AP® Macroeconomics
2003 Scoring Guidelines

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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.

Question 1 (cont'd)

Grading Rubric:

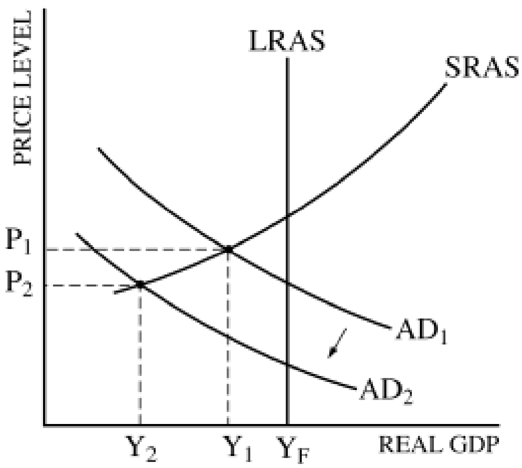
Point allocations: **(14 points: 3 +2+1+4+4)**

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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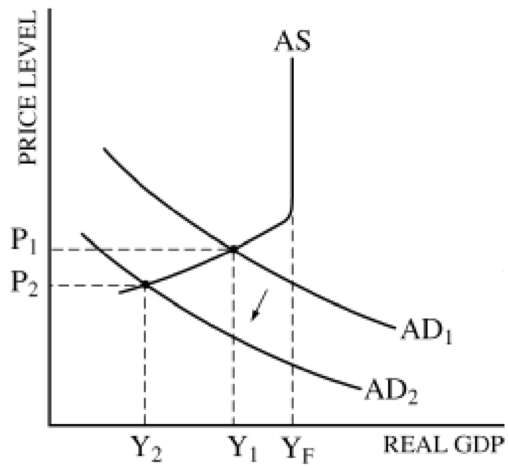


b) (2 points: 1 + 1)

1 point - for showing AD shift to the left

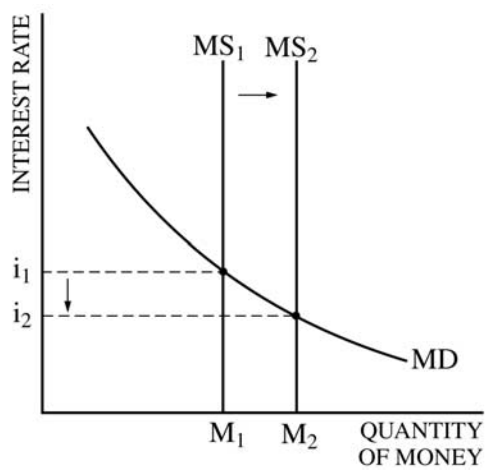
1 point - for Y and P both decreasing (shown on a graph or stated verbally)

(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$\downarrow$, 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.]

Question 2

Correct Answers:

Part a: A family with savings in a fixed-interest rate time deposit will hurt as the real value (or purchasing power) of this deposit will be reduced. A business repaying a long-term loan with a fixed-interest rate will benefit as the business will be repaying the principal with "cheaper" dollars.

Part b: A fiscal policy to reduce inflation would either be an increase in taxes or a reduction in government spending.

Part c: An open market operation to reduce inflation would be a sale of government bonds by the central bank; this sale would reduce bank reserves and the country's money supply.

Part d: With sustained inflation, nominal interest rates will rise in country Y, as lenders will need to be compensated for this inflation with a higher rate of interest.

Part e: Sustained inflation will lead to a reduction in the demand for country Y's goods, reducing demand for the country's currency. As a result, the country's currency will depreciate.

Question 2 (cont'd)

Grading Rubric:

Point allocations: **(7 points: 2 + 1 + 1 +1 + 2)**

a) 2 points: [1 for each explanation OR ½ for each simple assertion without a valid explanation.]

1 point - Family loses as inflation reduces its purchasing power (or real value) or its saving decreases in value / is worth less.

1 point - Business gains as it is paying the creditor using cheaper or inflated dollars.

b) 1 point - Decrease G or Increase T.

c) 1 point - Sell government bonds.

d) 1 point - Nominal interest rate will increase.

e) 2 points: (1 for direction and 1 for explanation)

1 point - The international value of the currency will decrease (depreciates).

1 point - Because the demand for the currency decreases OR supply of the currency increases OR capital outflow.

Question 3

Correct Answers:

Part a: Xanadu has the absolute advantage in producing tractors as it can produce a maximum of 40 tractors, while Atlantis can only produce a maximum of 10 tractors.

Part b: Atlantis has a lower opportunity cost for producing cars (1/3 tractor compared to 2 tractors for Xanadu). Thus, Atlantis has comparative advantage in producing cars.

Part c: Since Xanadu has comparative advantage in producing tractors, it will import cars. Xanadu will be able to acquire a car through trade more cheaply than producing a car domestically.

Part d: With trade Atlantis will be able to consume beyond its production possibilities boundary. Atlantis will be able to acquire one tractor for one car with international trade. In contrast, without trade and only domestic production, Atlantis would give up three cars for one tractor.

Question 3 (cont'd)

Grading Rubric:

Point allocations: (7 points: 2+ 2 + 2 +1)

a) 2 points: (1 for identification and 1 for explanation.)

1 point - Xanadu has an absolute advantage in tractors.

1 point - Xanadu can produce more (40) tractors than Atlantis (10).

b) 2 points: (1 for identification and 1 for explanation.)

1 point - Atlantis has a comparative advantage in the production of cars.

1 point - Atlantis produces cars at lower opportunity cost than Xanadu. It cost Atlantis 1/3 tractor for each car, but it costs Xanadu 2 tractors for each car.

c) 2 points: (1 for identification and 1 for explanation.)

1 point - Xanadu will import cars.

1 point - Because Xanadu has higher opportunity cost of producing cars.

- Atlantis has lower opportunity cost in cars.
- Cheaper for Xanadu to import cars than to produce domestically.
- Cheaper for Xanadu to import cars than to produce cars.
- Xanadu has a comparative advantage in tractors.
- Atlantis has comparative advantage in cars.

d) 1 point - Any quantity traded on one-for-one basis will permit Atlantis to consume beyond its PPF. Or, it becomes cheaper for Atlantis to import trucks than to produce them domestically, or a correct discussion of gains from trade using numbers.