

# ECON 3560/5040

## Quiz #1 (Answers)

Last Name: \_\_\_\_\_, First Name: \_\_\_\_\_

### Part A (7 points) Fill-in Questions

- (1) [3 points] Macroeconomics is the study of the economy as a whole. It focuses on issues such as Economic Growth, Inflation, and Unemployment
- (2) [2 points] Nominal GDP measures the current dollar value of the final goods and services in a given time period within a country's borders
- (3) [2 points] Okun's Law depicts a negative relationship between the percentage change in RGDP and the change in the unemployment

### Part B (13 points)

- (1) [7 points] **RGDP and NGDP**

Assume that apples cost \$0.50 in 1992 and \$1.00 in 1997, whereas oranges cost \$1.00 in 1992 and \$1.50 in 1997. If 4 apples were produced in 1992 and 5 in 1997, whereas 3 oranges were produced in 1992 and 4 in 1997. Suppose the base year is year 1992.

- (a) [1 points] What was real GDP in 1997?

$$RGDP_{1997} = \$0.50 \times 5 + \$1.00 \times 4 = \$6.50$$

- (b) [1 points] What was nominal GDP in 1992?

$$NGDP_{1992} = \$0.50 \times 4 + \$1.00 \times 3 = \$5.00$$

- (c) [2 points] What was the rate of economic growth ( $g$ ) between 1992 and 1997?

*Since 1992 is the base year,  $NGDP_{1992} = RGDP_{1992} = \$5.00$ . The rate of economic growth between 1992 and 1997 is given by*

$$g = \frac{RGDP_{1997} - RGDP_{1992}}{RGDP_{1992}} \times 100 = \frac{6.50 - 5.00}{5.00} \times 100 = 30\%$$

- (d) [1 points] What was general price level ( $P$ ) in 1992?

*Since 1992 is the base year,  $P = 100$*

- (e) [2 points] What was the rate of inflation ( $\pi$ ) between 1992 and 1997?

*Cost of basket is \$5.00 ( $= \$0.50 \times 4 + \$1.00 \times 3$ ) in 1992 and \$8.50 ( $= \$1.00 \times 4 + \$1.50 \times 3$ ) in 1997. The general price level in 1997 is  $P_{1997} = 8.50/5.00 \times 100 = 170$ . Therefore, inflation rate between 1992 and 1997 is*

$$\pi = \frac{P_{1997} - P_{1992}}{P_{1992}} \times 100 = \frac{170 - 100}{100} \times 100 = 70\%$$

- (2) [6 points] State whether you think each of the following questions is true (**T**), false (**F**), or uncertain (**U**) and briefly explain your answer. No credit will be given for an answer without any explanation

- (a) [2 points] An increase in the price of goods bought by firms and the government will show up in both the CPI and the GDP deflator

**False.** *Since CPI uses a typical consumer's basket of goods and services, an increase in the price of goods bought by firms and the government will show up in the GDP deflator but not in the CPI*

- (b) [2 points] According to the definition used by the U.S. Bureau of Labor Statistics (BLS), a person is not considered unemployed if that person is out of a job and looking for work.

**False.** *Since the person is looking for a job, he or she should be considered unemployed*

- (c) [2 points] Bureau of Economic Analysis (BEA) surveys consumers to determine composition of the typical consumer's "basket of goods to constructs the CPI

**False.** *Bureau of Labor Statistics (BLS) surveys consumers to determine composition of the typical consumer's basket of goods and collect data on prices of all items in the basket to construct CPI*