**Chapter 8 INFLATION ANSWERS**

**1. What is the consumer price index (CPI)?**

* 1. The CPI is the measure of consumer prices in both rural and urban areas. It is calculated by adding up all prices.
  2. **The CPI is a measure of the price level based on the consumption patterns of a typical consumer.**
  3. The CPI is a measure of all prices in the economy.
  4. The CPI is a measure of food prices because food is what is consumed.
  5. The CPI is a measure of food, clothing, and housing prices.

**2. Typically, the largest percentage category in the consumer price index (CPI) is**

* 1. transportation.
  2. education.
  3. food and beverages.
  4. **housing.**
  5. medical care.

**3. What is the difference between the consumer price index (CPI) and the gross domestic product (GDP) deflator?**

* 1. Under normal circumstances, the CPI is the better measure of the overall price level.
  2. If inflation is high, the CPI is the better measure of the overall price level; if inflation is low or deflation is occurring, the GDP deflator is the better measure.
  3. The GDP deflator is used only during periods of deflation; the rest of the time we use the CPI to measure the overall price level.
  4. **If we want to examine how price changes affect the overall economy, the GDP deflator is the better measure.**
  5. The CPI must be equal to the GDP deflator because of the “equation of consumer homogeneity.”

**4. Suppose a basket of goods and services has been selected to calculate the consumer price index (CPI) and 2012 has been chosen as the base year. In 2012, the basket’s cost was $150; in 2014, the basket’s cost was $160; and in 2016, the basket’s cost was $175. The value of the CPI in 2012 was \_\_\_\_\_\_\_\_.**

* 1. 10.0
  2. 67.7
  3. **100.0**
  4. 110.0
  5. 166.7

**5. A country’s consumer price index (CPI) was 175 last year, and this year it is 185. Which statement is correct?**

* 1. **Inflation was 5.7% this year.**
  2. Inflation was 10.0% this year.
  3. Inflation was 15.7% this year.
  4. Deflation was 5.7% this year.
  5. Deflation was 10.0% this year.

**6. A country’s consumer price index (CPI) was 210 last year, and this year it is 196. Which statement is correct?**

* 1. Inflation was 6.7% this year.
  2. Inflation was 14% this year.
  3. Inflation was 16.7% this year.
  4. **Deflation was 6.7% this year.**
  5. Deflation was 14% this year.

**7. Suppose that the consumer price index (CPI) of a country was 140 in 2017 and 147 in 2018. What was the country’s inflation rate during 2018?**

* 1. 3%
  2. **5%**
  3. 7%
  4. 12%
  5. 15%

**8. You know that the consumer price index (CPI) at the beginning of this year was 200 and the rate of inflation was 12.5%; this would mean the CPI at the end of the year was \_\_\_\_\_\_\_\_.**

* 1. 150
  2. 175
  3. **225**
  4. 250
  5. 275

**9. The consumer price index (CPI) in Country A rises from 170 to 180 during a particular year. In the same year, the consumer price index in Country B rises from 240 to 250. This means**

* 1. the inflation rate in both countries is 10%.
  2. the deflation rate in both countries is 10%.
  3. the inflation rate in Country A is 5%, and the inflation rate in Country B is 10%.
  4. **the inflation rate in Country A is 5.9%, and the inflation rate in Country B is 4.2%.**
  5. the inflation rate in Country A is 10%, and the inflation rate in Country B is 5%.

***Refer to the following table to answer the next four questions.***

|  |  |
| --- | --- |
| **Year** | CPI |
| 2012 | 185 |
| 2013 | 192 |
| 2014 | 187 |
| 2015 | 202 |
| 2016 | 216 |
| 2017 | 210 |
|  |  |

**10. The rate of inflation from 2012 to 2013 was about \_\_\_\_\_\_\_\_.**

* 1. **3.8%**
  2. 5.2%
  3. 7.0%
  4. 9.6%
  5. 12.3%

**11. The rate of inflation from 2014 to 2015 was about \_\_\_\_\_\_\_\_.**

* 1. –5.0%
  2. 2.8%
  3. 5.5%
  4. **8.0%**
  5. 15.0%

**12. The rate of inflation from 2013 to 2014 was about \_\_\_\_\_\_\_\_.**

* 1. –5.0%
  2. **–2.6%**
  3. 3.2%
  4. 5.5%
  5. 7.1%

**13. The rate of inflation from 2015 to 2016 was about \_\_\_\_\_\_\_\_.**

* 1. –3.5%
  2. 2.7%
  3. **6.9%**
  4. 11.1%
  5. 14.0%

**14. To convert the price of a good from an earlier year to today’s price, multiply the price in the earlier year by**

* 1. the consumer price index (CPI) today.
  2. the inflation rate today.
  3. **the ratio of the CPI today to the CPI in the earlier year.**
  4. the ratio of the CPI in the earlier year to the CPI today.
  5. the ratio of the inflation rate today to the inflation rate in the earlier year.

**15. The price of a McDonald’s hamburger was $0.15 in 1955 when the consumer price index (CPI) was 26.8 and $1.00 in 2018 when the CPI was 251.1. We could accurately say that**

* 1. **the price of a hamburger has increased less rapidly than inflation**
  2. the price of a hamburger has increased more rapidly than inflation.
  3. the price of a hamburger has increased at the same rate as inflation.

**16. The price of a Hershey’s chocolate bar was $0.05 in 1921 when the consumer price index (CPI) was 18 and $0.83 in 2018 when the CPI was 251.1. We could accurately say that**

* 1. the price of a chocolate bar has increased less rapidly than inflation
  2. **the price of a chocolate bar has increased more rapidly than inflation.**
  3. the price of a chocolate bar has increased at the same rate as inflation.

**17. In 1940, you could buy a Pepsi for $0.05. The consumer price index (CPI) in 1940 was 14.0, and the 2018 CPI was 251.1, so the inflation-adjusted price of a Pepsi is \_\_\_\_\_\_\_\_.**

* 1. $0.05
  2. **$0.90**
  3. $1.05
  4. $1.99
  5. $2.90

**18. Tuition at a large university cost $10,000 per semester in 2004 and $12,000 in 2012. If the consumer price index (CPI) was 184 in 2004 and 226 in 2012, then we could say tuition has**

* 1. increased at exactly the same rate as inflation.
  2. decreased.
  3. remained constant.
  4. increased more rapidly than inflation.
  5. **increased more slowly than inflation.**

**19. Three accuracy problems with the consumer price index (CPI) are**

* 1. the income effect, substitution effect, and money illusion.
  2. substitution, quality changes, and the money illusion.
  3. price confusion, substitution, and quality changes.
  4. **substitution, quality changes, and the availability of new goods and services.**
  5. the availability of new goods and services, substitution, and traditional bundle bias.

**20. Suppose a new electronics product is invented and this new product becomes cheaper over time. This lower cost can be problematic because**

* 1. the consumer price index (CPI) will include this new product immediately if it is a consumer good, but as a consumer good, it will not be included in the gross domestic product (GDP) deflator.
  2. the percentage change in the CPI will be distorted, but the change in the gross domestic product deflator will not be, regardless of whether the product is a consumer good or a producer good.
  3. **it is impossible that the CPI will include this new product immediately, even if it is a consumer good.**
  4. money illusion will cause consumers to buy more of this good than the CPI would otherwise reflect.
  5. this good might be produced in a geographic location that is not included in the CPI.

**21. If inflation occurs in a country, we know that**

* 1. both real and nominal wages are rising.
  2. both real and nominal wages are falling.
  3. both real and nominal wages remain constant.
  4. holding nominal wages constant, the real wage would rise.
  5. **holding nominal wages constant, the real wage would fall.**

**22. If your nominal wage rises and you think that it automatically means your real wage has risen, then you are experiencing**

* 1. shoe-leather costs.
  2. **money illusion.**
  3. menu costs.
  4. hyperinflation.
  5. price confusion.

**23. In Dallas, the cost of living index is 91.9, and in San Francisco, it is 164.0. You currently work in Dallas and your salary is $60,000. You are offered a promotion and pay raise to $75,000 to move to San Francisco. If you take the promotion**

* 1. your nominal wage and your real wage have increased.
  2. **your nominal wage increased but your real wage has decreased.**
  3. your nominal wage decreased but your real wage has increased.
  4. both your nominal and real wages have decreased.
  5. your real wage remained constant even though your nominal wage rose.

**24. You are offered two jobs, one in Kansas City paying $60,000 and one in New York City paying $60,000. Suppose the consumer price index (CPI) in 107.2 in Kansas City, and 220.1 in New York City. If real wages are the only consideration, then you would**

* 1. be indifferent between the two jobs because the real wages are exactly the same.
  2. take the job in New York City because the real wage is higher there.
  3. take the job in New York City because the nominal wage is higher there.
  4. **take the job in Kansas City because the real wage is higher there.**
  5. take the job in Kansas City because the nominal wage is higher there.

**25. Your nominal wage increases by 10%, and the overall price level increases by 12%. If you feel richer, you are experiencing**

* 1. wealth redistribution.
  2. price confusion.
  3. deflation.
  4. the substitution effect.
  5. **money illusion.**

**26. Deflation**

* 1. automatically implies that, on average, everyone is better off because prices have fallen.
  2. is the same as disinflation; it means the rate of inflation has fallen.
  3. **will make you better off if your nominal wages fall more slowly than prices.**
  4. will make you better off if your nominal wages fall more rapidly than prices.
  5. will make you better off if your real wages fall more rapidly than prices.

**27. Inflation affects the real value of future dollars and can therefore make signing long-term wage and loan agreements seem risky. This illustrates the issue of**

* 1. money illusion.
  2. menu costs.
  3. shoe-leather costs.
  4. wealth redistribution.
  5. **future price uncertainty.**

**28. You have to pay costs for your business now, but you also have to enter into contracts to pay wages and supply costs in the future. If inflation occurs, the best term for the problem that arises in this case is**

* 1. price confusion.
  2. **future price uncertainty.**
  3. money illusion.
  4. shoe-leather costs.
  5. menu costs.

**29. Wages are often tied to expected rates of inflation; thus, one reason why inflation is important is that**

* 1. when wages rise faster than inflation, companies lose money.
  2. when wages rise slower than inflation, workers suffer but corporate profits increase.
  3. **inflation creates uncertainty about costs and prices, which affects both employees and employers.**
  4. all inflation will eventually lead to hyperinflation, political instability, and war.
  5. menu costs mean restaurants have to print new menus, which is costly and unpleasant.

**30. A small business increases output in response to rising prices. The business mistakenly assumed the rising prices were the result of demand increases, when, in fact, it was the result of inflation. This is an example of the \_\_\_\_\_\_\_\_ problem.**

* 1. money illusion
  2. wealth redistribution
  3. menu cost
  4. tax distortion
  5. **price confusion**

**31.Your firm expands its output in a time when demand appears to be increasing. Demand for all goods is increasing because of inflation, and consumers want to buy all goods faster because their real purchasing power is falling due to inflation. This situation could indicate that your firm is experiencing**

* 1. future price uncertainty.
  2. menu costs.
  3. money illusion.
  4. deflation.
  5. **a price confusion problem.**

**32. If a bank expects inflation to increase in the near future, how will it respond?**

* 1. It will start paying lower interest on deposits.
  2. It will seek to reduce the amount of cash held in its vaults.
  3. It will temporarily scale back its efforts to gain new customers.
  4. **It will start charging more interest on loans.**
  5. It will temporarily suspend withdrawals.

**33. If inflation is estimated by an index, like the consumer price index (CPI) to be higher than it actually is, who is likely to be hurt by the error?**

* 1. **corporations that adjust worker salaries to keep pace with inflation**
  2. workers whose negotiated union wages include an inflation adjustment
  3. people whose Social Security incomes are adjusted for inflation
  4. consumers who pay a fixed percentage of purchases as sales tax
  5. entrepreneurs who borrow from banks at a fixed rate of interest

**34. The equation of exchange summarizes the long-run relationship between**

* 1. inflation and unemployment.
  2. real gross domestic product (GDP) and the price level.
  3. inputs and outputs.
  4. **the price level and the quantity of money.**
  5. the quantity of money and nominal GDP.

**35. When employers adjust wages for inflation, they generally use the consumer price index (CPI). If the CPI understates inflation,**

* 1. employers will be hurt because they will pay higher wages than they should.
  2. employers will be hurt because they will pay lower wages than they should.
  3. **workers will be hurt because their wages will not increase as much as they should.**
  4. workers will be hurt because their wages will increase by more than they should.
  5. neither workers nor employers will be affected.

**36. Suppose the price of gas increases by 5%, and wages and other prices also increase by 5%. \_\_\_\_\_\_\_\_ is occurring if people mistakenly conclude that gas has become more expensive.**

* 1. Wealth redistribution
  2. Price confusion
  3. **Money illusion**
  4. A tax distortion
  5. Deflation

**37. Signs at gas stations are designed to be able to quickly and easily change the posted price of gas. This helps reduce the \_\_\_\_\_\_\_\_ costs of inflation.**

* 1. **menu**
  2. price confusion
  3. shoe-leather
  4. money illusion
  5. substitution

**38. Suppose the quantity of money increases by 5%, the velocity of money is constant, and inflation is 2%. Based on the equation of exchange, by how much does the real gross domestic product (GDP) change?**

* 1. –3%
  2. 1%
  3. **3%**
  4. 5%
  5. 7%

**39. Leonora buys only Hot Pockets during a particular year. During this year, the price of all goods falls by 2.4% on average, but the price of Hot Pockets remains the same. Which statement is correct?**

* 1. Leonora benefits from inflation.
  2. Leonora is negatively impacted by inflation.
  3. Leonora benefits from deflation.
  4. Leonora is negatively impacted by deflation.
  5. **Leonora is not impacted by inflation or deflation.**

**40. Membership at an exclusive country club cost $3,000 per year in 2014 and $3,100 in 2018. If the consumer price index (CPI) was 236.7 in 2014 and 251.1 in 2018, we could say the cost of membership has**

* 1. increased at exactly the same rate as inflation.
  2. decreased.
  3. **increased more slowly than inflation.**
  4. increased more rapidly than inflation.
  5. remained constant.

**41. Membership at a private tennis club cost $1,000 per year in 2015 and $1,100 in 2018. If the consumer price index (CPI) was 237.0 in 2015 and 251.1 in 2018, we could say the cost of membership has**

* 1. increased more slowly than inflation.
  2. **increased more rapidly than inflation.**
  3. increased at exactly the same rate as inflation.
  4. decreased.
  5. remained constant.

**42. Suppose the quantity of money increases by 5%, the velocity of money is constant, and inflation is –2%. Based on the equation of exchange, by how much does the real gross domestic product (GDP) change?**

* 1. –3%
  2. 1%
  3. 3%
  4. 5%
  5. **7%**

**43. As a result of COVID-19, prices unexpectedly fell, and the inflation rate was well below average. This unexpected decrease in prices**

* 1. helps both lenders and borrowers.
  2. **helps lenders but harms borrowers.**
  3. has no effect on lenders or borrowers.
  4. harms both lenders and borrowers.
  5. harms lenders but helps borrowers.

**44. Consider a simple economy that produces only three products: mobile phones, smart watches, and earphones. Use the information in the following table to calculate the inflation rate for 2021, as measured by the consumer price index.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Product** | **Quantity** | **Base Year**  **Price (2009)** | **Price (2020)** | **Price (2021)** |
| Mobile Phones | 5 | $1.00 | $2.50 | $2.75 |
| Smart Watches | 10 | $5.00 | $8.00 | $8.75 |
| Earphones | 12 | $2.00 | $5.00 | $5.50 |

**Answer**:

Total expenditures for 2009 = (5 × $1.00) + (10 × $5.00) + (12 × $2.00) = $79.00.

Total expenditures for 2020 = (5 × $2.50) + (10 × $8.00) + (12 × $5.00) = $152.50.

Total expenditures for 2021 = (5 × $2.75) + (10 × $8.75) + (12 × $5.50) = $167.25.

The CPI for 2020 = [($152.50/$79.00) × 100] = 193.04.

The CPI for 2021 = [($167.25/$79.00) × 100] = 211.71.

So, the inflation rate for 2021 = [((211.71 – 193.04)/193.04) × 100)] = 9.67%.

**45. Explain why in industry it is important for both employers and workers to have an accurate measure of inflation.**

**Answer:** Employers set salaries based on what they have paid workers in the past while taking inflation into account. Estimating inflation higher than it actually is will lead to employers paying workers more than they need to, whereas workers will suffer if the employer estimate is off on the low side. Inflation measures like the consumer product index become particularly important when employers and union representatives negotiate the union workers’ contracts: the union side wants to make sure inflation over the term of the contract is not estimated lower than it should be, whereas the employer side wants to make sure inflation is not estimated higher than it should be.

**46. There are three reasons why the consumer price index (CPI) overstates inflation. List the reasons and explain each one.**

**Answer:**

Substitution: Consumers do not buy the same combination of goods every year; their purchases change as relative prices change. Because the CPI is based on a fixed market basket, the CPI overstates inflation by assuming that consumers buy the same amount of a good (e.g., chicken) when its price increases even though it is likely that consumers would substitute away from chicken.

Quality changes: The price of a good might partially reflect a better quality of the good in question, but the CPI assumes that goods are identical from year to year. The current CPI does make some adjustment for this, but the adjustment might not be sufficient.

Availability of new goods, services, and locations: New goods often are not immediately included in the CPI, and frequently the prices of new goods fall in the years after their introduction. This price change was not measured in the original or traditional CPI, but it is now at least partially measured in the chained CPI.

**47. What are so-called shoe-leather costs associated with inflation? Explain and give examples.**

**Answer**: Shoe-leather costs consist of all the ways in which people go to extra trouble as a result of inflation. When prices are stable, people are content to hold cash for a few days or weeks and spend it when it is convenient to do so. But when prices are rising rapidly, cash devalues rapidly. So people leave the cash in the bank as much as possible (where it earns a high rate of interest), make frequent trips to withdraw cash as needed, and spend that cash as fast as they can. The extra trips to the bank and to stores cost people time and also generate transportation expenses.

**48. Why would knowing the cost of living index be important in real life?**

**(*Hint:* Consider the following scenario. You get two job offers: one in San Francisco paying $80,000 per year and the other in Dallas paying $68,000 per year. Assume the CPI in San Francisco is 164.0 and 91.9 in Dallas).**

**Answer:** The cost of living index will help you determine your real wage in each city. Despite a higher nominal wage in San Francisco, the real wage there might be less because of the higher cost of living. In fact, based on the numbers in your book, your real wage in San Francisco would be about $48,780 ($80,000/1.640), whereas in Dallas it would be about $73,993 ($68,000/0.919).

**49. What is the underlying concept behind the price confusion problem?**

**Answer:** During a time of inflation, people spend money rapidly because, once one has possession of a good, its real value doesn’t decrease. If you hold money, its real value falls in the face of inflation. This rapid consumer spending causes a problem for producers because they are uncertain whether the increased demand for their goods is due to inflation (if so, they should not expand facilities) or due to relative preference changes (if so, they should expand facilities). The greater price they are able to command for their product may or may not be due to inflation; thus, the “signal” of the higher price must be correctly extracted or interpreted to determine whether the higher price or demand is due to inflation or to an actual preference change by consumers.

**50. A basket of goods and services costs $200 in 2017 and $225 in 2018. Using 2017 as the base year, calculate the consumer price index (CPI) for 2017 and for 2018.**

**Answer:**

CPI = (basket price ÷ basket price in base year) × 100

CPI 2017 = ($200 ÷ $200) × 100 = 100

CPI 2018 = ($225 ÷ $200) × 100 = 112.5

**51. The average price of a new car in 1960 was about $2,750. The consumer price index (CPI) was about 30 in 1960 and 256 today. Convert the 1960 car price into the price in today’s dollars. Explain what this number tells us.**

**Answer**: Price in today’s dollars = $2,750 × (256 ÷ 30) = $23,466.67. This tells us that paying $2,750 for a car in 1960 is equivalent to paying $23,466.67 today.