AP **CollegeBoard**

AP® Macroeconomics
Sample Student Responses
and Scoring Commentary
Set 1

Inside:

Free Response Question 3

☑ **Scoring Guideline**

☑ **Student Samples**

☑ **Scoring Commentary**

AP Central is the official online home for the AP Program: apcentral.collegeboard.org.

Question 3: Short   5 points

(a)		State that the cyclical rate of unemployment in Flowerland is 2%.	**1 point**
(b)	**(i)**	State that aggregate demand will increase and explain that net exports will increase.	**1 point**
	(ii)	State that cyclical unemployment will decrease.	**1 point**
		Total for part (b)	**2 points**
(c)		Calculate the price index for year 2020 as 130 and show your work.	**1 point**

$$\frac{\text{Value of the market basket in 2020}}{\text{Value of the market basket in 2019}} \times 100 = \frac{(\$4\times40)+(\$25\times4)}{(\$3\times40)+(\$20\times4)} \times 100 = \frac{\$260}{\$200} \times 100 = 130$$

(d)		State that the standard of living of the average citizen of Flowerland will decrease and explain that the increase in nominal income (20%) is less than the inflation rate (30%).	**1 point**
		Total for question 3	**5 points**

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

(a) The cyclical rate of unemployment is 2%.

(b) (i) Aggregate demand will increase because of the increase in exports of lavender oil.

(ii) Cyclical unemployment would decrease.

(c) MB for 2019 = $(40 \times 3) + (4 \times 20) = 200$

MB for 2020 = $(40 \times 4) + (4 \times 25) = 260$

$\frac{260}{200} \times 100 = \boxed{130}$

(d) The standard of living decreased because the inflation rates in Flowerland increased by 30% which is greater than the 20% increase in nominal wages which means the real wages along with the standard of living has decreased from 2019 to 2020.

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

(a) The cyclical rate of unemployment is 2%.

(b) The aggregate demand in Flowerland will shift to the right. If demand increases for the lavender oil, it must increase in the Shift. This happens because more people are now coveting the lavender oil.

The cyclical unemployment would decrease.

(c) Base year: 2019   2020

$40 \times 3 = 1120$ $40 \times 4 = 160$

$4 \times 20 = 80$ $4 \times 25 = 100$

   $\overline{\$200}$ $\overline{\$260}$

$CPI = \frac{268}{200}$ $\frac{26}{20} = 1\frac{6}{20} = 1\frac{3}{10} = 1.30$ $\boxed{CPI = 130}$

(d) The standard of living will stay the same. Nominal income will just be adjusting for inflation. Since nominal only adjusts for inflation, the real cost of living does not change, and thus, the standard of living remains the same. Goods and Services, in reality, ~~won~~ will not actually be cheaper, their prices will just be adjusted for the state of the market.

Page 5

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

A. The numerical value of the cyclical rate of unemployment in Flowerland is 3%.

B. i. Aggregate demand will increase as more people want to purchase Flowerland's lavender oil. ii. Cyclical unemployment will decrease because higher demand means more available jobs.

C. $25 · 4 units = $100. The CPI is $100.

D. The standard of living for the average citizen of Flowerland will increase as there will be more disposable income to spend or save.

Question 3

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

Overview

The question examined students understanding of the effects of a change in imports on aggregate demand and unemployment, and the effect of inflation on real income via a calculation of the price index.

Students were told that Flowerland is an open economy with a flexible exchange rate regime. It has a natural rate of unemployment of 5%, frictional unemployment rate of 4%, and an actual unemployment rate of 7%. In part (a), students were asked to calculate the value of the cyclical rate of unemployment in Flowerland. In part (b), students were asked to assume that the demand for lavender oil produced in Flowerland increases and to indicate what will happen to (i) aggregate demand and explain, and (ii) what will happen to cyclical unemployment.

Students were next given data on prices and quantities of the two goods produced by Flowerland, lavender oil and roses, in the years 2019 and 2020.

In part (c), students were told to assume that the base year was 2019 and asked to calculate the price index for 2020 and show their work.

In part (d), students were told that the nominal income in Flowerland increased by 20% from 2019 to 2020 and to indicate whether the standard of living in Flowerland will increase, decrease, or stay the same and explain.

Sample: 3A
Score: 5

- The response earned 1 point in part (a) for identifying that the cyclical rate of unemployment is 2%.
- The response earned 1 point in part (b)(i) for stating that AD will increase because of an increase in exports.
- The response earned 1 point in part (b)(ii) for stating that cyclical unemployment decreases.
- The response earned 1 point in part (c) for calculating the price index as 130 and showing the work.
- The response earned 1 point in part (d) for stating that the standard of living will decrease and explaining that the increase in nominal wages is less than the increase in the inflation rate.

Sample: 3B
Score: 3

- The response earned 1 point in part (a) for identifying that the cyclical rate of unemployment is 2%.
- The response did not earn the point in part (b)(i) because it does not explain that AD shifts to the right because of an increase in exports.
- The response earned 1 point in part (b)(ii) for stating that cyclical unemployment decreases.
- The response earned 1 point in part (c) for calculating the price index as 130 and showing the work.
- The response did not earn the point in part (d) for stating that the standard of living will stay the same.

Sample: 3C
Score: 1

- The response did not earn the point in part (a) for not identifying the cyclical rate of unemployment as 2%.

Question 3 (continued)

- The response did not earn the point in part (b)(i) because it does not tie the increase in AD to the increase in exports.
- The response earned 1 point in part (b)(ii) for stating that cyclical unemployment decreases.
- The response did not earn the point in part (c) for not calculating the price index as 130 and showing the correct work.
- The response did not earn the point in part (d) for stating that the standard of living will increase.