MACROECONOMICS

Section II

Planning Time—10 minutes

Writing Time—50 minutes

Directions: You have fifty 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.

1. Assume that the United States economy is in a severe recession with no inflation.

   (a) Using a correctly labeled aggregate demand and aggregate supply graph, show each of the following for the economy.

   (i) Full-employment output

   (ii) Current output level

   (iii) Current price level

   (b) The federal government announces a major decrease in spending. Using your graph in part (a), show how the decrease in spending will affect each of the following.

   (i) Level of output

   (ii) Price level

   (c) Explain the mechanism by which the decrease in government spending will affect the unemployment rate.

   (d) The Federal Reserve purchases bonds through its open-market operations.

   (i) Using a correctly labeled graph, show the effect of this purchase on the interest rate.

   (ii) Explain how the change in the interest rate will affect output and the price level.

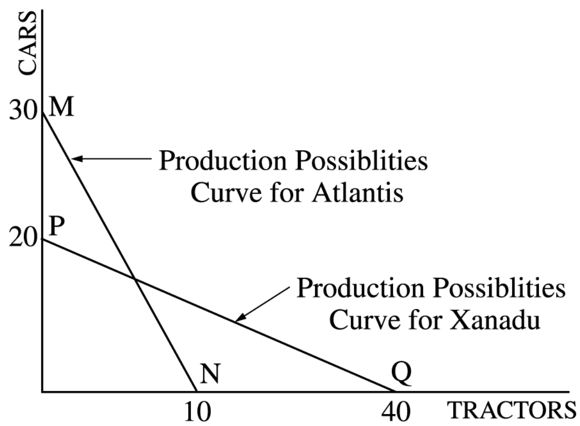
   (e) Explain how the change in the interest rate you identified in part (d) will affect each of the following.

   (i) International value of the dollar relative to other currencies

   (ii) United States exports

   (iii) United States imports

2. Country Y is experiencing severe and unanticipated inflation.
   (a) Explain the effect of this inflation on each of the following.
      (i) A family with savings in a fixed-interest-rate time deposit account
      (ii) A business repaying a long-term, fixed-interest-rate loan
   (b) Identify one fiscal policy action that could be implemented to reduce inflation.
   (c) Identify an open-market operation that could be implemented to reduce inflation.
   (d) Suppose that Country Y continues to experience high inflation in the long run. Indicate the effect of this inflation on the nominal interest rate in Country Y.
   (e) If Country Y's inflation is high relative to that of other countries, explain the effect of this inflation on the international value of Country Y's currency.



3. Assume that two countries, Atlantis and Xanadu, have equal amounts of resources. Atlantis can produce 30 cars or 10 tractors or any combination, as shown by the line MN in the figure above. Xanadu can produce 20 cars or 40 tractors or any combination, as shown by the line PQ in the figure above.
   (a) Which country has an absolute advantage in the production of tractors? Explain how you determined your answer.
   (b) Which country has a comparative advantage in the production of cars? Using the concept of opportunity cost, explain how you determined your answer.
   (c) If the two countries specialize and trade with each other, which country will import cars? Explain why.
   (d) If the terms of trade are such that one car can be exchanged for one tractor, explain how Atlantis will benefit from such trade.

END OF EXAMINATION

Question 1

Correct Answers:

Part a: Using a graph of aggregate demand and aggregate supply, the student should clearly show an equilibrium real output that is below full-employment output with a corresponding price level. Full-employment real output can be indicated by a vertical long-run aggregate supply curve, demonstrating a clear capacity constraint. The current equilibrium real output must be below the full-employment or potential output.

Part b: With a major decrease in the government spending, the aggregate demand curve shifts in and real output falls further from full-employment output. With an upward-sloping aggregate supply curve, the price level will also fall; with a perfectly horizontal aggregate supply, the price level remains unchanged.

Part c: With a reduction in real output, there will be less employment and the rate of unemployment will rise.

Part d: When the Federal Reserve purchases government bonds, bank reserves and eventually the money supply will increase, reducing the interest rate. The reduction in the interest rate will increase desired investment spending (and spending on interest-sensitive consumption), increasing aggregate demand that will increase real output and the price level.

Part e: With a lower interest rate in the United States, there will be a reduced demand for U.S. financial assets and for dollars. As a result the dollar will depreciate in the foreign-exchange market. U.S. exports will become more price competitive in foreign markets and increase in volume; imports to the U.S. will become more expensive and decrease.

Question 1 (cont'd)

Grading Rubric:

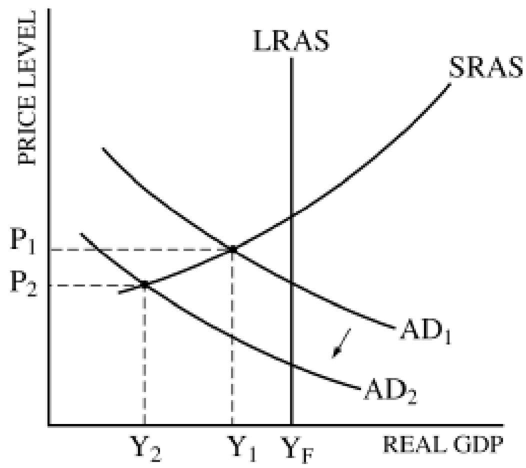
Point allocations: **(14 points: 3 +2+1+4+4)**

a) (3 points: 1 +1+1)

1 point - for correctly labeled AD/AS graph

1 point - for showing a full-employment output (vertical AS, LRAS or capacity constraint)

1 point - for identifying a price level (P) and output (Y) that is **BELOW** full employment



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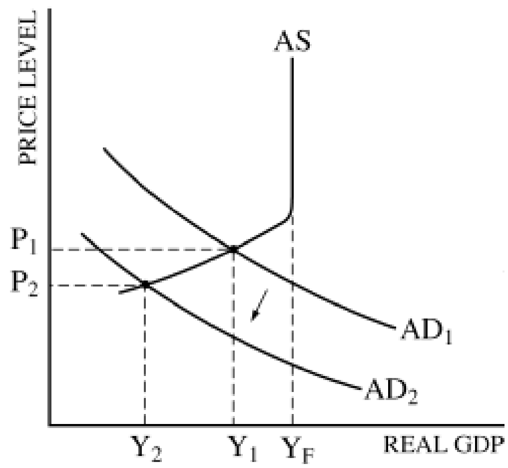


b) (2 points: 1 + 1)

1 point - for showing AD shift to the left

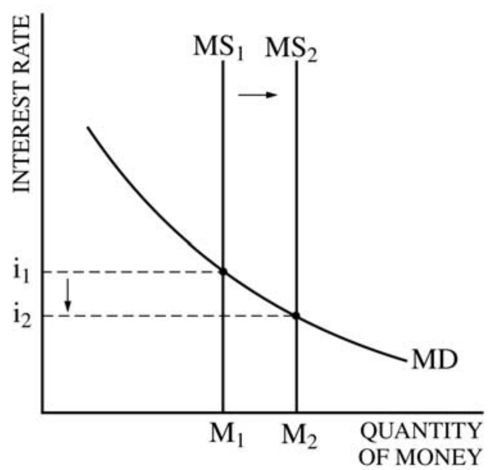
1 point - for Y and P both decreasing (shown on a graph or stated verbally)

(c) (1 point) - The decrease in G decreases output and/or employment falls; thus the unemployment rate rises.

[Phillips curve explanation that lower inflation raises unemployment rate is acceptable.]

Question 1 (cont'd)

d) 4 points:



1 point - for correctly labeled money market graph.
1 point - for shifting the money supply curve to the right and with a decrease in the interest rate (verbal explanation is acceptable).
1 point - for linkage: interest rate decreases, investment and interest-sensitive consumption spending increase.
1 point - for stating that AD increases (shifts to the right), output increases, price level increases (no graph required). [AD MUST shift out, even when AS shifts out.]

e) (4 points: <u>No graph</u> necessary)

1 point – Consistent assertion that the dollar depreciates relative to other currencies based on decreased interest rate from d). If r ↑ in d) then an appreciation of $ and X🡻, M 🡹.
1 point - Lower real interest rate will make U.S. financial assets less attractive to foreign investors, and the demand for the dollar will fall. Or r decline leads to D$🡻 due to lower expected return or outflow of $.
1 point - U.S. exports will increase as the depreciating dollar makes U.S. goods relatively cheaper in world markets.
1 point – U.S. imports will decrease as the depreciating dollar makes imports relatively more expensive to U.S. citizens.

[One explanation is sufficient to earn the full credit for the exports and imports.]