

Economics 102	Name _____
Fall 2010	TA Name _____
4/4/11	Discussion Section # _____
Second Midterm	Student ID # _____

**Version 1**

**DO NOT BEGIN WORKING UNTIL THE INSTRUCTOR TELLS YOU TO DO SO  
READ THESE INSTRUCTIONS FIRST.**

You have 50 minutes to complete the exam. The exam consists of 4 binary choice and 20 multiple choice questions. Each question is worth 4 points for a total of 96 points. The final 4 points of the exam depend upon you accurately and completely providing your name, ID number, discussion section number, version number, and TA name on the scantron sheet and the exam booklet. **Answer all questions on the scantron sheet with a #2 pencil**

**NO CELL PHONES, CALCULATORS, OR FORMULA SHEETS ARE ALLOWED.**  
**PICK THE BEST ANSWER FOR EACH QUESTION.**

**How to fill in the scantron sheet:**

1. Print your last name, first name, and middle initial in the spaces marked "Last Name," "First Name," and "MI." Fill in the corresponding bubbles below.
2. Print your student ID number in the space marked "Identification Number." Fill in the bubbles.
3. Write the number of the discussion section you've been attending under "Special Codes" spaces ABC, and fill in the bubbles. You can find the discussion numbers below on this page.
4. Write the version number of your exam booklet under "Special Codes" space D, and fill in the bubble. The version number is on the top of this page.

**If there is an error on the exam or you do not understand something, make a note on your exam booklet and the issue will be addressed AFTER the examination is complete. No questions regarding the exam can be addressed while the exam is being administered.**

**When you are finished, please get up quietly and bring your scantron sheet and this exam booklet to the place indicated by the instructors.**

**Discussion sections are as follows:**

<b><u>Michael Pistone</u></b>	<b><u>Junjie Guo</u></b>	<b><u>Zhewen Xu</u></b>
351 W 3:30-4:20	350 W 3:30-4:20	353 W 4:35-5:25
352 W 4:35-5:25	354 F 8:50-9:40	356 F 9:55-10:45
	355 F 9:55-10:45	358 F 12:05-12:55
	359 F 12:05-12:55	361 F 1:20-2:10

## Work Sheet

I, \_\_\_\_\_, agree to neither give nor receive any help on this exam from other students. Furthermore, I understand that use of a calculator is an academic misconduct violation on this exam.

Signed \_\_\_\_\_

1. Suppose you had the following information regarding the economy:

<u>Year</u>	<u>Nominal wage</u>	<u>CPI</u>
1991	\$15.00	100
1992	\$16.50	110
1993	\$20.00	150

Which of the following answers best describes what is happening to the real wage rate over the time period represented in the data?

- a) It increased from 1991 to 1992 and increased further from 1992 to 1993.
- b) It dropped from 1991 to 1992 and then increased from 1992 to 1993.
- c) It increased from 1991 to 1992 and then dropped from 1992 to 1993.
- d) It remained the same from 1991 to 1992 and then dropped from 1992 to 1993.

2. Consider an economy in which the only three items in the Consumer Price Index (CPI) are food, cars, and guns. Listed below are the quantities and prices of these items consumed in two different years, 1995 and 1996. The market basket for calculating the CPI is comprised of 10 units of food, 5 cars and 2 guns.

	1995		1996	
	Quantity	Price/unit	Quantity	Price/unit
Food	10	\$4	10	\$5
Cars	5	10	5	12
Guns	2	5	6	10

Using the information in the table, what is the inflation rate between 1995 and 1996 as measured by the CPI?

- a) 20%
- b) 30%
- c) 70%
- d) 120%
- e) Since there was no given base year, it cannot be determined.

3. Joe and Mary live in Zimbabwe and in recent years have been frustrated by the very high rates of inflation. Joe, who runs an office supply store recently gave up printing a price list because prices changed so frequently that it was hard for his printed list to be up to date. Mary finds that she is spending significant time trying to figure out which grocery stores offer the best prices for the household's usual purchases of bread, jam, and peanut butter. The costs of inflation represented here are

- a) Menu costs and unit-of-account costs
- b) Unit-of-account costs and shoe leather costs
- c) Menu costs and shoe leather costs
- d) Hyperinflation costs

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

The following table presents all of the production and the prices for a hypothetical economy. That is, GDP is comprised entirely of Coffee, Jelly Beans and Economics Textbooks.

	2000		2001		2002	
	Quantity	Price	Quantity	Price	Quantity	Price
<b>Coffee</b>	150	\$2	200	\$3	250	\$4
<b>Jelly Beans</b>	75	\$4	100	\$2	150	\$6
<b>Economics Textbooks</b>	8	\$30	8	\$25	10	\$20

The next **TWO** questions refer to the table above. The market basket for the CPI is the quantities produced in the year 2001. Take 2001 to be the base year, and use 100 as the scale factor for the CPI.

- 4. Using the information in the table, calculate the value for the CPI in 2002.
  - a) 156
  - b) 161.5
  - c) 210
  - d) 117.3
  
- 5. Using the information in the table, what is the value of the GDP deflator in 2000?
  - a) 95.2
  - b) 105
  - c) 100
  - d) 121.2

6. John worked as a typist for over twenty years and was laid off one day in 1995 after his company implemented new computers. He tried very hard to find another job but failed because the demand for typists was shrinking sharply because of the introduction of computers. According to the above information, which of the following statements best describes what happened to John?

- a) John became a discouraged worker.
- b) John became cyclically unemployed.
- c) John became structurally unemployed.
- d) John became frictionally unemployed.

7. The following information is given as percentages of the total population in a small country. Consider a country with 5000 people in the population.

Full-time workers: 40%

Part-time workers: 20%

Discouraged workers: 10%

Unemployed workers: 10% (Hint: this includes the cyclically unemployed workers)

Cyclically unemployed workers: 3%

What is the natural rate of unemployment in this country?

- a) 5%
- b) 6%
- c) 7%
- d) 8%
- e) 10%

8. Monica, Ross, Joey and Chandler worked together but they all lost their jobs last month. The following list describes what they have been doing since then.

- Monica has been taking care of her baby at home
- Ross went on to pursue a master's degree in paleontology
- Joey has been reading the job posts on Newspapers and sending his resumes out
- Chandler was frustrated and has been watching TV to kill time

Which of the friends (if any) are considered unemployed?

- a) Monica
- b) Ross
- c) Joey
- d) Chandler
- e) None of these individuals are unemployed

9. The government increases unemployment insurance to help those who are unemployed, so that they can take more time to find a better job. Which of the following side-effects would you expect to happen?

- a) The frictional unemployment rate will increase.
- b) The structural unemployment rate will increase.
- c) The cyclical unemployment rate will decrease.
- d) The unemployment rate will decrease.

10. Bakery A produces bread. Annually, Bakery A uses \$15 million worth of sugar, flour, and eggs (assume all three of these ingredients are produced in the same year that the bread is produced) to produce its bread. Wages and salaries in Bakery A for the year are equal to \$30 million; the bakery's only other annual expense is \$10 million in interest that it pays on its bonds. The annual profits for the owner of the bakery are \$15 million.

What is Bakery A's contribution to GDP this year?

- a) 70 million
- b) 60 million
- c) 55 million
- d) 40 million
- e) It cannot be determined from the information given

11. Laura, who lives in Kansas, finds a briefcase with \$60,000 cash inside of it at the casino. Instead of reporting it to the authorities she decides to start her own business. To do so she buys \$32,000 worth of equipment from Torcidos Ltd. in Canada and \$28,000 from Tornado Ltd. in Madison, Wisconsin. Both purchases are made during this year and all the equipment was produced during this year. The change in GDP in the United States due to Laura's actions is equal to:

- a) 0
- b) \$60,000
- c) \$28,000
- d) \$32,000

12. Maryland produces only two goods: crab cakes and waffles. Use the output information in the following table to answer the next question. Use 2010 as the base year.

	2010		2011	
	Quantity	Price	Quantity	Price
Crab cakes	50	\$2	80	\$4
Waffles	100	\$3	80	\$4

What was Maryland's growth rate of Real GDP from 2010 to 2011?

- a) 0%
- b) 100%
- c) 33.3%
- d) 60%

13. In Finland, real GDP was lower in 2009 than in 2010. The GDP deflator was the same in 2009 and 2010. Therefore, we can conclude that nominal GDP in 2010 is

- a) Lower than nominal GDP in 2009.
- b) Higher than nominal GDP in 2009.
- c) The same as nominal GDP in 2009.
- d) There is not enough information available to determine the trend of nominal GDP.

14. Suppose that last year real GDP increased while real GDP per capita decreased in an economy. Therefore, it must be the case that

- a) The labor force decreased last year.
- b) The labor force increased last year.
- c) The economy experienced population growth last year.
- d) The economy experienced a decrease in population last year.

15. Consider the following production function that relates levels of capital (K) and labor (L) to output (Y).

$$Y = K\sqrt{L}$$

Further, assume that capital (K) is fixed at 100. Does this function exhibit diminishing marginal returns to labor?

- a) Yes it does.
- b) No it does not.

Use the following information and the table below for the next **TWO** questions.

Consider an economy in which the labor force consists of the entire population. The following table summarizes values of population size, the level of capital and the level of real GDP in 3 consecutive years.

Year	Population	Capital	Real GDP
1	100	40	900
2	130	44	1200
3	160	48.4	1600

16. What is the annual growth rate for capital in this economy?

- a) 10%
- b) 30%
- c) 33%
- d) The growth rate for capital between years 1 and 2 is different from the growth rate between years 2 and 3.

17. Which of the following best describes the pattern of Real GDP per capita growth in this economy?

- a) There is growth in real GDP per capita between years 1 and 2, and also between years 2 and 3.
- b) Real GDP per capita grows between years 1 and 2, but falls between years 2 and 3.
- c) Real GDP per capita falls between years 1 and 2, but grows between years 2 and 3.
- d) There is a decrease in real GDP per capita between years 1 and 2, and also between years 2 and 3.

18. Annual tuition rates are rising at a rate of roughly 5% a year. Currently tuition at Harvard is roughly \$35,000 per year. If tuition rates keep rising at 5% per year, what will the tuition at Harvard be in 14 years?

- a) \$55,000
- b) \$70,000
- c) \$85,000
- d) \$100,000

Use the following information for the next **THREE** questions.

The economy of Kansas is a **closed** economy. The loanable funds market is characterized by the following equations where  $r$  is the interest rate as a whole number (for example, if the interest rate was 5% then  $r$  would be equal to 5 in the equation) and  $Q$  is the quantity of loanable funds.

$$\text{Private Investment: } r = 20 - \frac{1}{100}Q$$

$$\text{Private Savings: } r = 5 + \frac{1}{200}Q$$

19. Suppose that initially the government runs a balanced budget (remember this is just a hypothetical world). What is the equilibrium quantity of private investment in this economy?

- a) \$500
- b) \$1000
- c) \$1250
- d) \$2250

20. Now suppose that the government acts more realistically and decides to run a massive deficit of \$1500 dollars no matter what the interest rate is in the economy. What is the equilibrium quantity of savings in this economy?

- a) \$1500
- b) \$2000
- c) \$2500
- d) \$4500



21. Continue to assume that the government runs the \$1500 deficit. How much private investment is crowded out because of the government deficit?

- a) \$500
- b) \$1000
- c) \$1500
- d) Investment went up as a result of the deficit, there is no crowding out.

22. Consider the loanable funds market that is initially in equilibrium. As a result of the financial crisis, individuals began to increase their private savings at every interest rate. In addition, firms increase their investment expenditures since the interest rate is decreasing. Which of the following best describes what happens to the equilibrium interest rate and the quantity of loanable funds?

- a) The quantity of loanable funds increased and the interest rate decreased.
- b) The quantity of loanable funds increased and the effect on the interest rate is indeterminate.
- c) The quantity of loanable funds decreased as did the interest rate.
- d) The quantity of loanable funds decreased and the effect on the interest rate is indeterminate.

23. The concept that asset prices embody all publicly available information is known as the

- a) Complete information hypothesis.
- b) Efficient markets hypothesis.

24. The country of Wyoming is a closed economy, whose loanable funds market is characterized by the following equations.  $r$  is the real interest rate (so if  $r = 35$ , then the interest rate is 35%) and  $Q$  is the quantity of loanable funds.

$$\text{Demand: } r = 20 - \frac{1}{5}Q$$

$$\text{Supply: } r = 5 + \frac{1}{10}Q$$

Initially, the government runs a balanced budget, but then decides to run a deficit in order to hire more policemen to deal with bank robberies. After running their deficit, the equilibrium interest rate in Wyoming jumps up to 15%. Holding everything else constant, how large must the government deficit be to increase the interest rate to 15%?

- a) \$25
- b) \$50
- c) \$75
- d) \$100
- e) None of the above answers is correct.

Answers

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