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# AP<sup>®</sup> Macroeconomics

## Sample Student Responses and Scoring Commentary Set 2

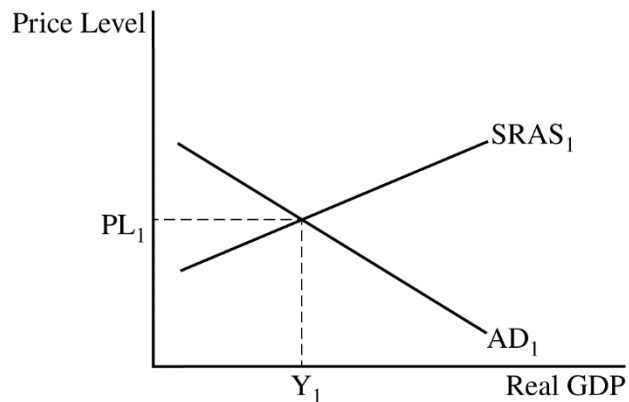
### **Inside:**

#### **Free-Response Question 3**

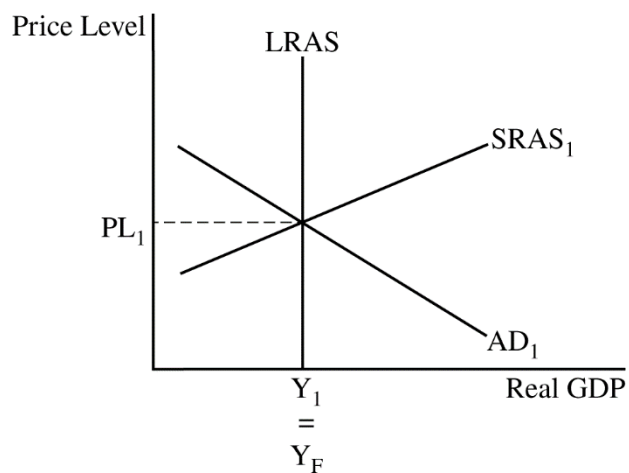
- ☒ **Scoring Guidelines**
- ☒ **Student Samples**
- ☒ **Scoring Commentary**

**Question 3: Short****5 points**

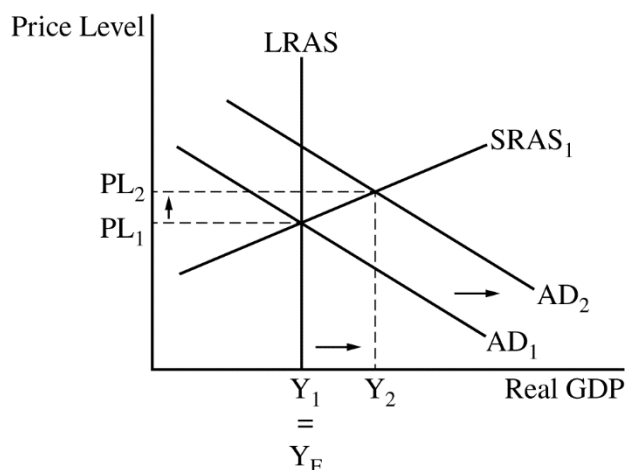
- A** Draw a correctly labeled aggregate demand–aggregate supply graph that shows  $PL_1$  and  $Y_1$  at the intersection of the aggregate demand (AD) and short-run aggregate supply (SRAS) curves. **1 point**
- Point 1



- Point 2 The graph must show a vertical long-run aggregate supply (LRAS) curve at equilibrium real output  $Y_1 = Y_F$ . **1 point**



- B** On the graph from part A, show the short-run effect of the increase in real income in Thailand as a rightward shift of Nepal's aggregate demand curve, resulting in an increase in real output, labeled  $Y_2$ , and an increase in the price level, labeled  $PL_2$ . **1 point**
- Point 3



- C** Calculate the minimum change in government spending as a decrease of 100 million rupees and show your work. **1 point**
- Point 4

$$\text{Min Change} = \frac{-400 \text{ million rupees}}{\frac{1}{(1 - 0.75)}} = \frac{-400 \text{ million rupees}}{4} = -100 \text{ million rupees}$$

- D** Explain that as real income rises, tax revenues will increase automatically (and/or transfer payments will decrease automatically), thereby slowing the rate at which disposable income is increasing, which will slow consumption growth. **1 point**
- Point 5

**Important:** Completely fill in the circle that corresponds to the question you are answering on this page.

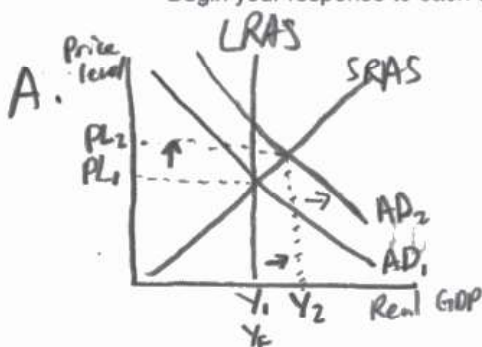
Question 1

Question 2

Question 3



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



C.  $MPC = 0.75$

$MPS = 1 - 0.75 = 0.25$

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

$\frac{400 \text{ million rupees}}{4} = 100 \text{ million rupees}$

The government must decrease government spending by 100 million rupees to close the output gap in the short run.

D. Automatic stabilizers like progressive income tax would reduce the effect of the change in real output because a progressive income tax would take a proportion of a consumer's income, reducing the amount of consumer spending. This lessens the shift from  $AD_1$  to  $AD_2$ , reducing the change in real output.

Page 5

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**Important:** Completely fill in the circle that corresponds to the question you are answering on this page.

Question 1



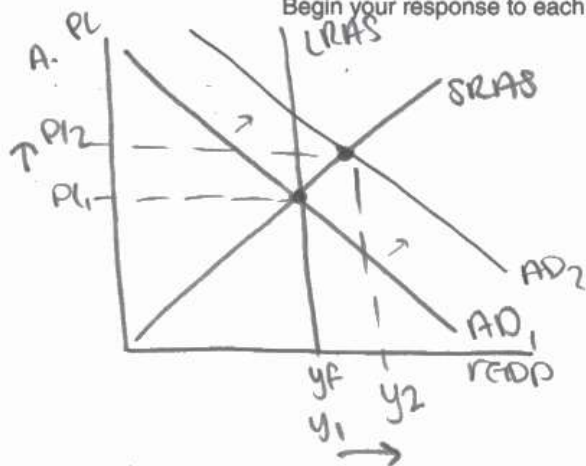
Question 2



Question 3



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



c.  $MPC = .75$

$MPS + MPC = 1 \Rightarrow .75 + .25 = 1$

minimum change is .25

& the direction of change in government spending to close the output gap in short-run is  $\uparrow$  (increase) ( $\rightarrow$ )

D. automatic stabilizers in short run would reduce the effect of the change in real output because they would balance the economy. Employment is part of the economy that can be used to push the government budget from a deficit to balanced.

Page 5

Use a pencil or pen with black or dark blue ink. Do NOT write your name. Do NOT write outside the box.

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**Important:** Completely fill in the circle that corresponds to the question you are answering on this page.

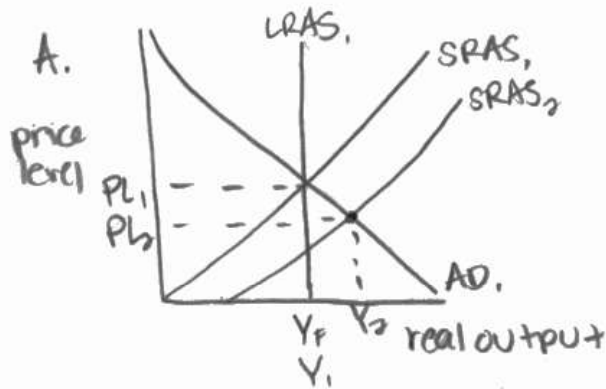
Question 1

Question 2

Question 3



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



B. on graph

C.  $1 - .75 = .25 = \frac{1}{4}$   $4(400 \text{ Million}) = 1600 \text{ Million}$   
decrease spending by 1,600 million

D. Automatic Stabilizers in the short run would reduce the effect of the change in real output because they are set in place to ensure stability by keeping interest rates and inflation rates set.

Use a pencil or pen with black or dark blue ink. Do NOT write your name. Do NOT write outside the box.

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### Question 3

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

#### Overview

**NEW for 2025:** The question overviews can be found in the *Chief Reader Report on Student Responses* on [AP Central](#).

#### Sample: 3A

##### Score: 5

Part A: The response earned point 1 for drawing a correctly labeled aggregate demand–aggregate supply graph showing  $Y_1$  and  $PL_1$  at the intersection of the aggregate demand (AD) and short-run aggregate supply (SRAS) curves. The response earned point 2 for showing a vertical long-run aggregate supply (LRAS) curve at equilibrium real output  $Y_1 = Y_F$ .

Part B: The response earned point 3 for shifting the AD curve to the right, resulting in an increase in real output, labeled  $Y_2$ , and an increase in the price level, labeled  $PL_2$ .

Part C: The response earned point 4 for calculating the minimum change in government spending as a decrease of 100 million rupees and showing the work.

Part D: The response earned point 5 for explaining that “[a]utomatic stabilizers like progressive income tax would reduce the effect of the change in real output because a progressive income tax would take a proportion of a consumer’s income, reducing the amount of consumer spending.”

#### Sample: 3B

##### Score: 3

Part A: The response earned point 1 for drawing a correctly labeled aggregate demand–aggregate supply graph showing  $Y_1$  and  $PL_1$  at the intersection of the aggregate demand (AD) and short-run aggregate supply (SRAS) curves. The response earned point 2 for showing a vertical long-run aggregate supply (LRAS) curve at equilibrium real output  $Y_1 = Y_F$ .

Part B: The response earned point 3 for shifting the AD curve to the right, resulting in an increase in real output, labeled  $Y_2$ , and an increase in the price level, labeled  $PL_2$ .

Part C: The response did not earn point 4 because it calculates the minimum change in government spending as “.25” and identifies the direction of change as “increase.”

Part D: The response did not earn point 5 because it does not explain that an increase in tax revenue or a decrease in transfer payments will slow consumption growth.

**Question 3 (continued)****Sample: 3C****Score: 2**

Part A: The response earned point 1 for drawing a correctly labeled aggregate demand–aggregate supply graph showing  $Y_1$  and  $PL_1$  at the intersection of the aggregate demand (AD) and short-run aggregate supply (SRAS) curves. The response earned point 2 for showing a vertical long-run aggregate supply (LRAS) curve at equilibrium real output  $Y_1 = Y_F$ .

Part B: The response did not earn point 3 because it shows a shift of the SRAS curve.

Part C: The response did not earn point 4 because it calculates the minimum change in government spending as a decrease of “1,600 million.”

Part D: The response did not earn point 5 because it does not explain that an increase in tax revenue or a decrease in transfer payments will slow consumption growth.