

Name:
ID:

Department of Economics
Iowa State University
Principles of Macroeconomics
Spring 2010, Midterm 1

Directions: **Do Not Open This Booklet Until Told To Do So.**

- Print your name and University ID number on this page
- Fill in your name, birth date, and ID on the bubble sheet, and put exam version 1 for special code “K”
- Answer multiple choice questions on the bubble-sheet, and answer the rest of the questions in this book.
- There are 66 points total on the exam.

Multiple choice questions. 2 points each

Answer the following questions on the bubble sheet provided. You will not get credit for your exam unless you fill in the exam version as special code “K” (the version is listed at the bottom of the page).

1. When the United States and Mexico trade:
 - A) both Mexico and the United States will be better off.
 - B) Mexico will be worse off because the United States is a stronger economic power.
 - C) both Mexico and the United States will be worse off.
 - D) the United States will be worse off because wages in Mexico are so low.

2. Rice and potatoes are substitute goods. If the price of rice rises, and there is a bumper crop of potatoes, then in the market for potatoes one would expect that the:
 - A) equilibrium price will rise, while the equilibrium quantity falls.
 - B) equilibrium price and quantity will both fall.
 - C) equilibrium price would rise, fall, or stay the same while equilibrium quantity would rise.
 - D) equilibrium price will rise, while the equilibrium quantity could fall, rise, or stay the same.

3. Suppose the U.S. government imposes a quota on the number of Japanese-made cars allowed into the United States (the quota is set at a quantity below equilibrium). Then we would expect the price of Japanese cars to _____ and the price of U.S.-made cars to _____.
 - A) decrease; increase
 - B) increase; increase
 - C) increase; decrease
 - D) decrease; decrease

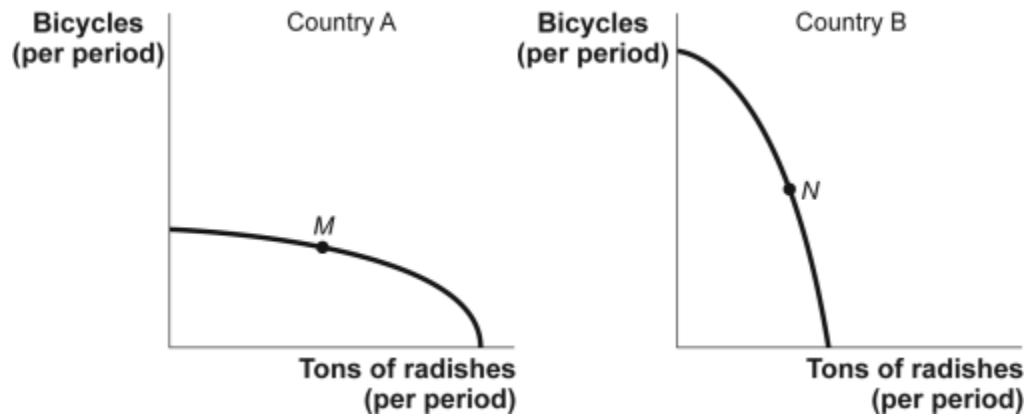
4. Which of the following will *not* cause an increase in supply of good X?
 - A) an increase in the price of good X and an increase in the price of inputs used to produce good X
 - B) an increase in the price of inputs used to produce good X
 - C) an increase in the price of good X
 - D) an improvement in the technology used to produce good X

5. Sometimes the government spends more or less, depending on the needs of the country. This statement best represents the economic concept of:
- A) when markets don't achieve efficiency, government intervention can improve society's welfare.
 - B) resources should be used as efficiently as possible to achieve society's goals.
 - C) government policies can change spending.
 - D) overall spending sometimes gets out of line with the economy's productive capacity.
6. A price floor is likely to cause inefficiency because:
- A) a black market emerges where sellers sell the good at prices above the price floor.
 - B) some buyers who want to buy at the controlled price are unable to find a seller willing to sell at that price.
 - C) buyers incur additional search costs looking for the scarce good.
 - D) the quantity of the good being bought and sold is less than the equilibrium quantity.
7. Suppose that a binding price floor is in place in a particular market. If the market is deregulated and the price floor is removed, then which of the following effects could occur?
- A) There would be a decrease in the quality of the good supplied.
 - B) The quantity demanded would decrease and the quantity supplied would increase.
 - C) An excess demand would develop.
 - D) There would be an increase in the quality of the good supplied.
8. An independent panel of economic experts at the _____ analyzes the macroeconomy and determines when recessions begin and end.
- A) President's Council of Economic Advisors
 - B) National Bureau of Economic Research
 - C) Treasury Department
 - D) Bureau of the Census

9. On a graph representing two variables:
- A) a line that is horizontal has a zero slope.
 - B) a positive slope of a curve means the variables are negatively related.
 - C) a negative slope of a curve means the two variables are positively related.
 - D) a line that is vertical has a zero slope.
10. An expansion is a period in which:
- A) output rises.
 - B) the price level falls.
 - C) unemployment rises.
 - D) output declines.
11. Consider the market for corn. What happens if there is an increased demand for corn tortillas and, at the same time, a new corn seed becomes available that increased the per-acre yield dramatically?
- A) The change in price is indeterminate, quantity increases.
 - B) Price and quantity decrease.
 - C) The change in price is indeterminate, quantity decreases.
 - D) Price increases, the change in quantity is indeterminate.
12. What is the difference between a shortage and scarcity?
- A) Scarcity will always exist because choices must be made, but a shortage will only exist if the price is kept below the equilibrium level.
 - B) Scarcity is a result of two or more alternative uses and will always exist, and quantities of supply and demand adjusting to flexible prices will create shortages.
 - C) A shortage will exist when a good is scarce.
 - D) There is no distinction between the two. They are the same thing.

Use the following to answer question 13:

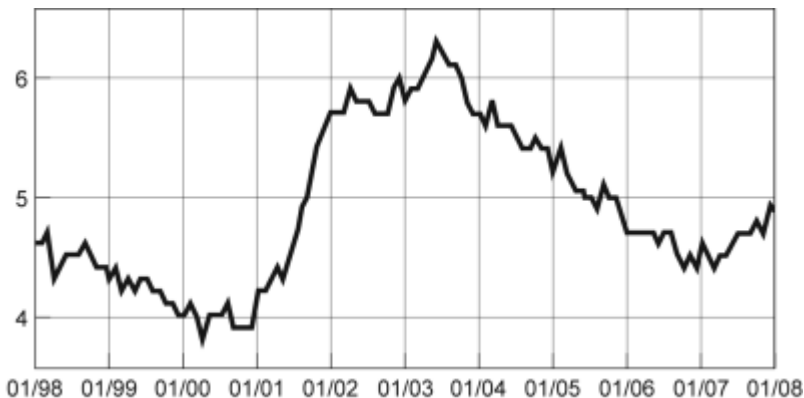
Figure: Bicycles and Radishes I



13. (Figure: Bicycles and Radishes I) The figure shows production possibility frontier for two countries that produce only radishes and bicycles. The axes of both graphs are measured in equivalent units. Country A is now operating at point *M*, and Country B is now operating at point *N*. Suppose Country A discovered a new technology that greatly increased its ability to produce bicycles. This would:
- A) lower the opportunity cost of producing radishes in Country A.
 - B) increase the opportunity cost of producing radishes in Country B.
 - C) increase the opportunity cost of producing radishes in Country A.
 - D) have no effect on the opportunity cost of producing radishes in Country A.

Use the following to answer question 14:

Figure: Seasonally Adjusted Unemployment Rate, 1/1998–1/2008

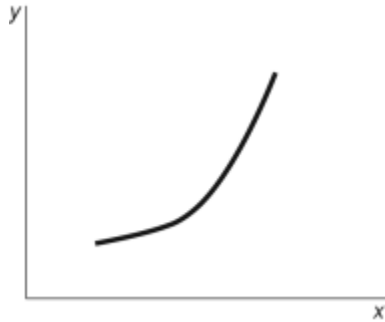


Source: Bureau of Labor Statistics, 2008.

14. (Figure: Seasonally Adjusted Unemployment Rate) What is the approximate slope of the graph between 1/2001 and 1/2003?
- A) 2
 - B) 1
 - C) -1
 - D) -2
15. Which of the following policies is most likely to reduce traffic congestion in a large metropolitan area?
- A) an increase in the price of subway and bus fare to and from the city
 - B) a limited number of free “early bird” parking passes given only to those who arrive prior to 6 A.M.
 - C) a toll road that requires each car to pay a fee to enter the city center
 - D) asking citizens to carpool
16. When graphing a curve, the vertical intercept is:
- A) the value of the x -variable when the value of the y -variable is equal to zero.
 - B) the value of the y -variable when the value of the slope is equal to zero.
 - C) the change in the y -variable between two points divided by the change in the x -variable between those same two points.
 - D) the value of the y -variable when the value of the x -variable is equal to zero.

Use the following to answer question 17:

Figure: $Y = f(X)$

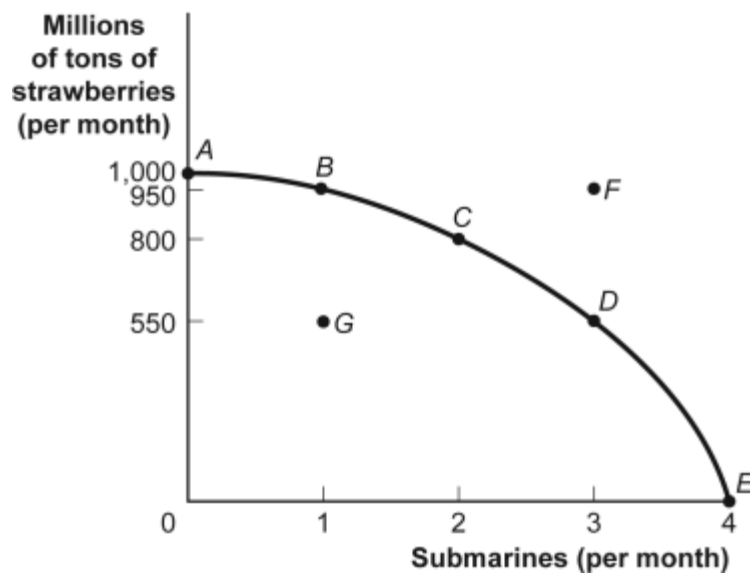


17. (Figure: $Y = f(X)$) In the figure, what best describes the slope of the relationship between x and y?
- A) A positive and constant slope.
 - B) A positive slope that is getting steeper.
 - C) A positive slope that is getting flatter.
 - D) A negative slope that is getting steeper.
18. If a country sold more goods and services to the rest of the world than they purchased from the other countries, then the country has a:
- A) budget deficit.
 - B) trade surplus.
 - C) trade deficit.
 - D) budget surplus.

19. If a country has a trade deficit, does it indicate that the country has a serious problem?
- A) No. Trade deficits occur when a country has higher investment spending relative to its level of saving.
 - B) Yes. Trade deficits occur when a country has low worker productivity.
 - C) Yes. Trade deficits occur when a country does not have comparative advantage in production.
 - D) Yes. Trade deficits occur when a country has high budget surplus.

Use the following to answer questions 20-22:

Figure: Strawberries and Submarines



20. (Figure: Strawberries and Submarines) Suppose the economy is operating at point G. This implies that:
- A) the economy lacks the resources to achieve a combination such as C.
 - B) people in this economy don't really like strawberries and submarines.
 - C) the economy can move to a point such as C only if it improves its technology.
 - D) the economy is experiencing unemployment and/or inefficient allocation of resources.

21. (Figure: Strawberries and Submarines) As the economy moves from point *A* toward, say, point *D*, it will find that the opportunity cost of each additional submarine:
- A) rises.
 - B) remains unchanged.
 - C) falls.
 - D) doubles.
22. (Figure: Strawberries and Submarines) Suppose the economy is now operating at point *C*. Moving to point *E* would require that the economy:
- A) eliminate its production of strawberries.
 - B) reduce its production of submarines.
 - C) achieve some employment and allow some resources to be idle.
 - D) improve its technology or increase the quantities of factors of production it has.
23. Which of the following is a reason for governments imposing or maintaining price controls?
- A) Both consumers and producers benefit from price controls.
 - B) It may be politically expedient to impose price controls that benefit influential voting groups.
 - C) The government benefits from price controls.
 - D) Price controls improve the efficiency of the market.
24. Mr. Freezee operates a fleet of ice cream trucks that drive around neighborhoods selling ice cream. He is trying to decide whether he should buy another ice cream truck to add to his fleet. He determines that one more truck will add \$750 to his revenue, but that the truck will also increase his costs by \$1,000. Based on marginal analysis, Mr. Freezee decides:
- A) that he should purchase the truck since the benefits outweigh the costs.
 - B) that he should purchase the truck since his profits will rise by \$250.
 - C) that he should not purchase the truck since the costs outweigh the benefits.
 - D) to purchase several trucks with the same costs and benefits.

25. Economists use the term 'long term growth' to indicate:
- A) growth of the economy over a period longer than one year but less than five years.
 - B) long-run growth of the economy only in a secular society.
 - C) the expansion phase of the business cycle.
 - D) growth of the economy over several decades.

The next questions are from your homework. Answer in the space provided. Please give short answers and use complete sentences. If you do not explain your answer it will be marked wrong, even if you write down a correct number.

1. Please answer the following **(1 point each)**. Except where noted, you do not need to explain your answers for this particular question.
 - a. What three measures of the economy tend to move together during the business cycle?
 - b. Which way do they move during an upturn? During a downturn?
 - c. Who in the economy is hurt during a recession? How?
 - d. How did Milton Friedman alter the consensus that had developed in the aftermath of the Great Depression on how the economy should be managed?

2. Two important industries on the island of Bermuda are fishing and tourism. According to data from the World Resources Institute and the Bermuda Department of Statistics, in the year 2000 the 307 registered fishermen in Bermuda caught 286 metric tons of marine fish. And the 3,409 people employed by hotels produced 538,000 hotel stays (measured by the number of visitor arrivals). Suppose that this production point is efficient in production. Assume also that the opportunity cost of one additional metric ton of fish is 2,000 hotel stays and that this opportunity cost is constant.

- a. If all 307 registered fishermen were to be employed by hotels (in addition to the 3,409 people already working in hotels), how many hotel stays could Bermuda produce?

(1 point)

- b. If all 3,409 hotel employees were to become fishermen (in addition to the 307 fishermen already working in the fishing industry), how many metric tons of fish could Bermuda produce? **(1 point)**

- c. Draw a production possibility frontier for Bermuda, with fish on the horizontal axis, and label Bermuda's actual production point for the year 2000 **(2 points)**.

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4. An insurance company has found that the severity of property damage in a fire is positively related to the number of firefighters arriving at the scene. **(2 points each)**
- a. Draw a diagram that depicts this finding with number of firefighters on the horizontal axis and amount of property damage on the vertical axis. What is the argument made by this diagram? Suppose you reverse what is measured on the two axes. What is the argument made then?
- b. In order to reduce its payouts to policyholders, should the insurance agency therefore ask the city to send fewer firefighters to any fire?