**Problem Set II Name & Section:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Note: Academic researchers have shown the strong link between writing information by hand and memory retention.* *I strongly advise students to complete this by hand. Please take the time to make sure your writing is legible.*

**1. Macro Economy & GDP**

A) Define (in your own words, please do not use the book, or other online resources) and give a strong, unique, example for the following terms. Answers will be checked for originality.

**Gross Domestic Product**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**GDP Deflator:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Real vs Nominal:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Labor Force:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Inflation:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Unemployment:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B) For each, indicate if it makes US GDP go up, go down, or stay the same:

|  |  |  |  |
| --- | --- | --- | --- |
|  | up | down | same |
| A US firm sells a new car to a foreign buyer |  |  |  |
| The government buys a new aircraft carrier |  |  |  |
| A US firm contracts an Indian firm to handle their telephone customer support |  |  |  |
| A father stays home to care for his child |  |  |  |
| A parent hires a nanny to care for their child |  |  |  |
| A ton of apples are imported and consumed |  |  |  |
| A ton of toys are produced and are put in a warehouse awaiting sale |  |  |  |
| A homeowner rents out a house they had previously occupied to go sail around the world |  |  |  |
| A new home is produced but not yet sold |  |  |  |
| US consumers import more illegal drugs from foreign countries |  |  |  |

Suppose these were all the economic activities in a small country last year.

1) For each, indicate the **dollar value** that each contributes to each component of GDP. If an item does not contribute to GDP, write “none”:

 **C I G NX**

1. Households buy $400 worth of apples. \_\_\_ \_\_\_ \_\_\_ \_\_\_
2. Firms sell $300 of lemons to foreigners. \_\_\_ \_\_\_ \_\_\_ \_\_\_
3. Firms build $900 worth of new houses. \_\_\_ \_\_\_ \_\_\_ \_\_\_
4. Firms buy $200 of corn from abroad and

sell it to households. \_\_\_ \_\_\_ \_\_\_ \_\_\_

1. Firms produce $800 of wheat, sell $500 to

households, $300 to foreigners. \_\_\_ \_\_\_ \_\_\_ \_\_\_

1. The government spends $500 on teachers

and $200 to build a school. \_\_\_ \_\_\_ \_\_\_ \_\_\_

1. Firms produce $600 of computers, sell $400

to households and store $200 for next year. \_\_\_ \_\_\_ \_\_\_ \_\_\_

1. Firms use $200 of flour to make $600 of bread

that is sold to households. \_\_\_ \_\_\_ \_\_\_ \_\_\_

1. Parents provide $1000 worth of babysitting

for their own children. \_\_\_ \_\_\_ \_\_\_ \_\_\_

1. The government builds a dam for $1000. \_\_\_ \_\_\_ \_\_\_ \_\_\_
2. Accountants provide $500 of services for firms. \_\_\_ \_\_\_ \_\_\_ \_\_\_
3. Firms buy $200 of olives from abroad and sell

$500 of olive oil to households. \_\_\_ \_\_\_ \_\_\_ \_\_\_

1. Children sell $100 of cookies on the roadside. \_\_\_ \_\_\_ \_\_\_ \_\_\_

2) What was total consumption in the economy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) What was total investment in the economy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) What was total government purchases in the economy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) What was total net exports in the economy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6) What was total GDP in the economy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2. Unemployment**

Suppose the following is a complete description of the adult population of the economy:

* 1. \_\_\_ 10 are retired,
	2. \_\_\_ 5 people are in the military,
	3. \_\_\_ 5 people are in prison,
	4. \_\_\_ 15 people are stay-at-home parents,
	5. \_\_\_ 5 are students that work part time,
	6. \_\_\_ 5 are students that do not work,
	7. \_\_\_ 15 work in 1 part time job,
	8. \_\_\_ 5 work in 2 part time jobs,
	9. \_\_\_ 20 work full time in 1 job,
	10. \_\_\_ 5 work 1 full time job and 1 part time job,
	11. \_\_\_ 5 have no job and are applying for jobs,
	12. \_\_\_ 5 have a job, and are applying for a second job
1. In the blanks above, write “E” for employed or “U” for unemployed for each group. If they are neither, write “N”.
2. How many are counted as employed? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. How many are counted as unemployed? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What is the unemployment rate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What is the labor force participation rate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. How is the unemployment rate affected by each of the following?
	1. Some of the people looking for work give up looking. \_\_\_\_\_\_\_\_\_\_\_
	2. Some of the full-time workers are reduced to part time work. \_\_\_\_\_\_\_\_\_\_\_
	3. Some of the workers who work 2 jobs lose one of them. \_\_\_\_\_\_\_\_\_\_\_
	4. Some people who work full time decide to retire. \_\_\_\_\_\_\_\_\_\_\_

**3. Inflation**

1. What is the difference between real and nominal GDP? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Suppose the base year is 2005, and the only goods in the economy are apples and bananas. In 2005 both apples and bananas cost $1, and 100 apples and 100 bananas are produced. In 2006, apples cost $20 and bananas cost $5, and 50 apples and 200 bananas are produced.
	1. What is nominal GDP in 2005? \_\_\_\_\_\_\_ In 2006? \_\_\_\_\_\_\_
	2. What is real GDP in 2005? \_\_\_\_\_\_\_ In 2006? \_\_\_\_\_\_\_
	3. What is the GDP deflator in 2005? \_\_\_\_\_\_\_ In 2006? \_\_\_\_\_\_\_
	4. Suppose the fixed basket of goods is 1 apple and 2 bananas.
	5. What is the level of the CPI in 2005? \_\_\_\_\_\_\_ In 2006? \_\_\_\_\_\_\_
	6. What is the CPI inflation rate from 2005 to 2006? \_\_\_\_\_\_\_
2. What are the three effects that bias the measurement of CPI?
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Which of the three effects listed in part c does each of the following illustrate?
	1. US households in 2010 spent a larger fraction of their income on televisions than they did in 1950. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. All televisions available in 2010 had higher resolution than any televisions available in 1950. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. In 1950, no US household had a plasma screen television, but in 2010 they are widely available. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Suppose the average television purchased in 1950 cost $200, and the average television purchased today costs $700.
	1. What is the percentage change in the average television price? \_\_\_\_\_\_\_
	2. Taking into account the effects in part c, is this percentage increase likely an underestimate or overestimate of the true change in the cost of televisions? **\_\_\_\_\_\_\_\_\_\_\_\_**
	3. Why? **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Suppose CPI is as follows in each year:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year: | 2007 | 2008 | 2009 | 2010 |
| CPI: | 100 | 99 | 125 | 140 |

Suppose in the year 2007 you are considering a job offer that pays $50,000 in 2007, plus a 10% (compounding) raise in each of the next three years.

1. What *nominal* salary will you make in each year?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year: | 2007 | 2008 | 2009 | 2010 |
| Nominal Salary |  |  |  |  |

1. What will your real salary be in each year, using a 2007 base year?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year: | 2007 | 2008 | 2009 | 2010 |
| Salary in 2007$ |  |  |  |  |

1. What will your real salary be in each year, using a 2009 base year?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year: | 2007 | 2008 | 2009 | 2010 |
| Salary in 2010$ |  |  |  |  |

1. In what year was your real salary highest? **\_\_\_\_\_\_\_\_\_**
2. Does your answer to 4 depend on the base year selected? **\_\_\_\_\_\_\_\_\_**
3. Suppose instead your contract gave you $50,000 in 2007, plus a cost of living adjustment equal to the percentage change in CPI. Compute the nominal wage in each year.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year: | 2007 | 2008 | 2009 | 2010 |
| Nominal Salary |  |  |  |  |

1. In what years is this contract better than the original one? **\_\_\_\_\_\_\_\_\_**

**4. Aggregate Supply & Demand**

1. Suppose a temporary tax cut increases aggregate demand. Suppose the economy is initially in a long run steady state. In the space below, show how output and prices are affected in the short run and the long run.

 Prices Output

Short Run: \_\_\_\_\_ \_\_\_\_\_

Long Run: \_\_\_\_\_ \_\_\_\_\_

1. A temporary oil price decrease causes an increase in short run aggregate supply. Suppose the economy is initially in a long run steady state. In the space below, show how output and prices are affected in the short run and the long run.

 Prices Output

Short Run: \_\_\_\_\_ \_\_\_\_\_

Long Run: \_\_\_\_\_ \_\_\_\_\_

1. An increase in female labor force participation causes an increase in short run and long run aggregate supply. Suppose the economy is initially in a long run steady state. In the space below, show how output and prices are affected in the short run and the long run.

 Prices Output

Short Run: \_\_\_\_\_ \_\_\_\_\_

Long Run: \_\_\_\_\_ \_\_\_\_\_

1. Suppose a change in international strategic priorities reduces military spending and permanently reduces aggregate demand. Suppose the economy is initially in a long run steady state. In the space below, show how output and prices are affected in the short run and the long run.

 Prices Output

Short Run: \_\_\_\_\_ \_\_\_\_\_

Long Run: \_\_\_\_\_ \_\_\_\_\_

**5. Classical Economics**

Please watch the following video: http://www.youtube.com/watch?v=SWVoPrntBso

1. What is a “bank run”? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What role does consumer psychology play in bank runs? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What happened to the quantity of money in the aftermath of the Great Depression?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Why do runs on banks reduce the quantity of money? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. According to John Maynard Keynes, what should the government do if private spending is insufficient to maintain full employment? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What does Friedman believe to be a fundamental weakness in the leadership system of the Federal Reserve (during the discussion with Von Hoffman about Keynes and Strong)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Why does Friedman believe that the US government has taken such an active role in the economy in the post-World War II era? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_