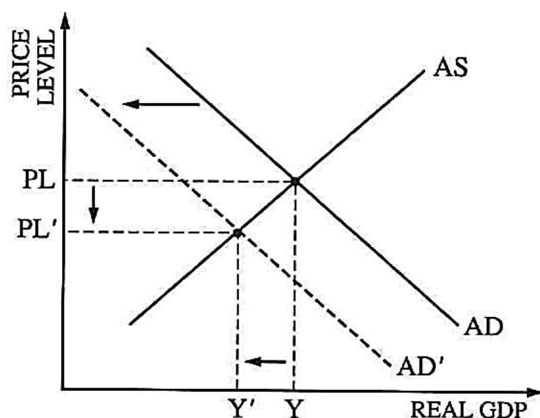
AP® MACROECONOMICS
2002 SCORING GUIDELINES (Form B)

Question 1

Correct Answer:



(a) Investment is a component of aggregate demand, so when investment decreases, AD decreases (shifts left) as indicated on the graph above. This decreases output from Y to Y', and the price level falls from PL to PL'.

(b) Employment rises and falls with the (real) output level. In this case employment will decrease because output decreases.

(c) To offset the effects of the decrease in investment, the government could increase its expenditures (G) **or decrease taxes. With an increase in G,** AD will increase **since G is a componenet of AD.** The increase in AD will increase output and the price level. Increases in government borrowing in the loanable funds market will increase the interest rate, as will increases in the demand for money resulting from increases in income.

(d) The central bank could buy government bonds to increase the money supply. The increase in the money supply will cause real interest rates to fall. AD will increase because investment and interest-sensitive consumption will both increase, and both investment and consumption are components of AD. The increase in AD will cause the price level and output to increase.

(e) If the central bank continues to increase the money supply, the price level will continue to increase as explained in part (d), resulting in an increase in inflation. The higher price level and lower interest rate that result from an increase in the money supply will make domestic prices and interest rates relatively unattractive. The domestic currency will be exchanged for foreign currency by those wishing to purchase goods and invest capital elsewhere, and less domestic currency will be demanded by foreigners, causing a devaluation of the domestic currency in foreign exchange markets.

Copyright © 2002 by College Entrance Examination Board. All rights reserved.
Advanced Placement Program and AP are registered trademarks of the College Entrance Examination Board.

Question 1 (cont'd.)

Grading Rubric:

Question 1: 14 points (3 + 1 + 4 + 4 + 2)

(a) 3 points (1 for the graph, 1 for P, and 1 for Q)

1 point: correctly labeled graph with shift
1 point: output will decrease
1 point: price level will decrease

(b) 1 point Employment will decrease because output decreases.

(c) 4 points (1 for the policy and 1 for explaining the changes in parts (i), (ii), (iii))

1 point: correct policy - increase G or decrease taxes (T)
1 point: AD increases (shifts to the right) because G increases or T decreases, since both G and C (which increases when T decreases) are components of AD
1 point: output and price level increase because AD increases
1 point: real interest rate increases because government borrowing in the loanable funds market increases the interest rate. Also, the increase in income increases the demand for money, which raises the interest rate.

(d) 4 points (1 point for the policy and 1 point each for each of the explanations)

1 point: the central bank buys government bonds to increase the money supply
1 point: real interest rate decreases because the money supply increases
1 point: AD increases because investment spending and interest sensitive consumption spending will both increase, and I and C are components of AD
1 point: output and price level will increase because AD has increased

(e) 2 points 1 point: inflation rises because of the increase in the money supply

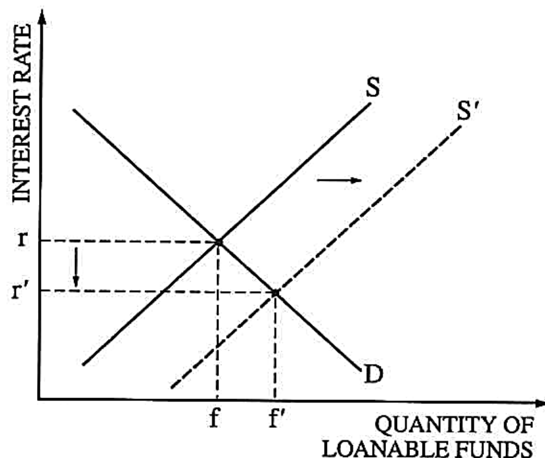
1 point: the value of the domestic currency will decrease because the interest rate is lower and the price level is higher relative to the rest of the world

Copyright © 2002 by College Entrance Examination Board. All rights reserved.
Advanced Placement Program and AP are registered trademarks of the College Entrance Examination Board.

Question 2

Correct Answer:

(a) Income becomes savings and consumption, so to tax income is effectively to tax both savings and consumption. If the government replaces the income tax with a national sales tax, only consumption will be taxed, and saving will become more attractive. Thus, consumption will decrease and national saving will increase.



(b) As indicated in the graph above, an increase in saving will shift the supply of loanable funds to the right, thereby decreasing the real interest rate. Investment responds positively to a decrease in the real interest rate.

(c) In the long run economic growth will increase, because the decrease in the interest rate will increase investment, which increases the capital stock and boosts productivity.

Grading Rubric:

Question 2: (7 points: 2 + 3 + 2)

(a) 2 points
1 point: consumption decreases
1 point: national savings increases

(b) 3 points (1 for the graph and 1 for each of the explanations)

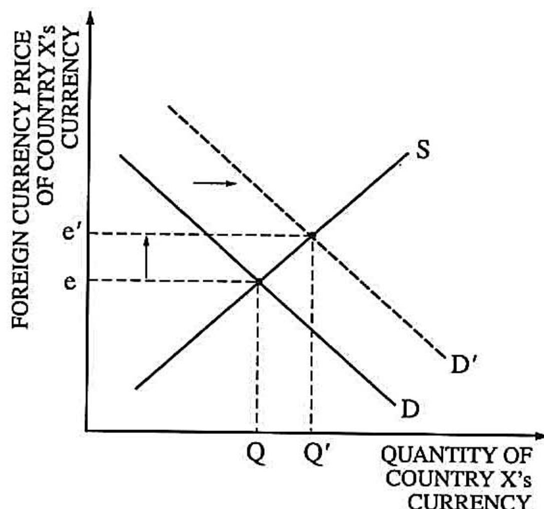
1 point: correctly labeled graph showing the shift in the supply of savings
1 point: decrease in real interest rate
1 point: increase in investment

(c) 2 points
1 point: long-run growth will increase
1 point: linking growth to changes in productivity and capital stock

Copyright © 2002 by College Entrance Examination Board. All rights reserved.
Advanced Placement Program and AP are registered trademarks of the College Entrance Examination Board.

Question 3

Correct Answer:



(a) Foreigners wishing to invest their capital in Country X will demand Country X's currency, shifting its demand curve to the right. As illustrated above, this will cause an appreciation in the value of Country X's currency, as from *e* to *e'*.

(b) Due to the appreciation in its currency, the relative price of Country X's goods increases. With this change in the exchange rate, Country X's exports become more expensive on the world market, and therefore decrease. Imports from other countries become relatively inexpensive, causing them to increase.

Grading Rubric:

Question 3: (6 points: 3 + 3)

(a) 3 points
- 1 point: correct foreign exchange market graph
- 1 point: outward shift in the demand for Country X's currency or inward shift in the supply of Country X's currency
- 1 point: Country X's currency will appreciate because of the increased demand for (or decreased supply of) its currency

(b) 3 points (1 for the direction of imports and exports, and 1 for an explanation that recognizes relative price differences)
- 1 point: Country X's imports will increase
- 1 point: Country X's exports will decrease
- 1 point: explanation of why imports or exports change that refers to relative price differences. Note: one explanation is sufficient for full credit.

Copyright © 2002 by College Entrance Examination Board. All rights reserved.
Advanced Placement Program and AP are registered trademarks of the College Entrance Examination Board.