

## Econ 20B- Additional Problem Set Two

**I. MULTIPLE CHOICES. Choose the one alternative that best completes the statement to answer the question.**

1. When the consumer price index rises, the typical family
  - a. has to spend more dollars to maintain the same standard of living.
  - b. can spend fewer dollars to maintain the same standard of living.
  - c. finds that its standard of living is not affected.
  - d. can offset the effects of rising prices by saving more.
  
2. The consumer price index is used to
  - a. differentiate gross national product from net national product.
  - b. turn dollar figures into meaningful measures of purchasing power.
  - c. characterize the types of goods and services that consumers purchase.
  - d. measure the quantity of goods and services that the economy produces.
  
3. Which of the following is the most accurate statement about nominal and real interest rates?
  - a. Nominal and real interest rates always move together.
  - b. Nominal and real interest rates never move together.
  - c. Nominal and real interest rates often do not move together.
  - d. Nominal and real interest rates always move in opposite directions
  
4. The steps involved in calculating the consumer price index, in order, are as follows:
  - a. Choose a base year, fix the basket, compute the inflation rate, compute the basket's cost, and compute the index.
  - b. Choose a base year, find the prices, fix the basket, compute the basket's cost, and compute the index.
  - c. Fix the basket, find the prices, compute the basket's cost, choose a base year and compute the index.
  - d. Fix the basket, find the prices, compute the inflation rate, choose a base year and compute the index.

5. In the country of Hyrkania, the CPI in 2000 was 120 and the CPI in 2001 was 132. Jake, a resident of Hyrkania, borrowed money in 2000 and repaid the loan in 2001. If the nominal interest rate on the loan was 12 percent, then the real interest rate was
- 12 percent.
  - 10 percent.
  - 2 percent.
  - impossible to determine without knowing the base year for the CPI.
6. The inflation rate is calculated
- using the national income accounts.
  - by adding up the price increases of all goods and services.
  - by computing a simple average of the price increases for all goods and services.
  - by determining the percentage increase in the price index from the preceding period
7. In a particular economy, the price index was 270 in 2005 and it was 300 in 2006 . Which of the following statements is correct?
- The economy experienced a rising price level between 2005 and 2006.
  - The economy experienced a higher inflation rate between 2005 and 2006 than it had experienced between 2004 and 2005.
  - The inflation rate between 2005 and 2006 was 30 percent.
  - All of the above are correct
8. Suppose the nominal interest rate is 6 percent and the expected inflation rate is 4 percent.
- The dollar value of savings increases by 10 percent and the value of savings measured in goods is expected to increase by 6 percent
  - The dollar value of savings increases by 10 percent and the value of savings measured in goods is expected to increase by 4 percent
  - The dollar value of savings increases by 6 percent and the value of savings in goods is expected to increase by 4 percent
  - The dollar value of savings increases by 6 percent and the value of savings in goods is expected to increase by 2 percent

9. Ms. Smith borrowed \$1,000 from her bank for one year at an interest rate of 10 percent. During that year the price level went up by 15 percent. Which of the following statements is correct?
- Ms. Smith will repay the bank fewer dollars than she initially borrowed.
  - Ms. Smith's repayment will give the bank less purchasing power than it originally loaned her.
  - Ms. Smith's repayment will give the bank greater purchasing power than it originally loaned her.
  - Ms. Smith's repayment will give the bank the same purchasing power that it originally loaned her.
10. An increase in the price of domestically-produced industrial robots will be reflected in
- both the GDP deflator and the consumer price index.
  - neither the GDP deflator nor the consumer price index.
  - the GDP deflator but not in the consumer price index.
  - the consumer price index but not in the GDP deflator.

**Table 24-1**

Year	Peaches	Pecans
2005	\$11 per bushel	\$6 per bushel
2006	\$9 per bushel	\$10 per bushel

11. **Refer to Table 24-1.** Suppose the typical consumer basket consists of 10 bushels of peaches and 15 bushels of pecans. Using 2005 as the base year, the CPI for 2006 is
- 100.
  - 120.
  - 200.
  - 240.
12. **Refer to Table 24-1.** Suppose the typical consumer basket consists of 10 bushels of peaches and 15 bushels of pecans. Using 2005 as the base year, what was the inflation rate in 2006?
- 20 percent
  - 16.7 percent
  - 10 percent
  - 8 percent

**II. CALCULATIONS AND EXPLANATIONS. Compute the numbers and provide explanations when necessary.**

13. In a simple economy, people consume only 3 goods, pizza, water and clothing. The market basket of goods used to compute the CPI has 50 units of pizza, 80 units of water and 20 units of clothing for both years. Year 2002 is used as base year.

	Pizza	Clothing	Water
2002 price	\$4	\$10	\$2
2003 price	\$6	\$20	\$3
2004 price	\$5	\$30	\$5

- a. What are the percentage increases in the price of pizza, clothing, and water in year 2003 compared to year 2002?
  - b. Do these price changes affect all consumers to the same extent? Explain.
  - c. What is the inflation rate in 2004 from year 2003.
14. Compute how much each of the following items is worth in terms of today's dollars using 177 as the price index for today.
- a. In 1926 the CPI was 17.7 and the price of a movie ticket was \$0.25.
  - b. In 1932 the CPI was 13.1 and a cook earned \$15.00 a week.
  - c. In 1943 the CPI was 17.4 and a gallon of gas cost \$0.19.
15. Jay and Joyce meet George, the banker, to work out the details of a mortgage. They all expect that inflation will be 2 percent over the term of the loan, and they agree on a nominal interest rate of 6 percent. As it turns out, the inflation rate is 5 percent over the term of the loan.
- a. What was the expected real interest rate?
  - b. What was the actual real interest rate?
  - c. Who benefited and who lost because of the unexpected inflation?

**III. SHORT ESSAYS. Answer the following questions briefly but concisely.**

15. List the three major problems in using the CPI as a measure of the cost of living. Please provide examples or explanations to support your arguments.