

**2023**



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# **AP<sup>®</sup> Macroeconomics**

## **Sample Student Responses and Scoring Commentary**

### **Set 1**

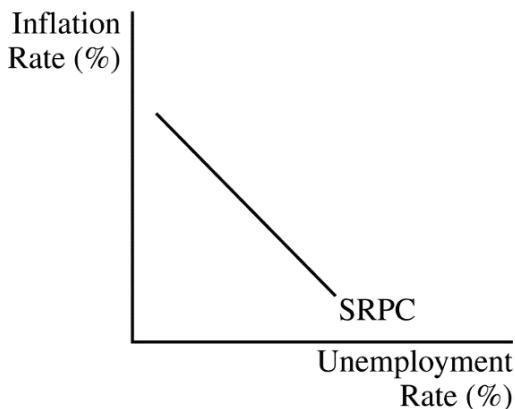
#### **Inside:**

##### **Free-Response Question 2**

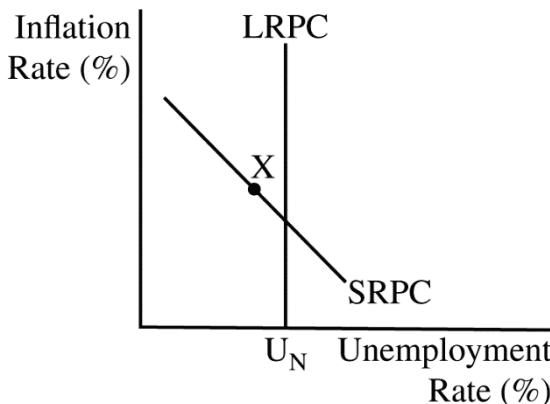
- Scoring Guidelines**
- Student Samples**
- Scoring Commentary**

**Question 2: Short****5 points**

- (a) Draw a correctly labeled graph of the short-run Phillips curve (SRPC).

**1 point**

For the second point, the graph must include a correctly labeled long-run Phillips curve (LRPC) and show point X on the SRPC to the left of the LRPC.

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

- (b) State that the central bank would increase its administered interest rates or increase interest on reserves.

**1 point**

- (c) State that there will be an increase in the flow of international financial capital into Noralandia and explain that international investors will seek higher returns on financial capital in Noralandia.

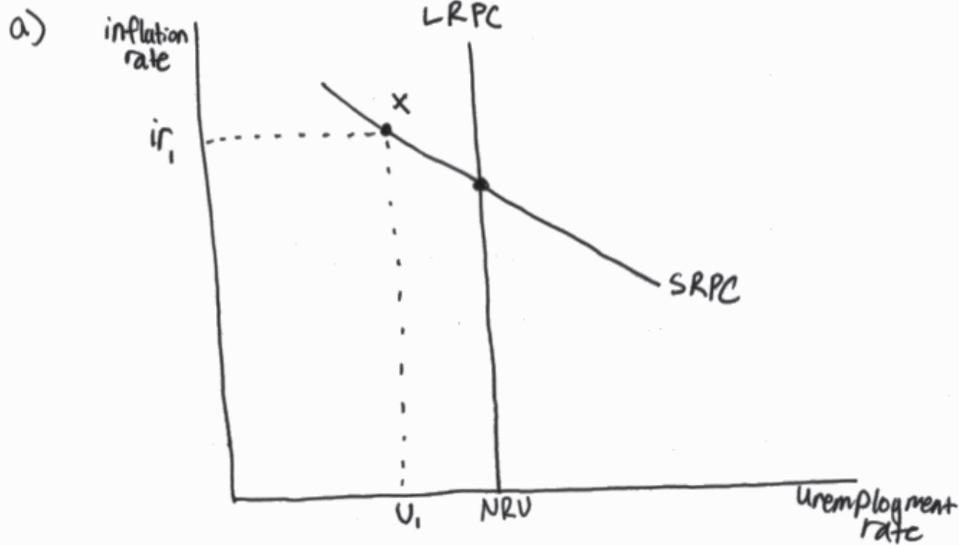
**1 point**

- (d) State that Noralandia's currency will appreciate and explain there will be an increase in the demand for Noralandia's currency (or a decrease in the supply of Noralandia's currency).

**1 point****Total for question 2 5 points**

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

Question 1   Question 2   Question 3



B) The Central bank can increase interest on reserves.

c) The interest rate will increase due to increased interest on reserves. As a result of this, there will be an increase in the flow of financial capital to Norlandia because foreign investors will want to earn the highest interest possible on their financial assets, leading to them ~~investing more purchasing more financial~~ investing more in Norlandia as their interest rates increase.

D) Norlandia's currency will appreciate in the foreign exchange market because more foreign ~~investors~~ will be demanding their currency to purchase Norlandia's bonds and other financial assets, ~~resulting in~~ resulting in Norlandia's currency appreciating against the other foreign currencies.

**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) Open Market Operations by selling government bonds.
- c) There will be an increase in the flow of international financial capital. This is because the ~~interest rate~~ real interest rate increased which causes foreign countries to demand more of Noralandia's currency.
- d) Noralandia's currency will appreciate. This is because the increase in demand for Noralandia's currency would strengthen in comparison to other countries, ~~this~~ and would increase the equilibrium exchange rate, causing Nordandia's currency to appreciate.

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

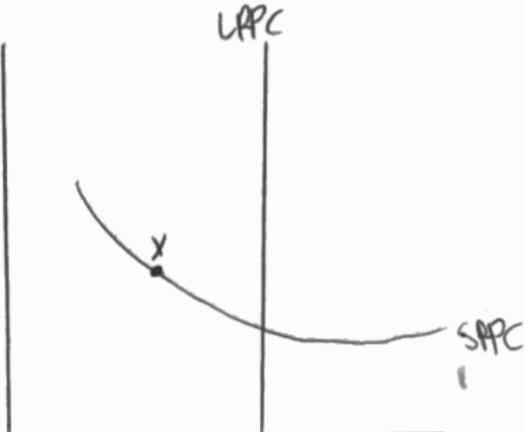
**Question 1   Question 2   Question 3**



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

2.

- (a) Inflation rate



~~(a) buy government bonds.~~

(b) sell government bonds

unemployment  
rate

money supply

(c) Increase because a decrease in ~~inflation rate~~ means an increase in interest rate.

(d) It will appreciate because it will become more sought after on the foreign exchange market, because of the country's higher interest rate.

## Question 2

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

### Overview

This question examined students' understanding of the Philips curve and how to use it to model the state of an economy; monetary policy actions in an ample reserve framework; and the effects of an interest rate change on international financial capital flows and the foreign exchange market. In part (a) students were told that Nolandia is in short-run equilibrium with an actual inflation rate that is currently higher than the expected inflation rate. They were then asked to draw a correctly labeled graph of the short-run and long-run Phillips curves and to label the current short-run equilibrium point as X. In part (b) students were told that the banking system in Nolandia has ample reserves. They were then asked to identify a specific monetary policy action that the central bank of Nolandia would take to bring the inflation rate closer to the expected inflation rate. In part (c) students were told that Nolandia has an open economy and a flexible exchange rate. Based solely on the effect of the monetary policy action identified in part (b) on interest rates in Nolandia, students were asked if there will be an increase, a decrease, or no change in the flow of international financial capital into Nolandia and to explain. Finally, in part (d), based on their answer in part (c), students were asked what will happen to the international value of Nolandia's currency and to explain.

#### Sample: 2A

Score: 5

The response earned the first point in part (a) for drawing a correctly labeled graph of the short-run Phillips curve (SRPC). The response earned the second point in part (a) for a correctly labeled long-run Phillips curve (LRPC) and for showing point X on the SRPC to the left of the LRPC. The response earned 1 point in part (b) for stating that the central bank would increase interest on reserves. The response earned 1 point in part (c) for correctly stating that there will be an increase in the flow of international financial capital into Nolandia and explaining that international investors will seek higher returns on financial capital in Nolandia. The response earned 1 point in part (d) for stating that Nolandia's currency will appreciate and explaining that there will be an increase in the demand for Nolandia's currency.

#### Sample: 2B

Score: 3

The response earned the first point in part (a) for drawing a correctly labeled graph of the short-run Phillips curve (SRPC). The response earned the second point in part (a) for a correctly labeled long-run Phillips curve (LRPC) and showing point X on the SRPC to the left of the LRPC. The response did not earn the point in part (b) because it does not state that the central bank would increase its administered interest rates or increase interest on reserves. The response did not earn the point in part (c) because it does not explain that international investors will seek higher returns on financial capital in Nolandia. The response earned 1 point in part (d) for stating that Nolandia's currency will appreciate and explaining that there will be an increase in the demand for Nolandia's currency.

### Question 2 (continued)

**Sample: 2C**

**Score: 2**

The response earned the first point in part (a) for drawing a correctly labeled graph of the short-run Phillips curve (SRPC). The response earned the second point in part (a) for a correctly labeled long-run Phillips curve (LRPC) and showing point X on the SRPC to the left of the LRPC. The response did not earn the point in part (b) because it does not state that the central bank would increase its administered interest rates or increase interest on reserves. The response did not earn the point in part (c) because it does not explain that investors will seek higher returns on financial capital. The response did not earn the point in part (d) because it does not explain that there will be an increase in the demand for Noralandia's currency (or a decrease in the supply).