# MACROECONOMICS

**Section II**

**Planning Time—10 minutes**

**Writing Time—50 minutes**

**Directions:** You 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 in long-run equilibrium with an expected inflation rate of 6 percent and an unemployment rate of 5 percent. The nominal interest rate is 8 percent.

   (a) Using a correctly labeled graph with both the short-run and long-run Phillips curves and the relevant numbers from above, show the current long-run equilibrium as point A.

   (b) Calculate the real interest rate in the long-run equilibrium.

   (c) Assume now that the Federal Reserve decides to target an inflation rate of 3 percent. What open-market operation should the Federal Reserve undertake?

   (d) Using a correctly labeled graph of the money market, show how the Federal Reserve's action you identified in part (c) will affect the nominal interest rate.

   (e) How will the interest rate change you identified in part (d) affect aggregate demand in the short run? Explain.

   (f) Assume that the Federal Reserve action is successful. What will happen to each of the following as the economy approaches a new long-run equilibrium?

      (i) The short-run Phillips curve. Explain.

      (ii) The natural rate of unemployment

2. Assume that as a result of increased political instability, investors move their funds out of the country of Tara.

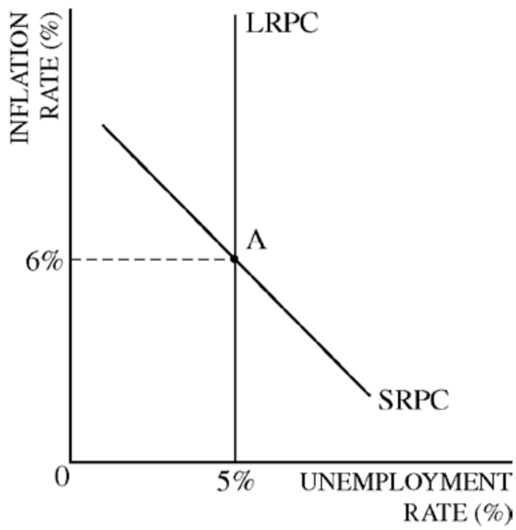
   (a) How will this decision by investors affect the international value of Tara's currency on the foreign exchange market? Explain.

   (b) Using a correctly labeled graph of the loanable funds market in Tara, show the impact of this decision by investors on the real interest rate in Tara.

   (c) Given your answer in part (b), what will happen to Tara's rate of economic growth? Explain.

## Question 1

**11 Points** (2 + 1 + 1 + 2 + 2 + 3)

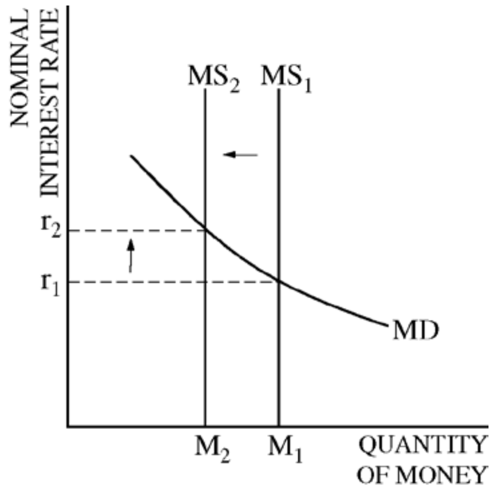



(a) 2 points:
- One point is earned for a correctly labeled graph of the short-run Phillips curve.
- One point is earned for showing position "A" on the LRPC at the correct coordinates where the SRPC crosses the LRPC curve.

(b) 1 point:
- One point is earned for the correct calculation of the real interest rate: 8% - 6% = 2%.

(c) 1 point:
- One point is earned for stating that the Federal Reserve should sell bonds.

**Question 1 (continued)**




(d) 2 points:

- One point is earned for a correctly labeled graph of the money market.
- One point is earned for showing a leftward shift of the money supply curve resulting in a higher interest rate.

(e) 2 points:

- One point is earned for stating that aggregate demand decreases.
- One point is earned for explaining that the higher interest rate decreases investment and interest-sensitive consumption spending, and that both consumption and investment are components of aggregate demand.

(f) 3 points:

- One point is earned for stating that the short-run Phillips curve will shift to the left.
- One point is earned for explaining that Federal Reserve policy will lower inflationary expectations.
- One point is earned for stating that the natural rate of unemployment will remain unchanged.