

2022

AP[®]

 CollegeBoard

AP[®] Macroeconomics

Free-Response Questions Set 1

MACROECONOMICS

SECTION II

Total Time—1 hour

Reading Period—10 minutes

Writing Period—50 minutes

3 Questions

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. If the question prompts you to “Calculate,” you must show how you arrived at your final answer. Use a pen with black or dark blue ink.

You may plan your answers in this orange booklet, but no credit will be given for anything written in this booklet. **You will only earn credit for what you write in the separate Free Response booklet.**

1. Assume a country's economy is operating below full employment.
 - (a) Draw a correctly labeled graph of aggregate demand, short-run aggregate supply, and long-run aggregate supply, and show each of the following.
 - (i) The current equilibrium real output and price level, labeled as Y_1 and PL_1 , respectively
 - (ii) The full-employment output, labeled as Y_F
 - (b) Identify one fiscal policy action the country's government can take to restore full employment.
 - (c) Assume instead that no fiscal policy action is taken. Suppose a change in investment spending causes real GDP to increase by \$200 billion. Calculate the minimum change in investment spending that could have caused this increase in real GDP if the marginal propensity to save is 0.25. Show your work.
 - (d) Assume the output gap was initially \$800 billion. On your graph in part (a), show the short-run effect of the change in investment spending identified in part (c), labeling the new equilibrium real output as Y_2 and the new equilibrium price level as PL_2 .
 - (e) Given your answer to part (d), is the actual rate of unemployment greater than, less than, or equal to the natural rate of unemployment? Explain.
 - (f) Assume that private savings now increase. Draw a correctly labeled graph of the loanable funds market and show the effect of the increase in private savings on the real interest rate.
 - (g) Based solely on the change in the real interest rate shown in part (f), what will happen to each of the following?
 - (i) Real GDP in the short run. Explain.
 - (ii) Long-run aggregate supply. 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.

2. Assume that commercial banks must hold a minimum of 20% of their deposits as reserves. Now suppose that the central bank of the country sells \$100,000 of government bonds to commercial banks.
- (a) Calculate the maximum change and state the direction of change in the money supply as a result of the central bank bond sale. Show your work.
- (b) Draw a correctly labeled graph of the money market and show the effect of the change in the money supply identified in part (a) on the nominal interest rate.
- (c) Given the change in the money supply in part (a), if the velocity of money is constant, what will happen to the nominal gross domestic product? Explain.
- (d) Based on the change in the nominal gross domestic product in part (c), what happens to the price level if the real gross domestic product is constant?

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. Italy and Japan are trading partners and have flexible exchange rates. The Italian currency is the euro and the Japanese currency is the yen.
- (a) Suppose that the exchange rate between the euro and the yen is 1 euro = 100 yen. What is the price of an Italian coat in yen if the coat costs 120 euros in Italy?
- (b) Assume that real interest rates increase in Japan. Identify what will happen to net financial capital flows between Italy and Japan.
- (c) Draw a correctly labeled graph of the foreign exchange market for the yen and show the effect of the increase in real interest rates in Japan on the value of the yen.
- (d) Based solely on the change in the exchange rate identified in part (c), what will happen to Italy's exports to Japan? 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