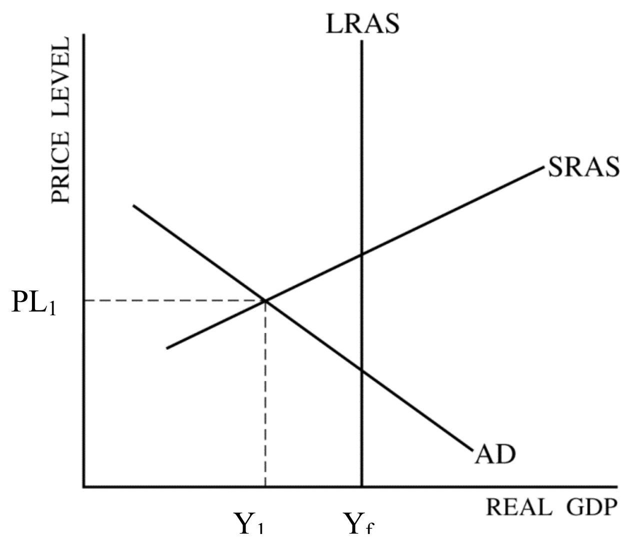
AP® MACROECONOMICS
2014 SCORING GUIDELINES

Question 1

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



(a) 2 points:

- One point is earned for drawing a correctly labeled graph showing an equilibrium with AD, SRAS, Y_1, and PL_1 labeled.
- One point is earned for drawing a vertical LRAS curve at Y_f to the right of the intersection of AD and SRAS.

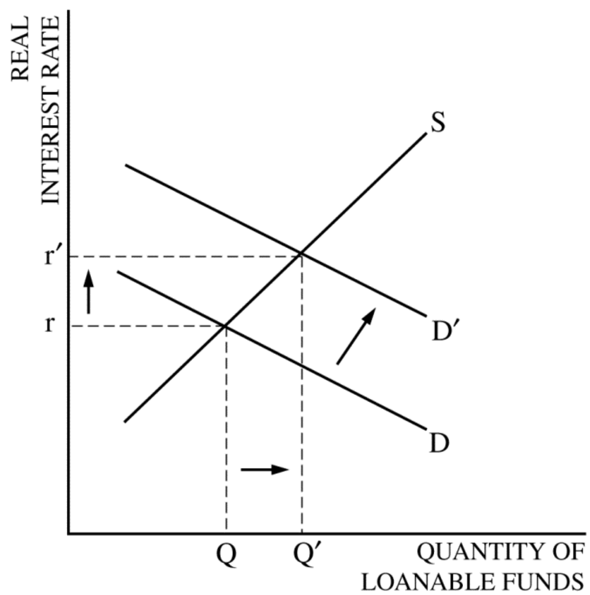
(b) 2 points:

- One point is earned for stating that cyclical unemployment will decrease.
- One point is earned for stating that the natural rate of unemployment will not change.

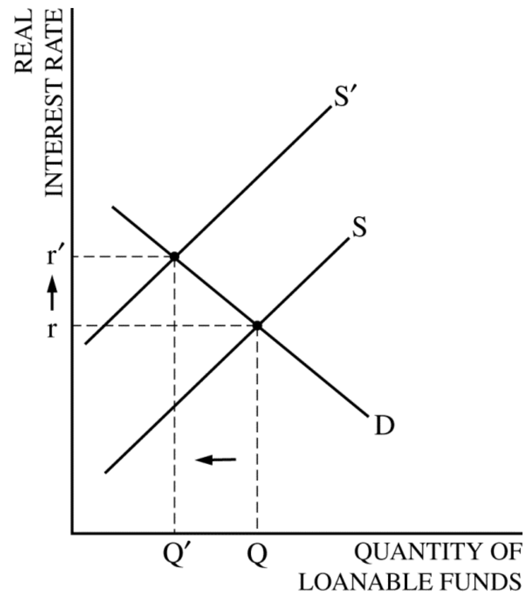
(c) 1 point:

- One point is earned for calculating the maximum change in real GDP:
  Change in GDP = (1/0.25) X \$100 billion = \$400 billion.

Question 1 (continued)



OR



(d) 2 points:

- One point is earned for drawing a correctly labeled loanable funds market graph.
- One point is earned for shifting the demand curve to the right (or shifting the supply curve to the left) and showing an increase in the real interest rate.

(e) 2 points:

- One point is earned for stating that the economic growth rate will fall.
- One point is earned for explaining that the higher real interest rate will slow down capital formation.

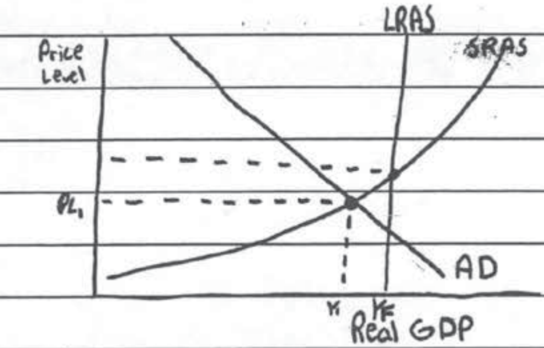
(f) 2 points:

- One point is earned for stating that real gross domestic product will increase.
- One point is earned for explaining that the expansionary effect of the increase in government spending outweighs the contractionary effect of the increase in taxes of the same size. (Or students may explain by calculating the net increase in GDP, $100 billion, or stating the tax multiplier is smaller than the spending multiplier.)

ADDITIONAL PAGE FOR ANSWERING QUESTION 1

1A
(1 of 2)

1) a.



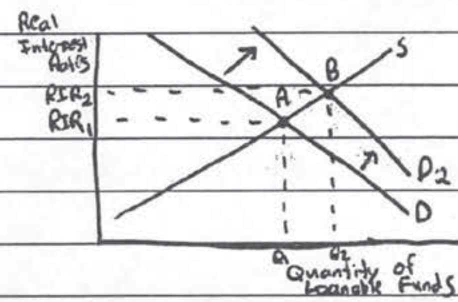
Ignore top dotted line going towards the Price Level Axis. I cannot erase or cross it out

b). The increase in government spending will decrease cyclical unemployment. The increase in government spending will have no effect on the natural rate of unemployment.

c). $\frac{1}{.25} = 4$ $100 \times 4 = 400$

The maximum possible change in real GDP that could result from a 100 Billion dollar increase in government spending and a MPC of 0.75 is <u>400 Billion Dollars</u>.

d).



The 100 Billion dollar increase in government spending will shift demand to the right, resulting in increased Real Interest Rates.

e) Based on the increased Real Interest Rates, the long run economic growth rate will decrease because Businesses are discouraged to invest with higher interest rates, and business investment is a component of the expenditures method of AD [CIGX]. Therefore, Aggregate demand will slow down with less business investment, and Aggregate Demand influences long run economic growth. Essentially, the crowding out effect will take place.

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1A
(2 of 2)

f) ~~The 100 Billion Dollar Tax cut will also~~

The real Gross Domestic product will still increase because the spending multiplier is 1 more than the taxing multiplier, therefore the 100 Billion dollar spending will have more of an effect than the 100 Billion dollar tax increase, so real GDP increases.

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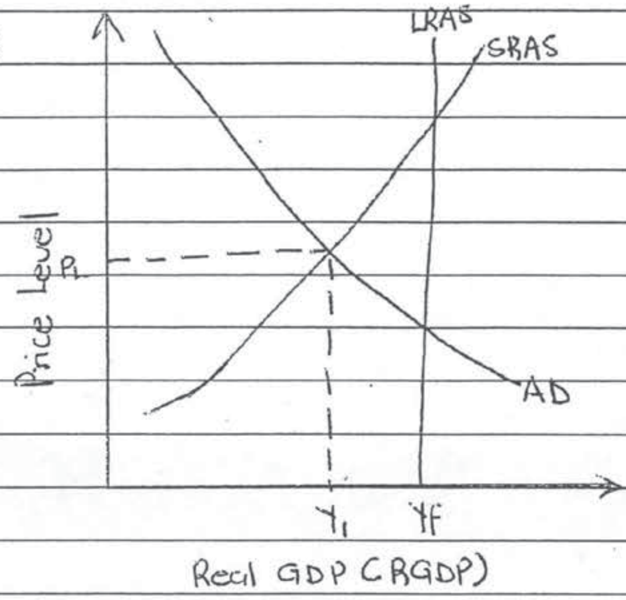
1B
(1 of 2)

a)



bi) Cyclical unemployment will decrease.

ii) The natural rate of unemployment will ~~decrease~~ remain the same.

c) MPC = 0.75

MPS = 1 − 0.75
= 0.25

Multiplier = $\frac{1}{0.25}$ = 4

• Therefore maximum possible change in real GDP = 4 × 100
= $400 billion.

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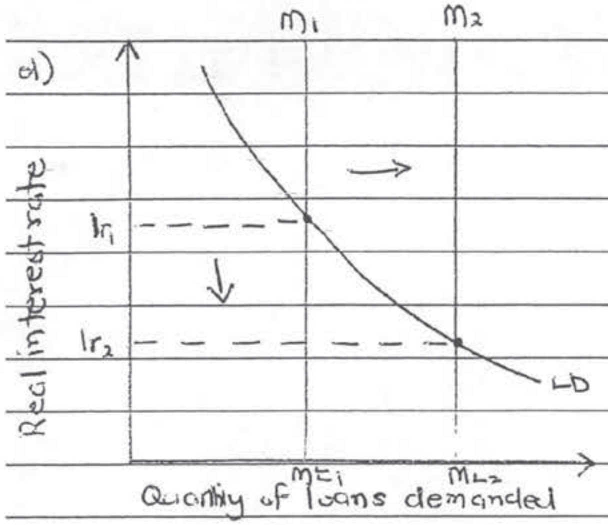
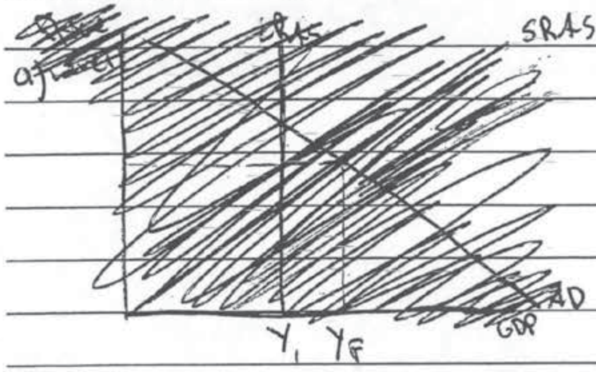
1B (2 of 2)

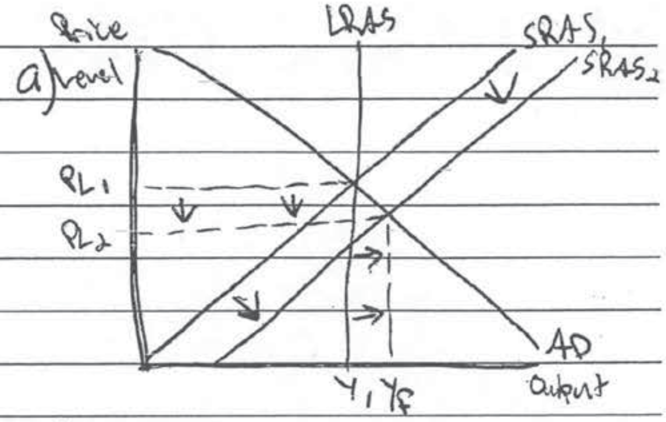
d)



e) Due to a decrease in real interest rate, there would be an in increase in investment and consumption. This eventually leads to an ~~economic~~ ~~an~~ increase in the economic growth rate in the long-run.

F) With an equal ~~eq~~ increase in both government spending and taxes, real gross domestic product would remain the same. Increase in government spending leads to an increase in real GDP and increase in taxes leads to a decrease in real GDP. Therefore an increase in government spending and taxes would cause the real GDP to remain the same.

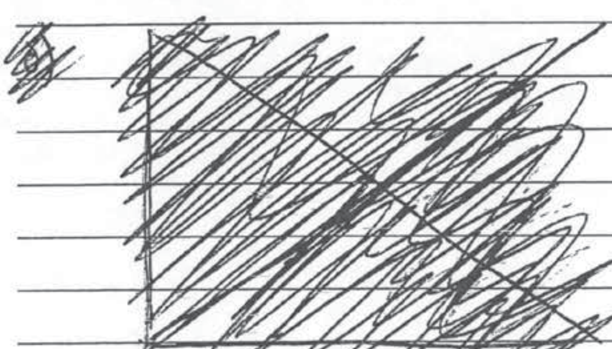


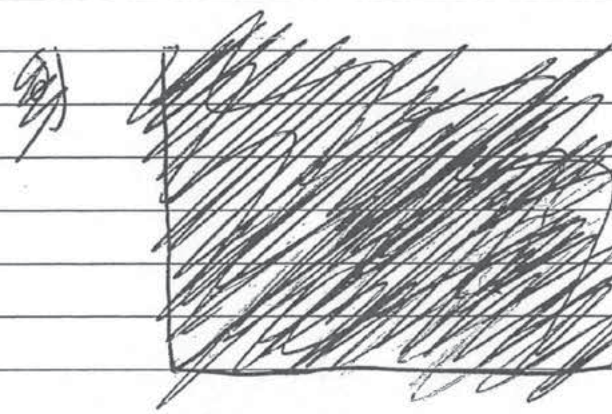


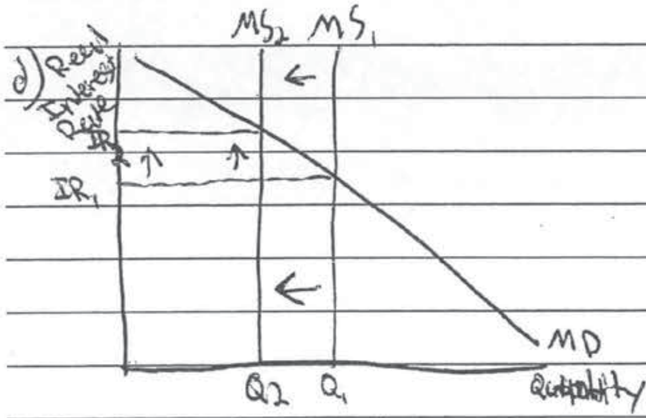
i) See Graph ii) See graph

b) i) unaffected
ii) increase

c) $75 billion







e) Long-run economic growth rate decreases because since the interest rate increased, growth will slow because of the money spent on interest rates.

f) Real GDP will decrease because of the decrease in Aggregate Demand and Aggregate Supply.

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Question 1

Overview

Question 1 focused on the effects of an increase in government spending on an economy producing at a less than full employment level of real output. Part (a) required students to construct an aggregate supply and aggregate demand diagram and show a current equilibrium below the full employment level of real gross domestic product. Part (b) tested students' understanding of the effect of an increase in government spending, financed by borrowing, on cyclical unemployment and the natural rate of unemployment. Part (c) asked students to use the marginal propensity to consume to calculate the possible change in real gross domestic product as a result of the increase in government spending from part (b). Part (d) required students to draw a graph of the loanable funds market and show the effect of increased government spending on the real interest rate, and part (e) tested the students' understanding of the effect of the change in the real interest rate on economic growth. Part (f) asked students to describe the output effect of an increase in government spending financed by an equal increase in taxes.

Sample: 1A
Score: 10

The response did not earn 1 point in part (e) for failing to provide an adequate explanation**.**

Sample: 1B
Score: 6

The response did not earn both points in part (d) for incorrectly labeling the graph and for shifting the supply curve to the right. The response earned 1 point in part (e) for stating that the economic growth rate would increase, because it is consistent with the lowered interest rate in part (d). The response did not earn the second point in part (e) for an inadequate explanation. The response did not earn both points in part (f).

Sample: 1C
Score: 3

The response earned 1 point in part (a)(i) for drawing a correctly labeled graph and showing the short-run equilibrium at PL_1 and Y_1. While the response did not earn 1 point in part (d) for mislabeling the graph, the response earned the second point in part (d) for shifting the supply curve of loanable funds to the left and indicating an increase in the real interest rate. The response earned 1 point in part (e) for stating that the economic growth rate decreases.