

Economics 101  
Fall 2010  
10/05/10  
First Midterm

Name \_\_\_\_\_  
TA Name \_\_\_\_\_  
Discussion Section # \_\_\_\_\_  
Student ID # \_\_\_\_\_

**Version 1**

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

You have 75 minutes to complete the exam. The exam consists of 10 binary choice and 26 multiple choice questions. Each binary choice question is worth 2 points and each multiple choice question is worth 3 points for a total of 98 points. The final two points of the exam depend upon your 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:**

Chris Reynolds	Jing Tao	Yi Li	Zhewen Xu	Zichen Qiu
DIS 315 3:30 Th	DIS 316 12:05 W	DIS 309 3:30 W	DIS 304 3:30 Th	DIS 301 3:30 W
DIS 305 1:20 F	DIS 313 3:35 Th	DIS 307 4:45 W	DIS 314 4:35 Th	DIS 306 4:45 W
	DIS 317 8:50 F	DIS 318 8:50 F	DIS 319 1:20 F	DIS 302 2:25 F
	DIS 311 9:55 F	DIS 312 9:55 F	DIS 310 2:25 F	

## 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 \_\_\_\_\_

*I. Binary Choice Questions (10 questions worth 2 points each)*

- 1.) Given the equation:  $y = 10 - 7x$ , we can say that  $x$  and  $y$  are:
  - a. Directly related.
  - b. Inversely related.
- 2.) The average toe-nail length of students taking this exam would best represent an example of:
  - a. Cross-sectional data
  - b. Time-series data
- 3.) Suppose Bob and Sue's PPFs for bread and jam have different slopes. Which of the following statements is always true?
  - a. Bob will always have the comparative advantage in one good, and Sue will always have the comparative advantage in the other good.
  - b. Bob will always have the absolute advantage in one good, and Sue will always have the absolute advantage in the other good.
- 4.) What is the primary difference between a PPF that is linear and a PPF that is bowed out from the origin?
  - a. Technology is constant in the linear version of the PPF, but technology may change in the "bowed out" version of the PPF.
  - b. Opportunity cost is constant in a linear version of the PPF, but opportunity cost varies as you move along the "bowed out" version of the PPF.
- 5.) "If a statement is false it is neither normative nor positive."
  - a. This is a true statement.
  - b. This is a false statement.
- 6.) When the supply curve and the demand curve simultaneously shift to the right, the equilibrium quantity is increased.
  - a. True
  - b. False
- 7.) \$5 is more than Laura's opportunity cost for a muffin. \$5 is less than Bill's opportunity cost for a muffin. Both will gain from trade if Laura sells Bill a muffin.
  - a. True
  - b. False

- 8.) Suppose Joe's opportunity cost of producing two bikes is four chairs while Sue's opportunity cost of producing 3 chairs is 6 bikes. The trading price range for 1 bike will therefore be between:
- 2 chairs and 3 chairs.
  - $\frac{1}{2}$  chair and 2 chairs.
- 9.) Suppose that the market for ham sandwiches is initially in equilibrium. Then, suppose that researchers discover that eating ham prolongs life expectancy by five years; at the same time the government decides to subsidize consumers of ham. Given these two changes, which of the following statements is correct?
- The equilibrium price of ham sandwiches will increase while the equilibrium quantity of ham sandwiches may increase, decrease, or remain the same.
  - The equilibrium price of ham sandwiches will increase as will the equilibrium quantity of ham sandwiches.
- 10.) If a good is a normal good, then a decrease in salary increases the demand for the good.
- True
  - False

## *II. Multiple Choice Questions (26 questions worth 3 points each)*

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

Your classmates are planning to go to Miami for spring break, and you are undecided about whether you should go with them. The round-trip airfares are \$600, but you have a frequent-flyer coupon worth \$500 that you could use to pay part of the airfare. All other costs for the vacation are exactly \$900. The most you would be willing to pay for the trip is \$1,400. Your only alternative use for your frequent-flyer coupon is for your trip to San Antonio two weeks after the break to attend your sister's graduation, which your parents are forcing you to attend and forcing you to pay for as well, but from which you derive no benefits. The San Antonio round-trip air-fare is \$450.

- 11.) Ignoring the San Antonio trip for now, if you do not use the frequent-flyer coupon to fly, should you go to Miami?
- Yes, your benefit from taking the trip is more than your cost of taking the trip.
  - No, your benefit from taking the trip is less than your cost of taking the trip.
  - Yes, your benefit from taking the trip is equal to your cost of taking the trip.
  - No, because there are no benefits from taking the trip.
- 12.) If you use the frequent-flyer coupon to fly to Miami, would you get any economic surplus by making the trip? In your calculation, don't forget that you must also attend your sister's graduation.
- No, there is a loss of \$50.
  - Yes, surplus of \$350.
  - Yes, surplus of \$400.
  - No, there is a loss of \$2,400.

- 13.) If the round-trip air-fare for the San Antonio trip cost \$350, should you go to Miami? In your calculation remember that you must attend your sister's graduation.
- a. No, there is a loss of \$50.
  - b. No, there is a loss of \$100.
  - c. Yes, there is economic surplus of \$50.
  - d. Yes, there is economic surplus of \$400.
- 14.) You are sitting in an airport waiting for your flight to Madison to leave. Your flight is scheduled to make a stop in Milwaukee and will arrive in Madison at 4:00 pm. The ticket agent at your gate announces that the airline is looking for volunteers to take a different flight to Madison. This flight leaves slightly later, but also arrives in Madison at 4:00 pm because it does not stop in another city first. The ticket agent is willing to give \$50 to whomever volunteers to bump from their scheduled flight to the later flight. If you decide not to volunteer, which of the following is certainly true?
- a. Your opportunity cost remains unchanged.
  - b. The \$50 incentive to switch flights is irrelevant data as far as making a decision about which flight to take since you have already paid for your airplane ticket.
  - c. Your flight just got \$50 more expensive, economically.
  - d. You have made the wrong decision because the costs outweigh the benefits.

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

In one game, it takes Minnesota 10 players to produce a fumble and 7 players to produce a turnover. In one game, it takes Ohio State 5 players to produce a fumble and 6 players to produce a turnover. Both teams have 11 players.

- 15.) With fumbles on the vertical axis, what is the slope of the PPF for Ohio State?
- a.  $-11/6$
  - b.  $-11/5$
  - c.  $-5/6$
  - d.  $-6/5$
- 16.) Which of the following statements is true?
- a. Minnesota has the absolute advantage in both fumbles and turnovers.
  - b. Ohio State has the absolute advantage in both fumbles and turnovers.
  - c. Minnesota has the absolute advantage in fumbles while Ohio State has the absolute advantage in turnovers.
  - d. Ohio State has the absolute advantage in fumbles while Minnesota has the absolute advantage in turnovers.

- 17.) Which of the following statements is true?
- a. Minnesota has the comparative advantage in the production of both fumbles and turnovers.
  - b. Ohio State has the comparative advantage in the production of both fumbles and turnovers.
  - c. Minnesota has the comparative advantage in the production of fumbles while Ohio State has the comparative advantage in the production of turnovers.
  - d. Ohio State has the comparative advantage in the production of fumbles while Minnesota has the comparative advantage in the production of turnovers.
- 18.) If these two teams were able to trade fumbles and turnovers, what would be an acceptable price (in terms of fumbles) for one turnover that both teams could agree upon?
- a.  $\frac{1}{2}$  fumble
  - b. 1 fumble
  - c. 2 fumbles
  - d. There is no price that could be agreed upon by both teams

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

Suppose there are two people, Julie and Marie, in an economy and they both produce good X and good Y. Both Julie and Marie have linear production possibilities frontiers give by the following equations:

Julie's PPF:  $X + 2Y = 1$

Marie's PPF:  $X + 3Y = 8$ .

- 19.) Julie and Marie currently do not engage in trade. We know that Julie is currently producing  $\frac{1}{4}$  unit of good Y and that Marie is currently producing 2 units of good X. Assume that both Julie and Marie are producing at an efficient point given their production possibility frontiers. Which of the following statements is true?
- a. Total current production of good X is equal to 2.5 units while total current production of good Y is equal to 2 units.
  - b. Total current production of good Y is equal to 2.25 units while total current production of good X is equal to 2.5 units.
  - c. Total current production of good X is equal to 1 unit while total current production of good Y is equal to 1.6 units.
  - d. Total current production of good X is equal to 2.5 units while total current production of good Y is equal to .8 units.
- 20.) Given the above information, which of the following statements is true?
- a. Julie has the comparative advantage in the production of good X.
  - b. Marie has the comparative advantage in the production of good X.
  - c. Neither Julie nor Marie has the comparative advantage in production of good X.
  - d. Neither Julie nor Marie has the comparative advantage in production of good Y.

Use the following information to answer the next three questions.

Suppose a market for a good is characterized by the following demand and supply equations, where Q is the quantity and P is the price of the good:

Demand:  $Q = 25 - (1/8)P$

Supply:  $Q = (1/2)P$ .

- 21.) What is the equilibrium price and equilibrium quantity in this market?
- Equilibrium price is \$40, equilibrium quantity is 20
  - Equilibrium price is \$20, equilibrium quantity is 40
  - Equilibrium price is \$40, equilibrium quantity is 40
  - Equilibrium price is \$20, equilibrium quantity is 20
- 22.) Calculate the value of consumer surplus (CS) and producer surplus (PS) in this market.
- CS = \$1,400; PS = \$600
  - CS = \$100; PS = \$400
  - CS = \$1600; PS = \$400
  - CS = \$400; PS = \$400
- 23.) Suppose that the government decides to implement a price floor in the market for this good. Furthermore, suppose that the price floor is set at a price of \$35. Holding everything else constant, which of the following statements is true?
- This price floor will create a surplus in this market.
  - This price floor will create a shortage in this market.
  - It is impossible to determine the effect of this price floor without further information.
  - This price floor will not affect this market.
- 24.) Congress is meeting this week to discuss the economy. There is general concern about the economy's performance and the need to help constituents who have found recent economic events difficult. One proposal currently being debated is the idea of raising the currently effective minimum wage by 20%. The representative presenting this idea argues that this will be an effective way to raise household income for all those people working for the lowest legal wages in the economy. Which of the following statements is true?
- Holding everything else constant, an increase in the effective minimum wage will help all workers working at the lowest legal wages since it will raise their wage.
  - Holding everything else constant, an increase in the effective minimum wage will help those workers who are able to hold onto or attain employment at this wage rate, but the overall level of employment of labor among low wage workers in the economy will decrease as the level of the minimum wage is increased.
  - Holding everything else constant, an increase in the effective minimum wage will make more highly skilled labor relatively more expensive.
  - The idea will backfire because everyone who is currently earning the minimum wage will lose their job when that minimum wage is increased.

- 25.) Consider a market for a good where the demand and supply curves are as follows, where  $P$  is the price per unit and  $Q$  is the quantity. Say that in this market there is an increase in population that results in the quantity demanded at every price doubling. What will be the new equilibrium quantity? Hint: Draw a sketch to help you!
- Demand:  $P = 80 - 4Q$   
Supply:  $P = 6Q + 20$
- a. 6
  - b. 7.5
  - c. 10
  - d. 12
- 26.) In the market for lumber the following equations describe supply and demand. Find the equilibrium price in this market.
- Supply:  $P = 4Q + 1$   
Demand:  $P = 3 - Q$
- a. \$2.4
  - b. \$2.6
  - c. \$2.8
  - d. \$3

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

The market for absinthe can be described by the following equations:

Demand:  $Q = 400 - 2P$

Supply:  $P = 2Q$

The government decides that absinthe is a vile and dangerous hallucinogen and considers banning it outright. However, after some discussion with industry lobbyists, the government is reminded that absinthe is delicious and shouldn't be banned. Instead, they tax absinthe producers \$5 per bottle.

- 27.) What was the original, pre-tax, price of absinthe?
- a. \$80
  - b. \$100
  - c. \$160
  - d. \$200
- 28.) What equations best describe the new, post-tax, market for absinthe?
- a.  $P = 200 - .5Q$  and  $P = 2Q + 5$
  - b.  $P = 200 - .5Q$  and  $P = 2Q + 10$
  - c.  $P = 197.5 - .5Q$  and  $P = 2Q$
  - d.  $P = 205 - .5Q$  and  $P = 2Q$



- 29.) What will be the new equilibrium net price (that the producer receives after paying the excise tax) of absinthe after the tax?
- a. \$105
  - b. \$156
  - c. \$161
  - d. \$165
- 30.) How much money will the government raise in tax revenue from this excise tax?
- a. \$0
  - b. \$390
  - c. \$400
  - d. \$420
- 31.) How much is the deadweight loss to society due to the imposition of this excise tax?
- a. \$0
  - b. \$5
  - c. \$10
  - d. \$25
- 32.) All is well and normal in the market for potatoes until two, simultaneous shocks send the market reeling. At the exact same time that a dire potato famine cripples farms and fields globally, Mr. Potato Head toys (the old-school kind that require an actual potato) become a runaway international sensation among the youth of the world. Is this sufficient information for an economist to compare the old and new market equilibria for potatoes?
- a. This information is plenty for an economist to intuit the direction of change for both the equilibrium price and the equilibrium quantity.
  - b. This information is plenty for an economist to intuit the direction of change for the equilibrium price, but not the direction of change in the equilibrium quantity.
  - c. This information is plenty for an economist to intuit the direction of change for the equilibrium quantity, but not the direction of change in the equilibrium price.
  - d. There is not enough information here for an economist to intuit the direction of change for either the equilibrium price or the equilibrium quantity.
- 33.) A new production technology allows tennis balls to be produced much faster and more cheaply (with no quality loss) than previous production methods. All else equal, what is the effect on the market for tennis rackets?
- a. A rightward shift in supply
  - b. A leftward shift in demand
  - c. A rightward shift in demand
  - d. There is not enough information to say

- 34.) It turns out that every man, woman, and child in America is living directly on top of a massive sea of oil. New wells are drilled and the money earned goes directly into all of our pockets. We are all filthy, stinking rich! Hooray! Holding everything else constant, what is the effect of this change on the market for a particular good?
- a. A leftward shift in demand
  - b. A rightward shift in demand
  - c. A leftward shift in supply
  - d. There is not enough information to say

*Use the following information for the next two problems.*

Consider the market for cabbage. Like most agricultural products, the market has many buyers and sellers and there is good information about the supply function for cabbage farmers. Currently, the market for cabbage is described by the following functions:

$$\text{Demand: } P = 100 - 2Q$$

$$\text{Supply: } P = 4 + Q$$

- 35.) The government institutes a Price Support Program in which it sets a price floor and agrees to buy any surplus cabbage in the market. The price floor is set at  $P = 40$ . How much will the government spend buying surplus cabbage? Ignore any cost related to cabbage storage in Nebraskan caves, transportation costs, etc.
- a. \$1,152
  - b. \$1,200
  - c. \$1,440
  - d. \$240
- 36.) How much more money do cabbage farmers receive under the price support program than they did in the market before the program started? Hint: Don't confuse revenue, which we're asking about here, with producer surplus.
- a. \$48
  - b. \$240
  - c. \$288
  - d. \$300

Number	Answers
1	B
2	A
3	A
4	B
5	B
6	A
7	A
8	B
9	B
10	B
11	B
12	A
13	C
14	C
15	D
16	B
17	D
18	B
19	B
20	B
21	A
22	C
23	D
24	B
25	B
26	B
27	C
28	A
29	B
30	B
31	B
32	B
33	C
34	D
35	D
36	C