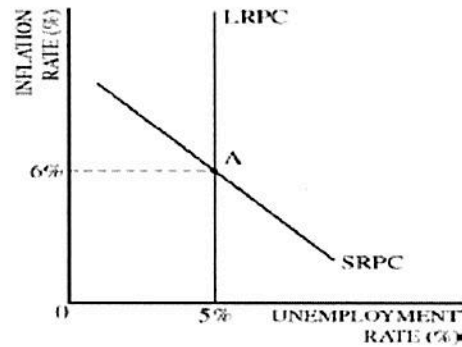


Rubrics for FUN Set 4.3

2009 Practice FRQ

Question 1

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



(a) 2 points:

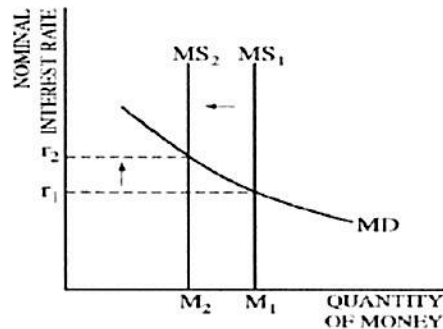
- One point is earned for a correctly labeled graph of the short-run Phillips curve.
- One point is earned for showing position "A" on the LRPC at the correct coordinates where the SRPC crosses the LRPC curve.

(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.



(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.

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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.

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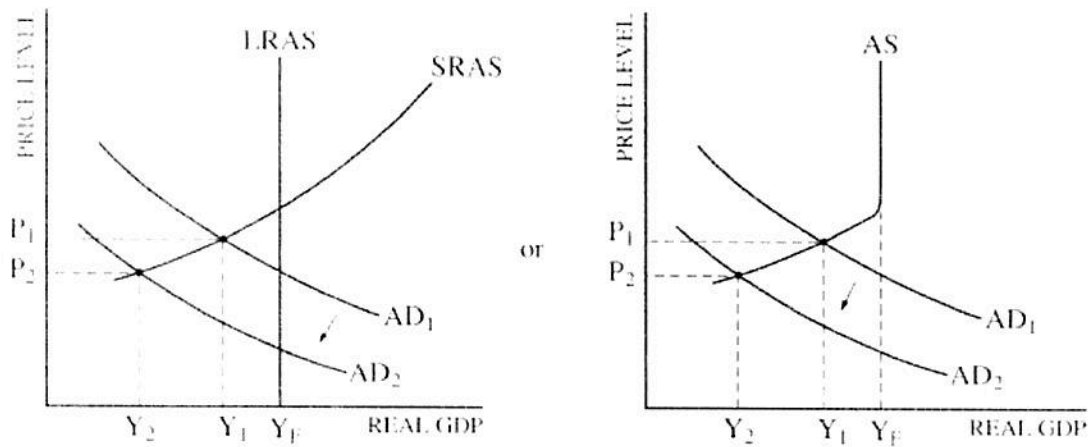
Question 1 (cont'd)

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



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)

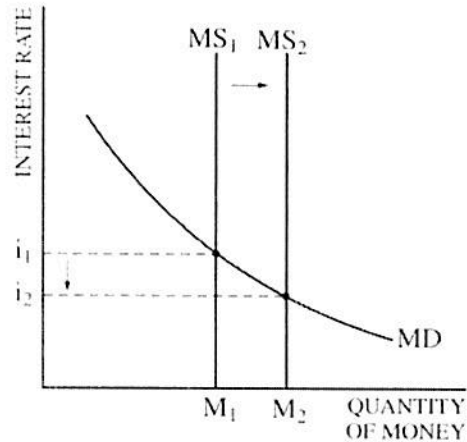
(c) (1 point) - The decrease in G decreases output and/or employment falls; thus the unemployment rate rises.

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

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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: No graph necessary)

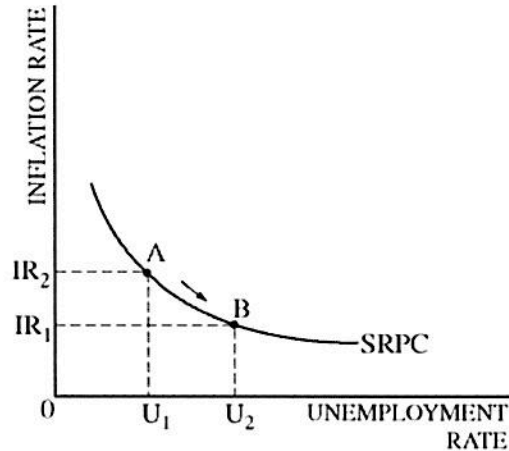
- 1 point – Consistent assertion that the dollar depreciates relative to other currencies based on decreased interest rate from d). If $r \uparrow$ in d) then an appreciation of S and $X \downarrow$, $M \uparrow$.
- 1 point - Lower real interest rate will make U.S. financial assets less attractive to foreign investors, and the demand for the dollar will fall. Or r decline leads to $D\$ \downarrow$ 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.]

**AP[®] MACROECONOMICS
2008 SCORING GUIDELINES**

Question 1

11 points (2 + 2 + 3 + 2 + 2)



(a) 2 points:

- One point is earned for a correctly labeled graph of the short-run Phillips curve (SRPC).
- One point is earned for showing on the SRPC the initial position "A" and the new position "B".

(b) 2 points:

- One point is earned for stating that the federal budget will be in a deficit.
- One point is earned for explaining that government spending (or transfer payments) will increase and/or tax revenues will fall due to the recession.

(c) 3 points:

- One point is earned for correctly calculating the increase in government purchases:
Change in $G = \text{Recessionary gap} / \text{Multiplier} = (\$500/5) = \$100$.
- One point is earned for stating that a larger reduction in personal income taxes is required than the \$100 billion increase in government spending.
- One point is earned for explaining that households do not spend all of the initial increase in disposable income caused by a tax reduction, or that the tax multiplier is smaller than the government spending multiplier.