



AP[®] Macroeconomics 1999 Scoring Guidelines

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Question 1

Correct Answer

Part (a) Given the inverse relationship between desired investment and the rate of interest, higher interest rates will reduce investment. With higher interest rates, firms will not undertake certain investment projects. Higher interest rates will attract capital from abroad into this country. The flow of funds increases the demand for the country's currency and leads to an appreciation of the currency. With the appreciated currency, the country's exports are more expensive to foreigners who purchase less; thus, exports fall.

Part (b) With reduced investment (and exports), aggregate demand falls (shifts in) leading to less real output and a lowered price level.

Part (c) An appropriate expansionary fiscal policy would either be an increase in government expenditures or a reduction in taxes. Such a policy would increase (shift out) aggregate demand, leading to higher real output and a higher price level. Nominal interest rates would increase. The expansionary fiscal policy would increase the demand for loanable funds, raising interest rates. Also, with a higher real output, the demand for money increases, raising interest rates. Bond prices will fall. An increase in the supply of bonds to fund the expansionary fiscal policy would lower bond prices. Higher interest rates would also bid down the price of existing bonds.

Part. (d) An appropriate monetary policy would be for the monetary authorities to buy government bonds, increasing the money supply, or for the monetary authorities to lower reserve requirements or reduce the discount rate. In each of these cases, the money supply would increase (or shift out). Given a constant money demand (a simplifying assumption), interest rates would fall.

Scoring Rubric

Part (a) = 3 points, Part (b) = 1 point, Part (c) = 3 points, Part (d) = 2 points; 9 Points in Total

Part (a)

(1 point) investment falls

(1 point) the currency appreciates due to increased demand for currency in foreign exchange markets, inflow of foreign funds or increased supply of foreign currency

(1 point) decrease in exports due to appreciated currency the price of exported goods has increased for foreign purchasers who are importing the goods (purchasing power argument)

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Question 1 (cont.)

Part (b)

(1 point) On a Correctly Labeled GRAPH: AD falls --> output down and price level down

Alternatives: -the student has a vertical AS curve, Q (or Y) unchanged and P down; or shifts AS to left, acceptable only if AD also shifts correctly

Part (c)

(1 point) Example of expansionary fiscal policy: increase G or decrease T

Alternative: decrease corporate taxes, then AS increase is acceptable, but ONLY if AD also shifts

(1 point) working through the aggregate demand or aggregate expenditure output up and price level up

(1 point) deficit financing: nominal interest rates increase so price of existing bonds falls, OR increase in the supply of bonds lowers the price of bonds

Part (d)

(1 point) Example of expansionary monetary policy preferred: buy bonds, decrease discount rate or decrease reserve requirement; "Printing money" is ok, but not "expansionary monetary policy"

(1 point) On Correctly Labeled GRAPH: Increase money supply and lower interest rate [Note: A perfect graph is expected, but the absence of labeling the horizontal axis can be excused; also, an upward sloping money supply function is acceptable.]

Note: Besides counting points, the answer may be looked at a whole and ultimately judged by its overall quality. The final total should mean something in terms of the overall quality of the answer. An 8 or 9 should reflect an excellent answer (a 9 is not necessarily a perfect answer); a 6 or 7, a good answer; a 4 or 5, an adequate answer; a 3 is a seriously deficient answer, but still an answer; a 2 an answer signifying nothing except one sustained argument; and a 1, containing only a correct, relevant-to-the question statement. A 0 has no relevant economic answer to the question. A dash (-) is given for an unresponsive or blank answer.

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Question 1 (cont.)

Purpose of the Question and Commentary on Students' Responses

As in the past, this long macroeconomic question is aimed at testing students' understanding of aggregate analysis and policy. The question begins by

investigating the impact of higher interest rates on investment, the value of the country's currency, and exports. Students frequently did not describe the linkage from higher interest rates to increased demand for the currency to the appreciation of the currency. The importance of capital flows in affecting interest rates should be well explained to students. Students are then asked to link the appreciation of the currency to a reduction in a country's exports. In the second part, students are asked simply to use aggregate analysis to show the impact of reduced investment on real output and the price level. In part (c), students are to identify one expansionary fiscal policy to counter the lowered real output from part (b). The more difficult aspect of part (c) for students was to link higher interest rates (from the expansionary fiscal policy) to lower prices on existing bonds. Alternatively, students could have reached this conclusion by explaining that an increase in the supply of bonds would lower bond prices. In the last part of the question, the students are to identify an expansionary monetary policy. On a correctly labeled graph for the money market, students are then asked to show the impact on nominal interest rates of the expansionary monetary policy. Generally, students responded well to this question; the primary exceptions concerned the link between capital flows and currency value, and the link between expansionary fiscal policy, interest rates, and bond prices.

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Question 2

Correct Answer

Part (a) Gross domestic product (GDP) can be calculated by summing the expenditures on final goods and services or by summing factor payments plus economic profit, the income approach. Summing value added for each final good produced will also measure GDP.

Part (b) The expenditure and income approach to calculating GDP will yield identical results. For any good, the total revenues minus total costs will equal economic profit. So, as an accounting identity, total revenues-- the expenditure approach-- will equal total factor costs (including those for intermediate goods) plus economic profits-- the income approach. In other words, all expenditures on goods and services will constitute an identical flow of income and profit for producers.

Part (c) Official GDP statistics do not provide a complete accounting of economic activity. The statistics will not include the value of underground or illegal economic activities, household work and production, or bartered goods. Also, the impact of externalities, both negative and positive, are not captured by official GDP statistics.

Part (d) In order to assess the impact on the typical person of a 4 percent increase in nominal GDP, certain additional pieces of information are needed. These include the rate of inflation, the rate of population growth, the change in the distribution of income, the change in leisure time enjoyed by the typical worker, the change in the impact of externalities not included in the GDP calculation, and the change in product quality.

Scoring Rubric

Part (a) = 1 Point, Part (b) = 1 Point, Part (c) = 1 point, Part (d) = 2 Points; 5 Points in Total

Part (a)

(1 point for both - no 1/2 points)
expenditure approach and income approach (or value added of final goods

Part (b)

sum of factor payments + profits (Income) = Expenditures (1 point) Or, a good circular flow model will earn one point.

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Question 2 (cont.)

Part (c)

1 point for any one of the following:

- underground or illegal economy
- barter
- home production
- externalities

Part (d)

1 point per correct response (maximum of two points)

- inflation rate
- population growth
- change in the income distribution
- change in externalities
- change in leisure time
- change in product quality

Note: Besides counting points, the answer may be looked at as a whole and ultimately judged by its overall quality. The final total should mean something in terms of the overall quality of the answer. A 5 should reflect an excellent answer, but not necessarily a perfect one; a 4, an excellent answer with a flaw; a 3, a good answer; a 2, an adequate answer; a 1, a seriously deficient answer, but still an answer. A 0 has no relevant economic answer to the question. A dash (-) is given for an unresponsive or blank answer.

Purpose of the Question and Commentary on Students' Responses

This question asks students to identify two ways of calculating GDP (income and expenditures), and then asks them to explain why each method would yield the same value of GDP. Often, students expressed an intuitive understanding of the equivalence, stating something like "A person's wages determines her expenditures," so they must be equal. In the third part of the question, students are asked to provide a shortcoming of GDP as a measure of real output. Generally, we were looking for exclusions from GDP, such as bartered activities or home production. Finally, the last part of the question considers the relationship between GDP growth and living standards. We were generally disappointed that students did not perform better on this question.

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Question 3

Correct Answer

Part (a): Since net investment is a component of aggregate demand, the aggregate demand curve will shift to the right. With net investment occurring, the capital stock will increase. An increase in the capital stock will increase (shift out) the long-run aggregate supply function. The potential output of the economy increases. With the increase in aggregate demand and the increase in aggregate supply, real output increases.

Part (b): The increase in capital stock, a factor of production, will lead to an outward shift in the country's production possibilities curve.

Scoring Rubrics:

Part (a) = 4 points, Part (b) = 1 point; 5 Points in Total

Part (a): One point each

- (i) AD increases because net investment is a component of AD
- (ii) Capital stock increases as a result of net investment
- (iii) Long-run aggregate supply increases (shifts to the right) with the increase in capital stock.
- (iv) Output increases because aggregate demand and long-run aggregate supply both increase

Part (b): One point

The production possibilities curve shifts outward because there has been an increase in the capital stock.