2021

AP CollegeBoard

AP® Macroeconomics

Sample Student Responses and Scoring Commentary Set 2

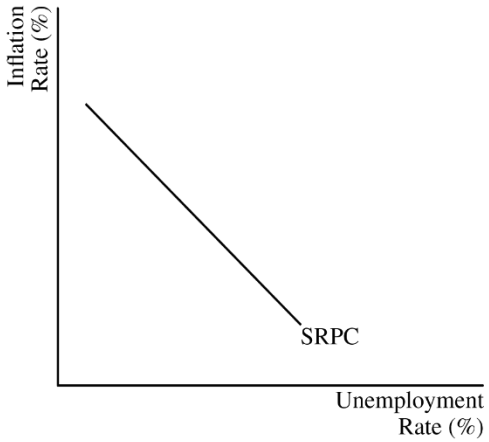
Inside:

Free Response Question 2

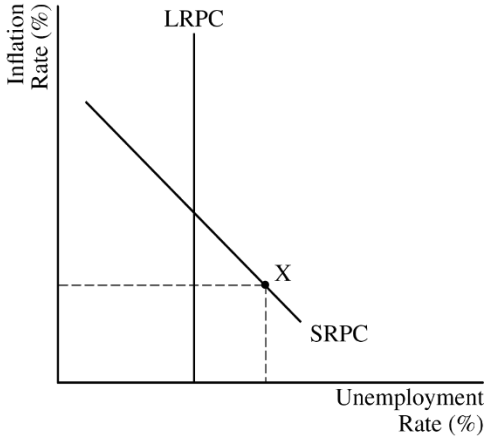
- ☑ **Scoring Guideline**
- ☑ **Student Samples**
- ☑ **Scoring Commentary**

Question 2: Short — 5 points

(a) Draw a correctly labeled graph of the SRPC. **1 point**



For the second point, the graph must include a correctly labeled LRPC and show point X on the SRPC to the right of the LRPC. **1 point**



Total for part (a) **2 points**

(b) (i) Calculate the minimum change in government spending as $150 billion and show your work. **1 point**

$$\frac{\text{Change in GDP}}{\text{Spending Multiplier}} = \frac{\$600 \text{ billion}}{1/(1-0.75)} = \frac{\$600 \text{ billion}}{4} = \$150 \text{ billion}$$

(ii) Calculate the minimum change in taxes as $200 billion and show your work. **1 point**

$$\frac{\text{Change in GDP}}{\text{Tax Multiplier}} = \frac{\$600 \text{ billion}}{-0.75/(1-0.75)} = \frac{\$600 \text{ billion}}{-3} = -\$200 \text{ billion}$$

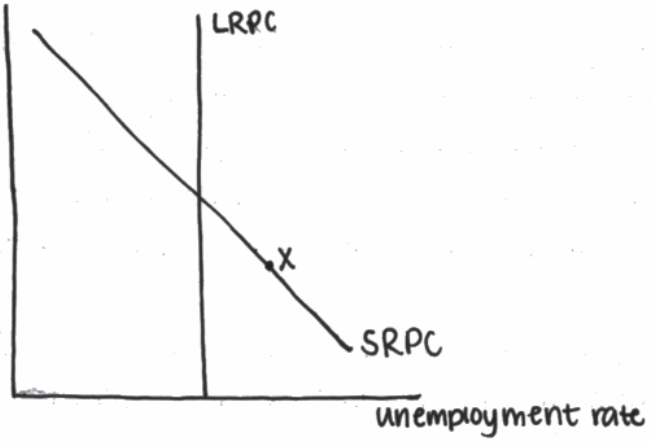
Total for part (b) **2 points**

(c)	Explain that SRAS will increase in the long run due to a decrease in nominal wages, input prices, or inflationary expectations.	**1 point**
	Total for question 2	**5 points**

Question 1 Question 2 Question 3

Begin your response to each question at the top of a new page.

a). Inflation Rate



b).i). MPS = 0.25

Spending multiplier = $\frac{1}{0.25} = 4$

4 (government spending) = $600 billion

Government spending = $150 billion (increase)

ii). MPC = 0.75, MPS = 0.25

Tax multiplier = $-\frac{MPC}{MPS} = -\frac{0.75}{0.25} = -3$

-3 (change in taxes) = $600 billion

-200 billion = change in taxes

The government needs to decrease taxes by $200 billion

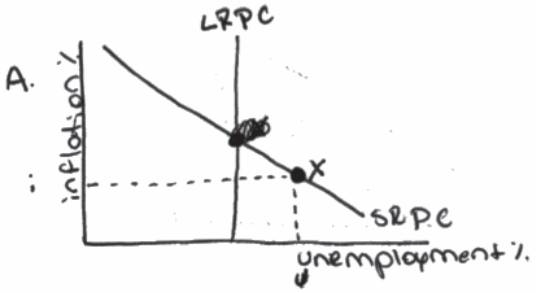
c). In the long run, the economy will adjust itself back to the full employment level of output. Wages will decrease, and eventually companies will be able to hire more people with these lower wages, increasing production and supply, so the SRAS will shift right and intersect the AD curve at the LRAS.

Q2 Sample B Page 1 of 1

Question 1 Question 2 Question 3

Begin your response to each question at the top of a new page.

A.



Bi) MPC = .75 = 3 600 · 3 = ~~$600B~~ 1800B is the amount of money that would need to be spent by the government to make a $600B difference in the economy with the money multiplier

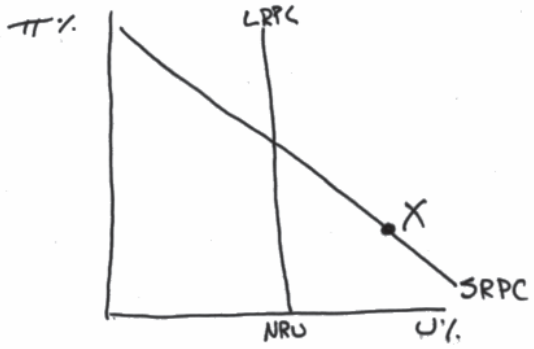
Bii) MPS = .25 = 4 600 · 4 = 2400B would be needed for aggregate demand to change $600B using the tax multiplier

C) in the long run people would start accepting lower wages that would increase Aggregate supply, this would move SRAS in an AS/AD model and bring the economy back to equalibrium.

Begin your response to each question at the top of a new page.

2.

(a)



(b) (i) $600 \times 1.25 =$ **$750 billion** MPC = Govt spend

MPC = .75, to make up $600 b, you need to spend more

You need MPC = 600 b, total = MPC + MPS

(ii) $600 \times 4 =$ **$2,400 billion** MPS = taxes

MPS = .25, to make up $600 b, spend more

(c) If no policy action is taken, the LRPC will shift to point X. The ~~new natural~~ inflation rates will be lower, but the new natural rate of unemployment will increase.

Question 2

Note: Student samples are quoted verbatim and may contain spelling and grammatical errors.

Overview

The question examined students' understanding of how fiscal policy can be used to eliminate a recessionary output gap, and how in the absence of intervention, the economy transitions to the long-run equilibrium. In part (a), students were asked to identify the economy's location on the short-run and long-run Phillips curve graph, when there is a recessionary gap of $600 billion. In part (b) i, given a marginal propensity to consume of .75, students were asked to calculate the minimum change in government spending needed to increase aggregate demand by the output gap of $600 billion and show their work. In part (b) ii, students were asked to assume that instead of a change in government spending, the government changes taxes to accomplish the same change in aggregate demand. In part (c), students were asked to assume that the government takes no policy action to close the output gap shown in part (a), and to explain how the economy will adjust in the long run.

Sample: 2A
Score: 5

- The response earned 1 point in part (a) for drawing a correctly labeled graph of the SRPC and earned 1 point for correctly labeling point "X" on the SRPC to the right of the LRPC.
- The response earned 1 point in part (b)(i) for calculating the minimum increase in government spending as $150 billion and showing the work.
- The response earned 1 point in part (b)(ii) for calculating the minimum decrease in taxes as $200 billion and showing the work.
- The response earned 1 point for stating that the SRAS will shift to the right because of a decrease in wages.

Sample: 2B
Score: 3

- The response earned 1 point in part (a) for drawing a correctly labeled graph of the SRPC and earned 1 point for correctly labeling point "X" on the SRPC to the right of the LRPC.
- The response does not earn the point in part (b)(i) because it does not calculate the minimum change in government spending correctly.
- The response does not earn the point in part (b)(ii) because does not calculate the minimum change in taxes correctly.
- The response earned 1 point for stating that the SRAS will shift to the right because of a decrease in wages.

Sample: 2C
Score: 2

- The response earned 1 point in part (a) for drawing a correctly labeled graph of the SRPC and earned 1 point for correctly labeling point "X" on the SRPC to the right of the LRPC.
- The response does not earn the point in part (b)(i) because it does not calculate the minimum change in government spending correctly.
- The response does not earn the point in part (b)(ii) because does not calculate the minimum change in taxes correctly.
- The response does not earn the point in part (c) because it does not state that SRAS will shift to the right and does not explain that nominal wages, input prices, or inflationary expectations will decrease.