

There are 25 multiple choice questions for 2 pts. each, and two written questions. Total points: 70. Look over the whole test before you begin. Good luck!

1) How many people are in the "labor force" if six thousand people are employed, one thousand people are unemployed, and two thousand people are full-time students?

- a) Nine thousand b) Seven thousand c) Six thousand d) Three thousand e) None of the above

2) What happens to the statistical unemployment rate if there is no change in the number of people employed, but many people without jobs give up looking for work?

- a) Increase b) Decrease c) No change d) Depends on the number of people who are full-time students
e) None of the above

For questions 3) and 4) look at the list of people below and find the right person.

3) Which of those people would not be counted as unemployed in our national statistics, but is unemployed on the economist's definition?

4) Which of those people would be counted as unemployed in our national statistics, but is not unemployed on the economist's definition?

- a) Harry does not have a job. He is a full-time college student.
b) Melissa owns and manages a Burger King franchise.
c) Aloysius is a recent high-school graduate who does not have a job. He applies for many jobs and goes on many job interviews. He will take a job that pays \$200,000 a year or more, but not a job that pays less than that.
d) Cecilia was an autoworker until the plant shut down. She has not applied for any jobs or had any interviews recently because no employer within commuting distance of her town is hiring. She will take the first job she is offered, at any wage.
e) Harrison is a recent college graduate who does not have a job. He spends all of his time in his mother's basement watching "Rick and Morty" and huffing aerosols.

5) Why do we believe that real aggregate production functions, for real countries, have constant returns to scale?

- a) We observe no correlation between the size of a country and its output (or income) per person
b) We observe a positive correlation between the size of a country and its output (or income) per person
c) We observe a negative correlation between the size of a country and its output (or income) per person
d) We observe that an increase in the quantity of capital *or* labor is associated with an increase in output
e) None of the above

6) The Japanese own lots of property in the U.S. and also own lots of shares in manufacturing firms that have plants located in China. Based on that information alone, which of the following is likely to be true about Japan?

- a) Investment spending (I) is greater than Consumption spending (C). b) Consumption spending (C) is greater than investment spending (I). c) GNP is less than GDP d) GNP is more than GDP e) None of the above

- 7) Which of the following American statistics best indicates changes in prices paid by your family for the things your parents buy?
 a) Nominal GDP b) Nominal GNP c) GDP price index d) CPI
 e) Chained (2012) dollar real GDP estimate
- 8) Which of the following American statistics best indicates total dollar income of U.S. residents?
 a) Nominal GDP b) Nominal GNP c) Real GDP index d) CPI
 e) Chained (2012) dollar real GDP estimate
- 9) Which of the following American statistics represents the total dollar value of final goods and services produced within U.S. borders?
 a) Nominal GDP b) Nominal GNP c) Real GDP index d) CPI
 e) Chained (2012) dollar real GDP estimate
- 10) Which of the following American statistics most closely represents total value added by all enterprises located in the U.S.?
 a) Nominal GDP b) Nominal GNP c) Real GDP index d) CPI
 e) Chained (2012) dollar real GDP estimate
- 11) Which of the following items is covered by the American CPI but not by the American GDP price index?
 a) Autos built in Japan b) Tractors built in Indiana c) Tickets to Disney World in Florida
 d) Both a) and b) e) Both a) and c)
- 12) Which of the following items is covered by the American GDP price index but not by the American CPI?
 a) Autos built in Japan b) Tractors built in Indiana c) Tickets to Disney World in Florida
 d) Both a) and b) e) Both a) and c)
- 13) Which of the following tends to increase American real GDP, but does not necessarily affect the American CPI?
 a) An increase in the price of tractors built in Korea
 b) An increase in the price of tractors built in Indiana
 c) An increase in the quantity of tractors built in Korea
 d) An increase in the quantity of tractors built in Indiana
 e) None of the above.

The following information is for 14) and 15). Look at the information below to figure out the value of a “chained (2000) dollar real GDP estimate” for the year 2001. Notice that the “base year” for the real GDP quantity index is 2000, and the column gives the index number, *not* percent changes in the index number.

Year	Nominal GDP, \$ billions	Real GDP quantity index (base year 2000).
1999	\$180	0.7
2000	\$200	1.0
2001	\$210	1.2
2002	\$211	1.1
2003	\$220	1.0

- 14) What is the value of a "chained (2000) dollar real GDP estimate" for 2001? Notice that the base year for this "chained dollar estimate" is 2000.
 a) \$200 b) \$210 c) \$220 d) \$230 e) None of the above
- 15) What is the value of a "chained (2000) dollar real GDP estimate" for 2003? Again notice that the base year for this "chained dollar estimate" is 2000.
 a) \$200 b) \$210 c) \$220 d) \$230 e) None of the above

The following information is for questions 16) - 21). There are three industries on the primitive island of Istria. All of them hire labor from households (families). Stone-finders find sharp stones and sell them to stone-axe makers. Stone-axe makers make stone axes out of stones (purchased from stone-finders) and wooden sticks (purchased from stick-makers). Stick-makers buy stone axes, cut small branches off trees and make them into sticks. Stone axes are sold not just to stick makers but also to households (to clobber deer, which households eat themselves; households never *sell* deer). Sticks are sold not just to stone-axes makers but also to households (to make fires to cook deer). Istrians have no contact of any kind with the outside world.

Fill out the table, then answer the questions.

	<u>Sales revenue</u>	<u>Cost of labor</u>	<u>Cost of stones</u>	<u>Cost of sticks</u>	<u>Cost of axes</u>	<u>Value-added</u>
Stone-axe makers	10	3	5	1	0	_____
Stick-makers	5	2	0	0	1	_____
Stone-finders	5	2	0	0	0	_____
GDP	_____					

- 16) What is value-added for stone-axe makers? a) 1 b) 2 c) 3 d) 4 e) 5
- 17) What is value-added for stick-makers? a) 1 b) 2 c) 3 d) 4 e) 5
- 18) What is value-added for stone-finders? a) 1 b) 2 c) 3 d) 4 e) 5
- 19) What is GDP? a) 6 b) 7 c) 8 d) 9 e) None of the above
- 20) Which of the following is a complete list of items that would be covered by a CPI for Istria?
 a) Stones, stone axes, sticks, deer b) Stones, stone axes, sticks c) Stone axes, sticks d) Stone axes
 e) None of the above
- 21) Which of the following is a complete list of items that would be covered by a GDP price index for Istria?
 a) Stones, stone axes, sticks, deer b) Stones, stone axes, sticks c) Stone axes, sticks d) Stone axes
 e) None of the above

For questions 22) and 23), here are some numbers from the National Income and Product Accounts of the country of Illyria. At the beginning of 1995, the value of inventories of unsold goods and unused materials was \$30 billion. Over the course of the year 1995, investment spending (I) was \$100 billion, of which business spending on all forms of capital (including buildings) was \$80 billion and spending on new residential buildings was \$20 billion.

- 22) At the end of 1995, what was the value of inventories of unsold goods and unused materials?
 a) \$20 billion b) \$30 billion c) \$40 billion d) \$50 billion e) I do not have enough information to say
- 23) Based on the numbers from the question above, what was consumption spending (C) over 1995?
 a) \$20 billion b) \$30 billion c) \$40 billion d) \$50 billion e) I do not have enough information to say

The following information is for questions 24) and 25). The only goods produced in the country of Dacia are socks and shoes. The table below shows their quantities and prices in three years. There is space below for you to do calculations.

	<u>Socks</u>		<u>Shoes</u>	
	<u>Quantity</u>	<u>Price</u>	<u>Quantity</u>	<u>Price</u>
1909	2	5	3	6
1910	1	8	1	2
1911	3	2	2	8

24) Suppose you made a Laspeyres price index for Illyria, with 1910 as the base year and the index value of the base year set equal to 100. What would be the value of the Laspeyres price index in 1911?

a) 100 b) 110 c) 120 d) 130 e) None of the above

25) Suppose you made a real GDP quantity index for Illyria, with 1910 as the base year and the index value of the base year set equal to 100. Would the value of the index for 1911 be less than 100, greater than 100, or equal to 100?

a) Less than 100 b) Greater than 100 c) Equal to 100 d) Depends on the value of nominal GDP in 1910
e) I do not have enough information to say

Written questions

1) Why is Gross Domestic Product called that? I mean,

a) 4 pts What does the word "Gross" mean in Gross Domestic Product?

b) 4 pts What does the word "Domestic" mean in Gross Domestic Product?

II) 12 pts. For each aggregate production function below, use the z method to test whether the function has constant returns to scale. *I want to see the algebra!* Then go back to the top and state whether it *does* or *does not* have constant returns to scale.

A) $Y = 4 + K^{1/2}L^{1/2}$ Does it have constant returns to scale? Yes or no? _____

B) $Y = 2K + \frac{1}{2}L$ Does it have constant returns to scale? Yes or no? _____

C) $Y = 20K^{1/2}L^{2/3}$ Does it have constant returns to scale? Yes or no? _____