

## Answer Key for the homework due on March 2<sup>nd</sup> – Selected Questions

pp. 225 – 226

#6

The value of the house is not included in GDP of 2006 because the house was constructed in 2000. On the other hand, the services of the real estate agent that helped sell or buy the house was provided in 2006, so its value would be included in GDP of 2006.

#7

Nominal GDP =  $(\$60 \times 100) + (\$2 \times 100) + (\$25 \times 50) = \$7,450$

Cotton is an intermediate good in the production of shirts, so it is not included.

#8

a. Real GDP for 2006 =  $(\$50 \times 100) + (\$2 \times 100) + (\$30 \times 50) = \$6,700$

Real GDP for 2007 =  $(\$50 \times 100) + (\$2 \times 120) + (\$30 \times 65) = \$7,190$

b. Growth rate of Real GDP in 2007 =  $(\$7,190 - \$6,700) / \$6,700 = 7.31\%$

#20

	<i>Nominal GDP</i>	<i>Real GDP</i>	<i>GDP deflator</i>	<i>% Change in GDP deflator</i>
2000	\$9,817	\$9,817	100	---
2001	\$10,128	\$9,891	102.4	2.4%
2002	\$10,470	\$10,049	104.2	1.76%
2003	\$10,971	\$10,321	106.3	2.02%
2004	\$11,734	\$10,756	109.09	2.62%

The largest percentage increase in the GDP deflator occurred in 2004 (2.62%).

pp. 257 – 259

#1

Unemployment rate =  $\text{Unemployed} / \text{Labor Force} = \text{Unemployed} / (\text{Employed} + \text{Unemployed})$

$\Rightarrow 0.04 = \text{Unemployed} / (136,891,000 + \text{Unemployed})$

$\Rightarrow \text{Unemployed} = 5,703,792$

Labor Force =  $\text{Employed} + \text{Unemployed} = 136,891,000 + 5,703,792 = 142,594,792$

Labor Force participation rate =  $\text{Labor Force} / \text{Working-age population}$

$\Rightarrow 0.671 = 142,594,792 / \text{Working-age population}$

$\Rightarrow \text{Working-age population} = 212,510,867$

#15

For the United States, the real minimum wage is:

$$1956: (\$1.00/27)*100 = \$3.70$$

$$2004: (\$5.15/189)*100 = \$2.72$$

$$\text{The percentage change in real minimum wage is: } (\$2.72 - \$3.70)/\$3.70 = -26.49\%$$

For France, the real minimum wage is:

$$1956: (\text{€}0.19/10)*100 = \text{€}1.90$$

$$2004: (\text{€}7.61/110)*100 = \text{€}6.92$$

$$\text{The percentage change in real minimum wage is: } (\text{€}6.92 - \text{€}1.90)/\text{€}1.90 = 264.21\%$$

The percentage increase in the price level is  $(189 - 27)/27 = 600\%$  for the United States and  $(189 - 27)/27 = 1,000\%$  for France.

#16

$$1929: \text{Real GDP} = (\$103.6/11.9)*100 = \$870.59$$

$$1933: \text{Real GDP} = (\$56.4/8.9)*100 = \$633.71$$

$$\text{Percentage change in Real GDP} = (\$633.71 - \$870.59)/\$870.59 = -27.21\%$$

#17

$$\text{Quantity*Price}(1999) = \$10*2 + \$2*10 + \$15*6 = \$130$$

$$\text{Quantity*Price}(2005) = \$11*2 + \$2.45*10 + \$15*6 = \$136.5$$

$$\text{Quantity*Price}(2006) = \$16.20*2 + \$2.4*10 + \$14*6 = \$140.4$$

$$\text{CPI}(2005) = (136.5/130)*100 = 105$$

$$\text{CPI}(2006) = (140.4/130)*100 = 108$$

$$\text{Inflation rate}(2006) = (108 - 105)/105 = 2.86\%$$