Economics 102 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Spring 2013 TA Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

03/20/2013 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 **10 binary choice worth 2 points** and **15 multiple choice questions worth 5 points**. Please accurately and completely provide your **name**, **ID number**, **discussion section number, version number, and TA name** on the scantron sheet and the exam booklet. Writing all this information correctly is **worth 5 points**. 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 and other information:**

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.**

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| --- | --- | --- | --- | --- |
| Section | Location | Day | Time | TA |
| 334 | SS 6314 | Thur | 2:25-3:15 PM | Brandon Hoffman |
| 337 | SS 6101 | Thur | 3:30-4:20 PM | Brandon Hoffman |
| 333 | SS 6322 | Thur | 2:25-3:15 PM | Xun Gong |
| 331 | Ingraham 225 | Fri | 8:50-9:40 AM | Xun Gong |
| 338 | Van Hise 227 | Fri | 9:55-10:45 AM | Xun Gong |
| 329 | Bascom 55 | Fri | 12:05-12:55 PM | Xun Gong |
| 328 | SS 6322 | Thur | 3:30-4:20 PM | Zachary Flynn |
| 330 | Bascom 53 | Fri | 12:05-12:55 PM | Zachary Flynn |
| 335 | Ingraham 115 | Fri | 11:00-11;50 AM | Zachary Flynn |
| 336 | Van Hise 240 | Fri | 9:55-10:45 AM | Zachary Flynn |

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

**Signed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Binary Choice (worth 2 points each)**

* 1. Suppose, in 2010, you purchased a house built in 2003. Which of the following would be included in the gross domestic product for 2010?
1. The value of the house in 2010
2. The value of the services of the real estate agent that helped with the real estate transaction
	1. Which of the following goods is directlycounted in GDP using the product approach (i.e., GDP = the sum of the product of each good’s price times each good’s quantity)?
3. The lettuce that Subway purchases for its sandwiches
4. A 12-inch Subway sandwich purchased by a student
	1. Between 1970 and 2008, medical spending in the U.S. grew at a rate of about four percent per year. This implies that medical spending will quadruple in approximately\_\_\_ years.
5. 17.5
6. 35
	1. Suppose Y is output, K is capital, L is labor, and A is the level of technology in an economy and we can express the relationship between output and K, L, and A with the following aggregate production function:

Y = A(K.5)(L.5)

Given this production function, what will happen to the level of output, Y, if K, L and A are all doubled?

1. Y will double
2. Y will more than double
3. Michael is fifteen and works twenty hours a week babysitting his neighbor's kids. Is he counted as part of the unemployed group?

a) Yes

b) No

1. Kathy graduated from UW-Madison with a degree in Economics in December (2012). She is currently looking for a job that suits her skills and level of education. Which type of unemployment is Kathy experiencing?

a) Frictional Unemployment

b) Structural Unemployment

1. In Catan, there are only 5 types of goods included in the basket used in calculating the CPI: Sheep, Bricks, Wood, Rocks, and Wheat. We do not know the number of each type of good included in the basket but we do know the following:
* Between the years of 2007 and 2008, the prices of Sheep, Wood, and Wheat did not change.
* The CPI for the year 2008 is 90 using 2007 as the base year (100 point scale).
* The price of Bricks decreased from $2 to $1 and the price of Rocks increased from $1 to $2.

Are there more Bricks or more Rocks in the CPI basket for Catan?

a) There are more Bricks in the CPI basket for Catan.

b) There are more Rocks in the CPI basket for Catan.

1. To calculate the CPI for a given year we hold the quantities of goods and services in the market basket constant while measuring the ratio of the market basket cost in the base year to the market basket cost in the current year.
2. True
3. False
4. In the country of Hyrule (population (16 years and older) of 1,200), there are a total of 1,000 employed people working to produce goods and services and 100 people who are unemployed. The rest of the population is not a part of the labor force. This year, the Hyrule GDP was $25,000. If the natural unemployment rate is 9.5%, then the full employment GDP for Hyrule would have been \_\_\_\_\_\_\_\_?
5. Greater than $25,000
6. Less than $25,000
7. Suppose the January 2013 US unemployment rate is 7.9%. The 2012 US Male unemployment rate is 8%. Using this information, is the 2012 US female unemployment rate more than or less than 7.9 %?
8. The female unemployment rate is MORE than 7.9%.
9. The female unemployment rate is LESS than 7.9%.

**Multiple Choice (worth 5 points each)**

1. Assume Sam earned $48,000 in 1996 and $48,000 in 2004. Suppose 1996 is the base year for the CPI and the CPI in 2004 is 120. Then in the 8 years between 1996 and 2004, how much does the purchasing power of that $48,000 change in terms of US dollars?
2. The purchasing power in 2004 was approximately 16.7% lower than in 1996.
3. The purchasing power is the same in the two years since the annual income is the same.
4. The purchasing power in 2004 was $8,000 higher than the purchasing power in 1996.
5. We cannot tell what happened to Sam’s purchasing power since Sam’s purchasing power depends on what he consumed while the change in the CPI reflects what happens to the typical consumer.

12. Suppose the market basket in Monria consists of 1 unit of chocolate, 2 units of butter and 1 unit of sugar. Given the following table of the production and prices of items produced in Monria, we find that there is \_\_\_\_\_\_\_\_\_\_\_\_ in prices between the years 2007 and 2008 and ­­­­­\_\_\_\_\_\_\_\_\_\_\_\_ in prices between the years 2008 and 2009.

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2007 | 2008 | 2009 |
| Quantity of chocolate | 1000 | 1000 | 1000 |
| Price of chocolate | 3.0 | 4.0 | 5.0 |
| Quantity of butter | 900 | 800 | 1500 |
| Price of butter | 1.5 | 2.5 | 1.0 |
| Quantity of sugar | 2000 | 1800 | 1800 |
| Price of sugar | 1.0 | 1.0 | 2.0 |

1. Inflation: Deflation
2. Inflation: Inflation
3. Deflation: Deflation
4. Deflation: Inflation

13. All of the following are reasons for frictional unemployment **EXCEPT:**

1. Workers have different preferences and abilities with regard to what kinds of employment they wish to do.
2. Unemployed workers have a smaller income than employed workers and so they accept the first job offer that they receive.
3. The flow of information is imperfect and therefore it takes times for unemployed workers to find jobs that are a good match with their skills.
4. Geographic mobility takes time and therefore an unemployed person may not be able to move immediately to a geographic location that has a job that fits their skills well.

14. Suppose the size of the labor force stays constant, and the working-age population stays constant, but a greater number of persons who were unemployed become employed. The labor force participation rate will \_\_\_\_\_\_\_.

a) Increase

b) Decrease

c) Remain constant

d) Be indeterminate

15. Suppose that homemakers are included as employed in the labor force statistics, rather than being counted as out of the labor force. This would

1. Increase the measured labor force participation rate.
2. Increase the unemployment rate.

c) Decrease the number of persons in the labor force.

d) Decrease the number of persons in the working-age population.

1. The Real GDP per capita in Neverland is $42,000 in 2012. Because nobody grows old in Neverland, the population stays constant at 38 people. If the GDP per capita becomes $84,000 in 2040 (28 years later), what is a good approximation of the long run GDP growth rate?
2. 1.5%
3. 2.0%
4. 2.5%
5. 4.0%
6. Last year, a house was built and sold at a price of $100,000. This year, the owner of the house rents it to a tenant for $600 a month. How much is added to this year's GDP as a result of these activities?
7. $600
8. $100,000
9. $100,600
10. $7200
11. Which one of the following transactions changes (in either direction) the level of US GDP?
12. An American shoe store imports a shoe from China and sells it to a German exchange student.
13. An American bookstore imports books from a Canadian publisher and sells them to a local college student.
14. An American farmer in California exports marijuana to Mexico. Assume that marijuana growing in California is not a legal activity.
15. An American car manufacturer exports a car to India.
16. A country's GDP for a given year is:
17. The sum of the value of all final goods and services purchased by citizens of the country during that year.
18. The sum of factor payments made by firms plus consumption made by households during that year.
19. The sum of the value of all final goods and services produced within a country during that year.
20. The sum of the value of all final goods produced by companies owned by citizens in that country during that year.

Use the following information to answer the next **TWO** questions.

The following table lists the goods produced and prices in the Catan economy as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Quantity in 2007 | Price in 2007 | Quantity in 2008 | Price in 2008 |
| Sheep | 2 units | $5 per unit | 3 units | $6 per unit |
| Wood | 2 units | $1 per unit | Unknown # of units sold | $2 per unit |
| Grain | 6 units | $3 per unit | 1 unit | $4 per unit |

1. Suppose the GDP deflator is measured with 2008 as the base year and using a 1 point scale. Given this information and the above table, what is the GDP deflator for 2007?
2. 0.75
3. 0.8
4. 1.25
5. There is not enough information to answer this question.
6. Now suppose that the GDP deflator is measured with 2007 as the base year and that the value of the GDP deflator for 2008 is 1.5. Given this information and the above table, how many units of Wood were produced in 2008?
7. 1
8. 2
9. 5
10. 10

Use the following information to answer the next **TWO** questions.

The country of Catan is in Autarky (that is, they are a closed economy). It produces 5 goods (Wood, Sheep, Wheat, Bricks, and Rocks) and provides no services. The following equations describe the real GDP, Y, of Catan.

G = (1/4)Y where G is government spending

I = (1/8)Y where I is investment spending

C = 50 + .5(Y-T) where C is consumption spending

T= 40 where T is the fixed, and constant, level of taxation in this economy

1. Use the expenditure approach to measuring GDP to solve for the level of real GDP in this economy. Assume that the aggregate price level is fixed and does not change in this example.
2. Real GDP or Y = 200
3. Real GDP or Y = 240
4. Real GDP or Y = 280
5. Real GDP or Y = 320
6. Suppose the President mandates that the government budget must be balanced so that T = G. The government decides it will change the level of taxes to whatever level is necessary to achieve this goal even if it changes the level of GDP for this economy. What do Taxes have to be for the government to be running a balanced budget?
7. Taxes = 60
8. Taxes = 50
9. Taxes = 40
10. Taxes = 20
11. Suppose that an economy is initially hiring 100 units of labor while the level of capital and technology available in this economy is fixed. Holding everything else constant, if the economy moves to employ a larger amount of labor then:
12. Labor productivity will rise.
13. Capital productivity will rise.
14. The marginal product of labor will stay the same.
15. Both answers (a) and (c) are correct.
16. Suppose that the labor market in an economy is described by the following two equations where L is the quantity of labor and W is the wage rate.

Demand for Labor: L = 1000 – 100W

Supply of Labor: L = 200W – 800

Furthermore, suppose that the aggregate production function for this economy is given by the following equation:

Y = 20(K(1/2))(L(1/2))

Assume that capital, K, is fixed in this economy and equal to 400 units. When the labor market is in equilibrium, what is the value of labor productivity?

1. One unit of output per 20 units of labor.
2. Twenty units of output per unit of labor.
3. 8000 units of output per unit of labor.
4. Two hundred units of output per unit of labor.

Answers

1:B

2:B

3:B

4:B

5:B

6:A

7:A

8:B

9:B

10:B

11:A

12:A

13:B

14:C

15:A

16:C

17:D

18:D

19:C

20:A

21:D

22:B

23:B

24:B

25:B