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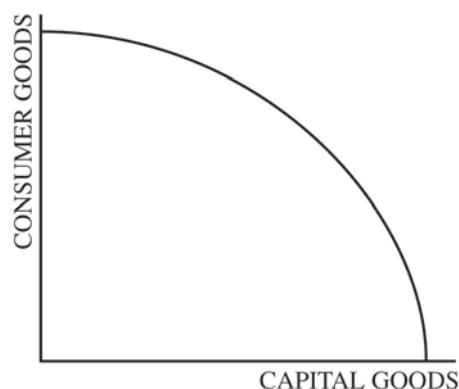## Planning Time—10 minutes
Writing Time—50 minutes

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. In answering the questions, you should emphasize the line of reasoning that generated your results; it is not enough to list the results of your analysis. 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 at full employment.

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

       (i) Current price level, labeled PL_1

       (ii) Current output level, labeled Y_1

   (b) Assume that personal savings in the United States increase. Using a correctly labeled graph of the loanable funds market, show the impact of the increase in personal savings on the real interest rate.

   (c) Based on the real interest rate change identified in part (b),

       (i) will interest-sensitive expenditures increase, decrease, or remain unchanged?

       (ii) what will happen to the rate of economic growth? Explain.

   (d) Assume that the real interest rate of the euro zone increases relative to the real interest rate of the United States. Draw a correctly labeled graph of the foreign exchange market for the euro and show the impact of the change in the real interest rate in the euro zone on each of the following.

       (i) Demand for the euro. Explain.

       (ii) Value of the euro relative to the United States dollar

   (e) Assume that the United States current account balance is zero. Based on the change in the value of the euro identified in part (d)(ii), will the United States current account balance now be in surplus, be in deficit, or remain at zero?

2. Assume that the country of Fischerland produces only consumer goods and capital goods.

(a) The graph above shows the production possibilities curve for Fischerland. The production of which of the following exhibits increasing opportunity costs: consumer goods only, capital goods only, both goods, or neither good?

(b) Redraw the graph given above. Show a point that represents fully employed and efficiently used resources on the redrawn graph and label it A.

(c) Assume there is a recession in Fischerland. On your graph in part (b), label as C a point representing the recession.

(d) Identify a fiscal policy action that the Fischerland government can take to address the recession.

(e) Assume instead that no discretionary policy actions are taken. Will short-run aggregate supply increase, decrease, or remain the same in the long run? Explain.

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3. Inflation and expected inflation are important determinants of economic activity.

(a) Draw a correctly labeled graph of a short-run Phillips curve.

(b) Using your graph in part (a), show the effect of an increase in the expected rate of inflation.

(c) What is the effect of the increase in the expected rate of inflation on the long-run Phillips curve?

(d) Given the increase in the expected rate of inflation from part (b),

   (i) will the nominal interest rate on new loans increase, decrease, or remain unchanged?

   (ii) will the real interest rate on new loans increase, decrease, or remain unchanged?

(e) Assume that the nominal interest rate is 8 percent. Borrowers and lenders expect the rate of inflation to be 3 percent, and the growth rate of real gross domestic product is 4 percent. Calculate the real interest rate.
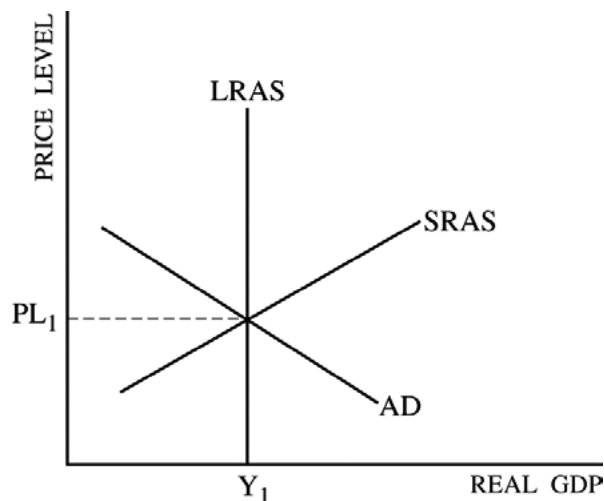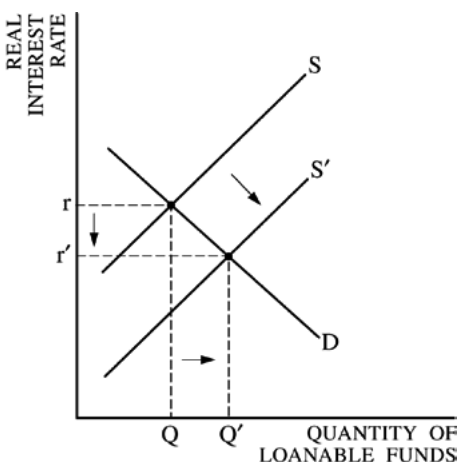
STOP

END OF EXAM

Question 1

10 Points (2 + 2 + 2 + 3 + 1)

(a) 2 points:
- One point is earned for drawing a correctly labeled graph, showing AD, SRAS, and PL_1.
- One point is earned for drawing a vertical LRAS curve at Y_1 that is at the intersection of AD and SRAS.
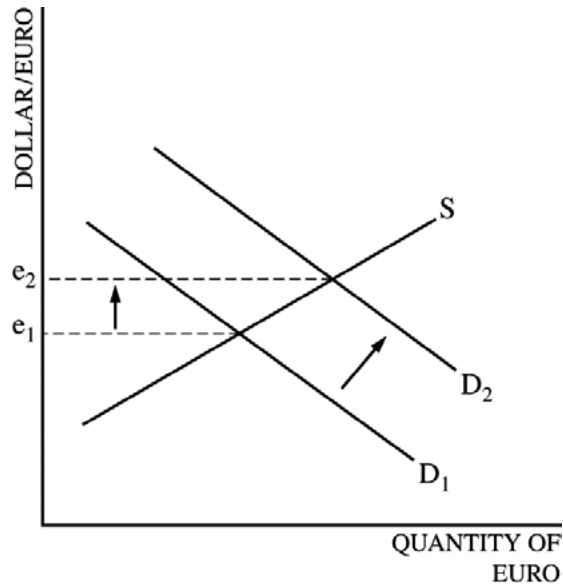

(b) 2 points:
- One point is earned for drawing a correctly labeled graph of the loanable funds market.
- One point is earned for shifting the supply curve to the right and showing a decrease in real interest rate.

(c) 2 points:
- One point is earned for stating that interest-sensitive expenditures will increase.
- One point is earned for stating that the economic growth rate will increase because higher investment will increase capital formation.

Question 1 (continued)

(d) 3 points:
- One point is earned for drawing a correctly labeled graph of the foreign exchange market for the euro.
- One point is earned for shifting the demand curve to the right and showing an increase in the value of the euro.
- One point is earned for explaining that the demand for the euro increases because the higher real interest rate in the euro zone leads to higher returns for financial investments in the euro zone, attracting funds from the United States to the euro zone.

(e) 1 point:
- One point is earned for stating that United States current account will be in surplus.