

## Answer Key to Midterm Exam #1

### 1. Multiple Choice:

- 1) D
- 2) B
- 3) D
- 4) D
- 5) C
- 6) D
- 7) A
- 8) D
- 9) A
- 10) B
- 11) C
- 12) C
- 13) B
- 14) B
- 15) B
- 16) D
- 17) A
- 18) B
- 19) C
- 20) A
- 21) A
- 22) A
- 23) A
- 24) B
- 25) A
- 26) C

**If you have questions regarding these questions please contact me.**

### 2. Bonus Multiple Choice:

27) Answer: E

**Explanation:** Each of the items listed here contributes to an increase in GDP, even though increases from these sources do not represent improvements in standards of living. In each case, the increases are associated with other changes that are not recorded as part of GDP and lower society's standards of living.

For example, if a hurricane hits Florida and power company workers work overtime to replace downed power lines, their extra work is added to GDP for this year. However, society as a whole is not better off because this work only returns the community to the position that it was in before the hurricane hit. The problem here is that GDP includes the increase in output associated with the overtime work, but the loss caused by the hurricane is not subtracted from GDP.

If the burglary rate rises, increasing the demand for burglar alarms, workers at alarm manufacturers will put in extra hours to meet the demand. Thus, GDP will be higher, but people will not be better off. We measure the additional output from the workers but do not measure the loss associated with the increased

level of crime.

Likewise, GDP includes the additional spending associated with caring for individuals suffering from health problems due to smoking. However, the losses to society resulting from smoking are not subtracted from GDP.

If the threat of war forces the government to spend more on the development of nuclear weapons, GDP goes up, but our overall standard of living may go down. This is because there is a key component to our standard of living that we do not measure--external threats to our national security. We would be better off with no threat of war and no bombs than with the threat of war and bombs.

28) Answer: B

**Explanation:** The government only includes the value of goods and services produced and sold through markets. Legal gambling is regarded as a service with a market value. Non-market activity is not included in GDP, even if it produces a valuable final good or service. The primary reason is that there is no accurate way for the government to estimate the value of non-market activity such as do-it-yourself work. Also excluded is the amount spent on criminal activities such as drug trafficking, prostitution, or illegal gambling.

Clearly, the traditional measurements of GDP do not represent all the production occurring in an economy. Using traditional measurements, GDP excludes production activities that contribute to well-being and includes others that run counter to the concept of well-being (such as the production of nuclear weapons). These issues have led to the calculation of alternative measures of GDP. One of these is the Genuine Progress Indicator (GPI), which includes social and environmental factors that the GDP ignores.

29) Answer: C

**Explanation:** When the government's statistical agency measures consumption, investment, and government spending on goods and services, some of the included items are produced outside of the United States. For instance, if you spend \$20 on a bottle of wine from Chile, consumption goes up by \$20. If a company purchases a printing press from Korea for \$25,000, investment increases by \$25,000. However, in both cases, the products are imported, and their value should not be included in the calculation of the U.S. GDP. Therefore, because some consumption, investment, and government spending is for foreign-produced goods, the dollar value of imports is subtracted from the sum of consumption, investment, and government spending.

Also note that some goods produced in the United States are not purchased by consumers, firms, or the government in the United States, but instead are exported to other countries. The dollar value of exported goods are included in the calculation of GDP to get total production of final goods.

30) Answer: B

**Explanation:** The long-run view of the economy is based upon the concept of monetary neutrality. In the long run, output is determined by such factors as the number of workers and the level of technology. Changes in nominal variables, such as the money supply and the price level, have no impact upon the real economy in the long run.

Monetary neutrality does not hold in the short run. In the short run, real and nominal variables are related. For instance, it is possible for changes in the money supply (a nominal variable) to affect the level of output (a real variable) in the short run, but not in the long run.

### 3. Short Answers

1. (3 points)

Due to an expectation in inflation (higher overall prices tomorrow), the aggregate demand for goods and services today will increase because of substitution effect, and will decrease because of wealth effect.

2. (3 points)

The Bureau of Economic Analysis releases data quarterly on the gross domestic product. Use the information below to calculate GDP for the United States in the second quarter of 2002. All figures are in billions of current dollars (that is, there is no correction for changes in the value of the dollar over time).

Exports	\$1,018
Personal income	\$8,914
Consumption spending	\$7,255
Government spending on goods and services	\$1,960
Transfer payments	\$1,283
Net interest	\$213
Imports	\$1,444
Investment spending	\$1,588

Nominal GDP (in billions of dollars) for the United States in the second quarter of 2002 is:

**\$10377**

Explanation: **Nominal GDP can be measured by adding all the components of spending in an economy. It is calculated using the following equation:  $GDP = C + I + G + EX - IM$ , where C = consumption spending, I = investment spending, G = government spending on goods and services, EX = exports, and IM = imports.**

3. (2 points each part, 6 points in total)

**Scenario**

This table shows the nominal and real GDP for the United States for 1996 through 1998.

	<b>Nominal GDP (Billions of dollars)</b>	<b>Real GDP (Billions of 1996 dollars)</b>
1996	\$7,813	\$7,813
1997	\$8,318	\$8,160
1998	\$8,782	\$8,509

Source: Bureau of Economic Analysis

a) Which year is the base year?

**1996**

b) What is the growth rate in real GDP between 1997 and 1998?

$$(8509-8160)/8160*100=4.3\%$$

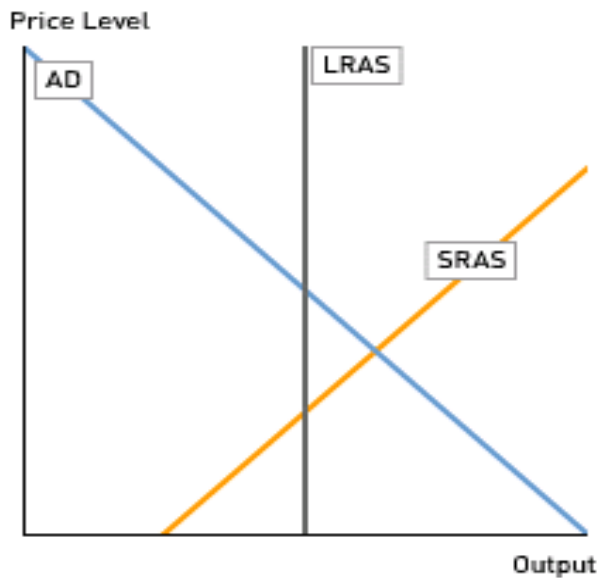
c) What is the GDP deflator in 1998? (Round to the nearest integer.)

$$8782/8509*100=103$$

4. (10 points in total)

### Scenario

This is an aggregate supply-aggregate demand graph for the U.S. economy.



a) (3 points)

Which of the following statements best describes the situation shown in the graph?

(Write down your choice (A, B, C, or D) without explanation)

- A. The economy is suffering from a recession.
- B. The unemployment rate is greater than the natural rate of unemployment.
- C. There is not sufficient aggregate demand for the economy to reach long-run equilibrium.
- D. The economy is producing more than the natural rate of output.

Your choice is:    **D**   

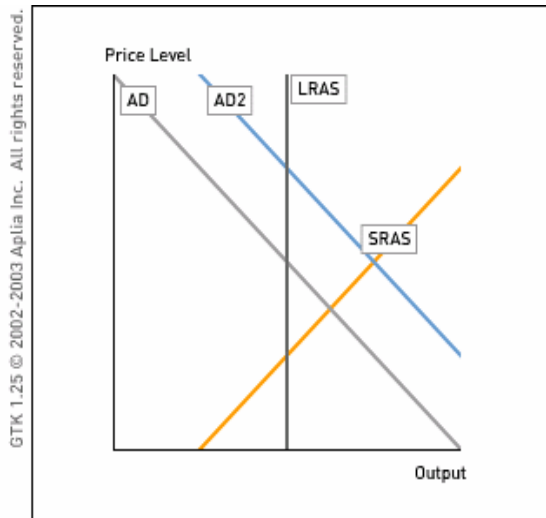
Explanation: **The output level associated with the long-run aggregate supply curve is called the natural rate of output. The intersection of the aggregate demand curve and the short-run aggregate supply curve occurs at an output level that exceeds this amount.**

b) (4 points)

On the aggregate supply-aggregate demand graph below, **show** what happens if the Federal Reserve increases the money supply. First, decide which curve would shift. Then add a new curve at the shifted position and label it AD2, LRAS2, or SRAS2, as appropriate.

i) The Curve    **AD**   would shift.

ii) Label the shifted curve below:



Explanation: **An increase in the money supply increases the aggregate demand, which is illustrated by a rightward shift of the aggregate demand curve.**

c) (3 points)

Which of the following events would bring the economy back to the natural rate of unemployment and long-run equilibrium? (Again, you don't need to explain your choice)

- A. The government raises Social Security taxes.
- B. Businesses increase investment in expectation of a stronger economy.
- C. The Federal Reserve buys bonds on the open market.
- D. Consumer confidence in the economy rises, sparking higher levels of consumption.

Your choice is: \_\_\_\_\_**A**\_\_\_\_\_

Explanation: **Currently, the economy is producing more than the natural rate of output. This means that unemployment is unusually low and inflation is more likely a problem. Graphically, the economy can return to long-run equilibrium by shifting the aggregate demand curve to the left. In other words, aggregate demand must decrease to bring the economy back to long-run equilibrium.**

**A tax increase will decrease consumption, reducing aggregate demand. The other three choices all represent events that will increase aggregate demand.**