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College of Business Administration  
Department of Economics  
Principles of Macroeconomics  
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Spring 2004

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## QUIZ III – Version 2

- This closed book QUIZ is worth 100 points.  
The exam totals 40 Multiple-Choice questions and 3 Short-Essay questions.  
Each Multiple-Choice question is worth 2 points.  
The Short-Essay questions are worth 20 points.  
Allocate your time accordingly.
- Including the cover page, the exam totals 11 pages.
- DO NOT forget to write your name and your student id on the exam booklet.
- Non-Programmable calculators and language dictionaries are allowed.
- At the end of the exam, hand-in the exam booklet and the computer sheet to the examiner.

**March 3, 2004**

**4:35 p.m. – 5:40 p.m.**

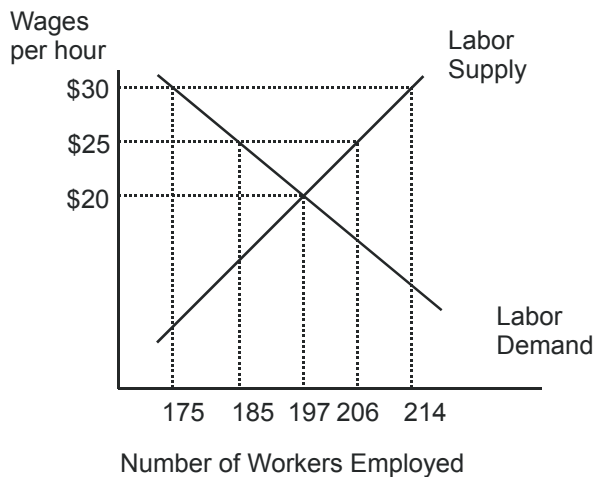
**BA 2-210**

## Multiple-Choice Questions (80 points)

1. If a bank agrees to make a loan at a 10% interest and the inflation rate is 3%, then 7% is the \_\_\_\_ rate.  
a) real wage  
b) hyperinflation  
c) real interest  
d) disinflation  
e) nominal interest
2. If the market interest rate is 8% and the inflation rate is 3%, then the real interest rate equals:  
a) 8%   b) 24%   c) 11%   d) 5%   e) 3%
3. Increasing the capital available to the workforce, holding other factors constant, tends to \_\_\_\_\_ total output at a(n) \_\_\_\_\_ rate.  
a) decrease; increasing  
b) increase; increasing  
c) decrease; decreasing  
d) increase; constant  
e) increase; decreasing
4. Globalization and skill-biased technological change have contributed to:  
a) the slowdown in productivity since 1973.  
b) high rates of employment in Western Europe.  
c) diminishing returns to labor.  
d) increasing wage inequality.  
e) the long-term growth in real wages.
5. If on the day you were born, your parents deposited \$1,000 into a savings account that would earn an annual compound interest rate of 5 percent, what would the value of the account be on your 20<sup>th</sup> birthday?  
a) \$2,653.30   b) \$1,500.00   c) \$1,050.00   d) \$3,325,256.73   e) \$1,100.00
6. In symbolic terms where Y equals real GDP, POP equals total population, and N equals the number of employed workers, Y/POP must equal:  
a)  $N/Y \times POP/N$ .  
b)  $Y/POP \times N/POP$ .  
c)  $N/Y \times N/POP$ .  
d)  $Y/N \times POP/N$ .  
e)  $Y/N \times N/POP$ .

7. The introduction of an overnight delivery service that guarantees the delivery of packages anywhere in the world overnight will increase:
- a) the labor force participation rate.
  - b) average labor productivity.
  - c) the unemployment rate.
  - d) the quantity of human capital.
  - e) the share of population employed.
8. An example of a government policy to provide a framework within which the private sector can operate productively is:
- a) the suppression of political dissent.
  - b) government ownership of capital.
  - c) the establishment of minimum wage laws.
  - d) establishing well defined property rights.
  - e) the taxation of savings.
9. Compared to the 1950s and 1960s average productivity growth \_\_\_\_\_ in the 1970s and \_\_\_\_\_ in the 1980s and 1990s.
- a) slowed; improved somewhat
  - b) slowed; slowed even more
  - c) speeded up; increased even more
  - d) slowed; remained at low rates
  - e) speeded up; slowed

Use the following to answer question 10:



10. Based on the figure, if a union contract requires that workers be paid \$25 per hour, there will be \_\_\_\_\_ unemployed workers.
- a) 12
  - b) 21
  - c) 39
  - d) 10
  - e) 22

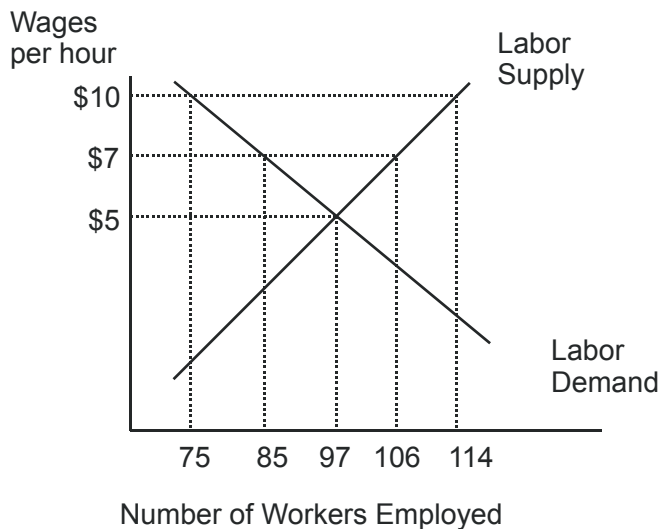




- 22.** In the United States between 1980 and 2000, the over-sixteen population:
- a) grew less rapidly than employment.
  - b) grew at approximately the same rate as employment.
  - c) decreased while employment increased.
  - d) was constant, while employment increased.
  - e) grew more rapidly than employment.
- 23.** If the CPI equaled 1.00 in 1995 and 1.10 in 2000 and a typical household's income equaled \$35,000 in 1995 and \$38,500 in 2000, then between 1995 and 2000, real household income:
- a) may have increased or decreased.
  - b) was constant.
  - c) increased.
  - d) can not be determined.
  - e) decreased.
- 24.** A political system that promotes the free and open exchange of ideas:
- a) slows the development of new technologies and products.
  - b) increases average labor productivity.
  - c) encourages unproductive economic activity.
  - d) will not have well-defined property rights.
  - e) is detrimental to economic growth.
- 25.** The average annual growth rates of labor productivity from 1960 to 1973 were \_\_\_\_\_ than the average rates over the period from 1973 to 1979.
- a) more rapid in the U.S., but slower in other industrialized countries
  - b) about the same as
  - c) more rapid
  - d) slower in the U.S., but more rapid in other industrialized countries
  - e) slower
- 26.** Which of the following is an example of investing in human capital?
- a) A firm replaces manually controlled production with a computer controlled procedure.
  - b) A firm pays for workers to take college classes.
  - c) A chemical firm supports research to develop new chemicals.
  - d) A firm purchases new equipment for a manufacturing process.
  - e) A firm reorganizes the production process.

27. The marginal product of labor and the price of the output produced determine the:
- a) supply of labor.
  - b) the amount of worker mobility.
  - c) the quantity of labor employed.
  - d) the price of labor.
  - e) demand for labor.

Use the following to answer question 28:



28. Based on the figure, if the minimum wage is set at \$10 per hour, there will be \_\_\_\_\_ unemployed workers.
- a) 22    b) 39    c) 10    d) 12    e) 21
29. The costs of unemployment are lowest (and perhaps even negative) for \_\_\_\_\_ unemployment.
- a) frictional and structural
  - b) frictional
  - c) cyclical
  - d) structural
  - e) cyclical and structural
30. Which of the following contributed to the worldwide slowdown in productivity since 1973?
- a) The decline the quality of public education.
  - b) A dearth of technological innovations during the 1970s.
  - c) An increase in technological innovations during the 1970s.
  - d) The improvement in the measurement of productivity growth.
  - e) The increase in the price of oil that followed the Arab-Israeli war of 1973.

- 31.** The value of the marginal product of labor equals the marginal product of labor times the:
- a)** quantity of labor.
  - b)** price of output.
  - c)** quantity of output.
  - d)** real wage.
  - e)** nominal wage.
- 32.** A quantity measured in terms of current dollar value is called a(n) \_\_\_\_\_ quantity.
- a)** relative
  - b)** deflated
  - c)** indexed
  - d)** nominal
  - e)** real
- 33.** Mr. Long is considering the purchase of a corporate bond with a yield (interest rate) of 6% per year, and he expects the inflation rate will average 4% per year during the period that he would hold the bond. Mr. Long has decided to purchase the bond only if the real rate of return is positive on the investment. If the tax rate on the interest income is:
- a)** less than 33.3%, he should buy the bond.
  - b)** less than 50%, he should buy the bond.
  - c)** less than 33.3%, he should not buy the bond.
  - d)** greater than 33.3%, he should buy the bond.
  - e)** greater than 50%, he should buy the bond.
- 34.** The population of Alpha totals one million people of whom 40 percent are employed. Average output per worker in Alpha is \$20,000. Real GDP per person in Alpha totals:
- a)** \$28,000
  - b)** \$20,000
  - c)** \$8 billion
  - d)** \$12,000
  - e)** \$8,000
- 35.** A currency board was introduced in 1991 In Argentina mandating that the Argentine government exchange Argentine pesos for dollars at a one-to-one rate. The goal of introducing the currency board was to:
- a)** overcome the hyperinflation of the 1980s and ensure a strong, stable domestic currency.
  - b)** overcome the problem of the illegal use of dollars in the Argentine economy.
  - c)** reduce the Argentine government's cost of printing pesos.
  - d)** expand foreign trade between Argentina and the United States.
  - e)** begin the change toward dollarization and eventually replace the Argentine peso with the U.S. dollar.

- 36.** An example of a government policy to provide a framework within which the private sector can operate productively is:
- a) the suppression of political dissent.
  - b) the establishment of minimum wage laws.
  - c) the taxation of savings.
  - d) maintaining a well-functioning legal system.
  - e) government ownership of capital.
- 37.** If the official CPI inflation rate is 4%, the "true" rate of inflation is probably closer to \_\_\_\_ according to the findings of the Boskin Commission.
- a) 4%   b) -4%   c) 0%   d) 6%   e) 2%
- 38.** Costs of structural unemployment:
- a) are quite small since unemployed workers gain the opportunity to develop new job skills.
  - b) include substantial lost economic output.
  - c) are quite small because workers are usually only structurally unemployed for a short period of time.
  - d) may actually be negative.
  - e) are quite small since unemployed workers gain time to gain psychological stability
- 39.** The introduction of word processing software that increases the demand for workers with computer skills relative to those without such skills is an example of:
- a) globalization.
  - b) the diminishing marginal product of capital.
  - c) increasing reservation prices.
  - d) the diminishing marginal product of labor.
  - e) skill-biased technological change.
- 40.** Fred and Barney fill egg cartons with eggs. Fred just started the job and can only fill 25 cartons an hour. Barney has significant on-the-job experience that allows him to fill 50 cartons an hour. Both Fred and Barney work 50 hours a week. Fred's average weekly productivity is \_\_\_\_ cartons; Barney's average weekly productivity is \_\_\_\_ cartons; and as a team their average weekly productivity is \_\_\_\_ cartons.
- a) 1,250; 2,500; 3,750
  - b) 25; 50; 7,500
  - c) 25; 50; 75
  - d) 25; 50; 37.5
  - e) 1,250; 2,500; 1,875

### Answer Key

1. c
2. d
3. e
4. d
5. a
6. e
7. b
8. d
9. a
10. b
11. b
12. b
13. e
14. a
15. c
16. e
17. e
18. c
19. c
20. b
21. d
22. a
23. b
24. b
25. c
26. b
27. e
28. b
29. b
30. b
31. b
32. d
33. a
34. e
35. a
36. d
37. e
38. b
39. e
40. e

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## Short-Essay Questions (20 points)

Answer in the given space below each question.

### Question 1 (7 points)

Give two reasons why the official inflation rate may understate the “true” rate of inflation. Illustrate by example.

First, *quality adjustment bias* occurs when government statisticians underestimate quality improvements. For example, if candy bars weigh 10% more than last year and also cost 10% more, there is no true inflation in candy bar prices (the price per ounce is unchanged). But if the statisticians fail to note the increase in weight and simply record the 10% increase in price, they would mistakenly overstate inflation. Changes in the weight of candy bars are easy to measure, of course, so this particular problem would probably not occur in practice; but more subtle improvements in quality (for example, more effective medical procedures) are often very difficult to measure precisely, potentially leading to quality adjustment bias and overstatement of inflation. Explain.

Second, the fact that the CPI assumes a fixed “basket” of goods and services, and does not allow for the possibility of consumer substitution of less expensive items, also tends to create an overstatement of inflation (*substitution bias*). For example, if Mars candy bars are included in the official basket, and the price of these candy bars rises, then an increase in the official cost of living will be recorded. But if people can switch to Snickers bars, which they like equally well and which have not had a price increase, then the “true” cost of living will not have risen, despite what the CPI shows.

### Question 2 (7 points)

What is human capital? Why is it economically important? How is new human capital created? Explain.

Human capital is the talents, education, training, and skills of workers. Human capital is important because workers with more human capital are more productive, implying higher levels of output per worker and higher living standards. New human capital is created through “investment in people”, as when individuals spend time and money acquiring an education, or an employer devotes resources to training workers.

### Question 3 (6 points)

List three types of unemployment and their causes. Which of these types is economically and socially least costly? Explain.

*Frictional unemployment* is the short-term unemployment associated with the process of matching workers with jobs in a dynamic, heterogeneous labor market. *Structural unemployment* is the long-term and chronic unemployment that exists even when the economy is producing at a normal rate. Structural unemployment results from factors such as language barriers, discrimination, structural features of the labor market, lack of skills, or long-term mismatches between the skills workers have and the available jobs. *Cyclical unemployment* is the extra unemployment that occurs during periods of recession. Frictional unemployment is probably the least costly type of unemployment, because it is both usually of short duration and often economically beneficial, being part of the process by which productive matches of workers and jobs are formed.