

2019 AP[®] MACROECONOMICS FREE-RESPONSE QUESTIONS

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 economy of Artland is currently operating above full employment.
 - (a) Draw a correctly labeled graph of the short-run aggregate supply, long-run aggregate supply, and aggregate demand curves, 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) Assume the central bank and the government do not take any policy actions to close the output gap.
 - (i) On your graph in part (a), show how the economy automatically adjusts in the long run and label the new equilibrium price level PL_2 .
 - (ii) Explain the cause of the adjustment shown in part (b)(i).
 - (c) Alternatively, suppose the government wants to close the output gap using fiscal policy.
 - (i) Identify a fiscal policy action the government could implement to close the output gap.
 - (ii) How will the fiscal policy action identified in part (c)(i) affect the following?
 - The unemployment rate
 - The natural rate of unemployment
 - (iii) In closing the output gap, will the automatic adjustment identified in part (b)(i) produce a higher, a lower, or the same price level compared to the fiscal policy identified in part (c)(i) ?
 - (d) Draw a correctly labeled graph of the market for loanable funds. Show the effect of the fiscal policy action identified in part (c)(i) on the equilibrium real interest rate.
 - (e) Given the interest rate change identified in part (d), will the long-run aggregate supply curve shift to the right, shift to the left, or remain the same in the long run? Explain.

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2. The European Union and the United States are trading partners.
- (a) If the current account balance is zero, will an increase in United States real income result in a current account surplus, deficit, or no change? Explain.
 - (b) Draw a correctly labeled graph of the foreign exchange market for the euro. On your graph, show the effect of the increase in United States real income on the value of the euro relative to the United States dollar.
 - (c) Now assume interest rates increase in the European Union.
 - (i) What is the effect of the increase in interest rates in the European Union on the demand for the United States dollar? Explain.
 - (ii) Based on your answer to part (c)(i), what is the effect on the value of the United States dollar relative to the euro?
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3. Sweden and Norway use equal quantities of resources to produce food and capital goods. The table below shows the maximum possible production of food OR capital goods for each country.

Country	Food	Capital Goods
Sweden	50	100
Norway	30	120

- (a) Draw a correctly labeled graph of the production possibilities curve for Sweden. Place food on the horizontal axis and capital goods on the vertical axis. Plot the relevant numerical values on the graph.
- (b) On your graph in part (a), indicate the following.
 - (i) A point that represents an efficient level of production, labeled E
 - (ii) A point that represents an inefficient level of production, labeled I
 - (iii) A point that represents an unattainable level of production, labeled U
- (c) Assume Sweden moves from producing 20 units of food and 60 units of capital goods to producing 30 units of food and 40 units of capital goods. What will happen to economic growth in Sweden in the future?
- (d) Which country has the comparative advantage in the production of capital goods? Explain.
- (e) Based on the table above, identify a specific number of units of capital goods that could be traded for 10 units of food and be mutually beneficial.

STOP

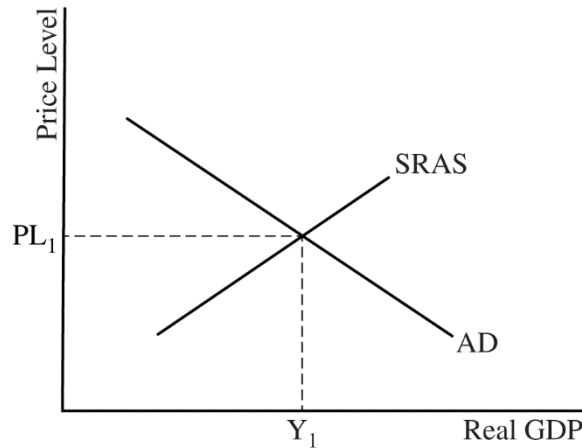
END OF EXAM

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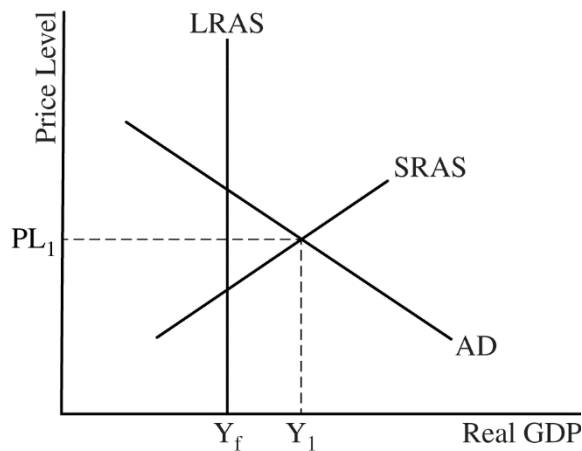
Question 1

10 points (2 + 2 + 3 + 2 + 1)

(a) 2 points



- One point is earned for drawing a correctly labeled graph showing a downward sloping aggregate demand (AD) curve, an upward sloping short-run aggregate supply (SRAS) curve, the equilibrium output level labeled Y_1 , and the equilibrium price level labeled PL_1 .

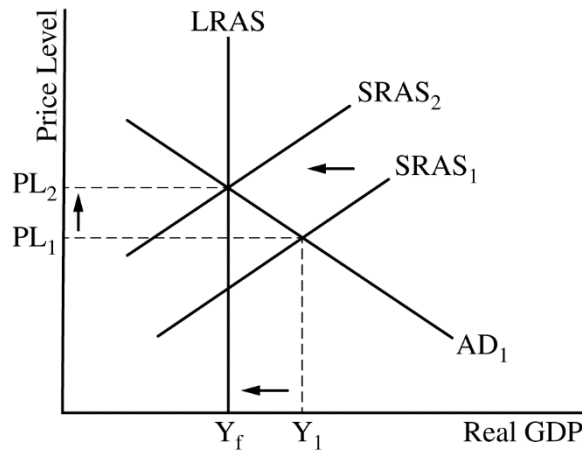


- One point is earned for drawing a correctly labeled vertical long-run aggregate supply (LRAS) curve with full employment output labeled Y_f to the left of the short-run equilibrium output level, Y_1 .

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Question 1 (continued)

(b) 2 points



- One point is earned for showing a leftward shift in the SRAS curve and for showing PL_2 higher than PL_1 .
- One point is earned for explaining that the SRAS curve will shift to the left due to the increase in input prices, nominal wages, or inflationary expectations.

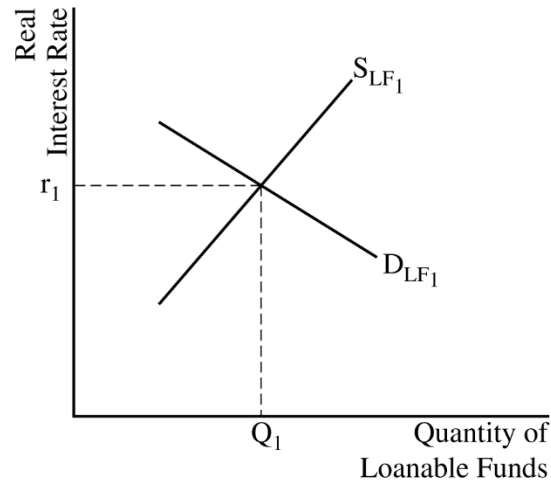
(c) 3 points

- One point is earned for stating a decrease in government spending, a decrease in transfer payments, or an increase in taxes.
- One point is earned for stating that the unemployment rate will increase and the natural rate of unemployment will not change.
- One point is earned for stating that the automatic adjustment will produce a higher price level than the fiscal policy.

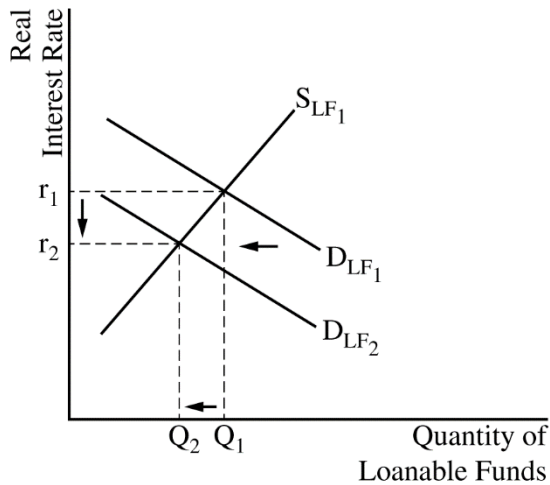
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Question 1 (continued)

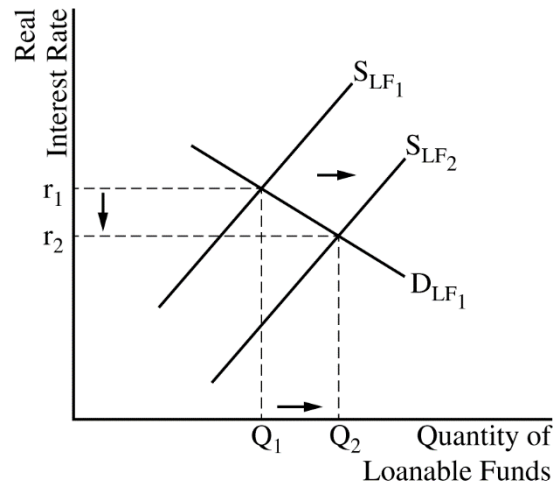
(d) 2 points



- One point is earned for drawing a correctly labeled graph of the loanable funds market.



OR



- One point is earned for showing a leftward shift of the demand for loanable funds curve (or a rightward shift in the supply of loanable funds curve) and a decrease in the real interest rate.

(e) 1 point

- One point is earned for stating that the LRAS curve will shift to the right and for explaining that the lower real interest rate will lead to increased capital formation due to increased investment spending.