible exchange rates. Jamaica's currency is the Jamaican dollar (JMD), and Turkey's currency is the lira (TRY). Draw a correctly labeled graph of the foreign exchange market for the Jamaican dollar relative to the lira, and show the effect of the change in net exports identified in part (b) on the supply of the Jamaican dollar and the international value of the Jamaican dollar.

   (d) How will the change in net exports identified in part (b) affect Jamaica's capital and financial account (CFA)? Explain.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

STOP

END OF EXAM

1. Assume the economy of Vanderlandia is in short-run equilibrium with a real GDP of \$500 million. The full-employment level of real GDP is \$550 million.

(a) Draw a correctly labeled graph of the aggregate demand, short-run aggregate supply, and long-run aggregate supply curves, and show each of the following.

(i) The current equilibrium real output and price level, labeled Y_1 and PL_1, respectively
(ii) The full-employment output, labeled Y_F

(b) Assume no policy action is taken to restore full employment.

(i) Explain how the economy will adjust in the long run.
(ii) Following the long-run adjustment process, will the price level in Vanderlandia be greater than, less than, or equal to PL_1 shown on your graph in part (a)?

(c) Assume instead that policymakers in Vanderlandia are considering changing government spending to restore full employment in the short run and that the marginal propensity to save is 0.2.

(i) Calculate the minimum change and state the direction of change in government spending required to completely close the output gap in the short run. Show your work.
(ii) On your graph in part (a), show the short-run effect of the change in government spending in part (c)(i), labeling the new equilibrium price level PL_2.

(d) Draw a correctly labeled graph of the loanable funds market, and show the effect of the change in government spending in part (c)(i) on the equilibrium real interest rate.

(e) Based on the change in the real interest rate shown on your graph in part (d), what will happen to each of the following?

(i) The price of previously issued bonds
(ii) The rate of economic growth in the long run. Explain.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

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2. Assume a country's economy is currently operating below full employment.

(a) Identify a fiscal policy action the country's government could implement to restore full employment.

(b) Draw a correctly labeled graph of the loanable funds market, and show the effect of the fiscal policy action identified in part (a) on the equilibrium real interest rate.

(c) Based solely on the real interest rate change shown in part (b), what will happen to each of the following?

(i) Net exports. Explain.
(ii) The stock of physical capital. Explain.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

1. Assume Smithland is in short-run equilibrium at a level of output that exceeds the full-employment level of output.

(a) Draw a correctly labeled graph of the aggregate demand, short-run aggregate supply, and long-run aggregate supply curves, and show each of the following.

(i) The current equilibrium real output and price level, labeled Y_1 and PL_1, respectively

(ii) The full-employment output, labeled Y_F

(b) Assume Smithland's government cuts individual income taxes. On your graph in part (a), show the short-run effect of the tax cut on equilibrium real output, labeling the new short-run equilibrium real output Y_2.

(c) Based solely on the change in real output on your graph in part (b), what will happen to each of the following in the short run?

(i) The natural rate of unemployment

(ii) Nominal interest rates. Explain.

(d) Assume instead the central bank intervenes to correct an inflationary output gap. What open-market operation should the central bank take?

(e) Draw a correctly labeled graph of the money market, and show the effect of the open-market operation identified in part (d) on the nominal interest rate.

(f) Based solely on the interest rate change identified in part (e), what will happen to the international value of Smithland's currency in the foreign exchange market? Explain.

(g) Based solely on the exchange rate change identified in part (f), will Smithland's imports increase, decrease, or remain the same? Explain.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

3. The government budget of the country of Geeland is currently balanced. The government budget is composed of tax revenues (T), transfer payments (TR), and government spending (G).

(a) Assume the economy moves into a recession and there is no discretionary policy action.

(i) Will the government budget move into a deficit or a surplus in the short run? Explain using the appropriate components of the government budget identified above.

(ii) Based on your answer to part (a)(i), what will happen to the government debt?

(b) Based on your answer to part (a)(i), identify one specific fiscal policy action that will balance the budget.

(c) How will the fiscal policy action from part (b) affect the actual unemployment rate in the short run? Explain.

(d) Did the government efforts to maintain a balanced budget make Geeland's recession more severe or less severe in the short run? Explain.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

STOP

END OF EXAM

MACROECONOMICS
Section II
Total Time—1 hour
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 the United States economy is in recession.

   (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 price level, labeled PL_1

      (ii) Current output, labeled Y_1

   (b) Now assume the euro zone, a major trading partner of the United States, enters into a recession.

      (i) What will be the effect on United States exports to the euro zone? Explain.

      (ii) On your graph in part (a), show the effect of the change identified in part (b)(i) on real output in the United States.

      (iii) What will be the effect of the change identified in part (b)(ii) on unemployment in the United States?

   (c) Assume the euro zone recession causes a decrease in the demand for United States dollars in the foreign exchange market.

      (i) Will the euro appreciate, depreciate, or remain unchanged against the dollar? Explain.

      (ii) Draw a correctly labeled graph of the foreign exchange market for dollars, and show the effect of the decrease in the demand for dollars on the exchange rate for dollars.

   (d) Assume the United States implements a combination of expansionary fiscal and monetary policies. In the absence of complete crowding out, what will be the effect of these policies on each of the following?

      (i) Aggregate demand in the United States

      (ii) The price level in the United States

      (iii) Interest rates in the United States. Explain.

MACROECONOMICS
Section II
Planning Time—10 minutes
Writing Time—50 minutes

Directions: You have 10 minutes to read all of the questions in this booklet, to sketch graphs, to make notes, and to plan your answers. You will then have 50 minutes to answer all three of the following questions. 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 operating below full employment.

   (a) Draw a correctly labeled graph of long-run aggregate supply, short-run aggregate supply, and aggregate demand, and show each of the following.

   (i) Current equilibrium output and price level, labeled as Y_1 and PL_1

   (ii) Full-employment output, labeled as Y_f

   (b) Assume that the Federal Reserve targets a new federal funds rate to reach full employment. Should the Federal Reserve target a higher or lower federal funds rate?

   (c) Given the Federal Reserve action you identified in part (b), draw a correctly labeled graph of the money market and show the effect on the nominal interest rate.

   (d) The policy makers pursue a fiscal policy rather than the monetary policy in part (b). Assume that the marginal propensity to consume is 0.8 and the value of the recessionary gap is $300 billion.

   (i) If the government changes its spending without changing taxes to eliminate the recessionary gap, calculate the minimum required change in government spending.

   (ii) If the government changes taxes without changing government spending to eliminate the recessionary gap, will the minimum required change in taxes be greater than, smaller than, or equal to the minimum required change in government spending in part (d)(i) ? Explain.

   (e) Assume the government lowers income tax rates to eliminate the recessionary gap. Will each of the following increase, decrease, or stay the same?

   (i) Aggregate demand. Explain.

   (ii) Long-run aggregate supply. Explain.