

ECON 251 DISTANCE LEARNING: MAY 2014
MIDTERM EXAM

Student's Name: _____

Proctor's Name: _____

Date: _____

INSTRUCTIONS

To the student:

- You have a maximum of 2 hours to complete the exam
- The exam is closed notes & book. You are not permitted to consult any outside resources.
- You can use a *non-graphing* calculator only
- Scratch paper can be used, but it must be provided by your proctor
- Circle your answers clearly on the exam and give the exam to your proctor when finished
- Failure to follow these guidelines will result in an automatic 0 for the exam score

To the proctor:

- The student should adhere to the guidelines listed above
- Once they have finished taking the exam, please scan and return the exam to jbrindl@purdue.edu unless other arrangements have been made
- Students are not permitted to keep the exam since other students may be taking it at a later time.
- Thank you for taking to the time to administer the exam and please contact me if you have any questions

-Jacob Brindley

Instructor ECON 251

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Use the following information to answer questions #1-#4.

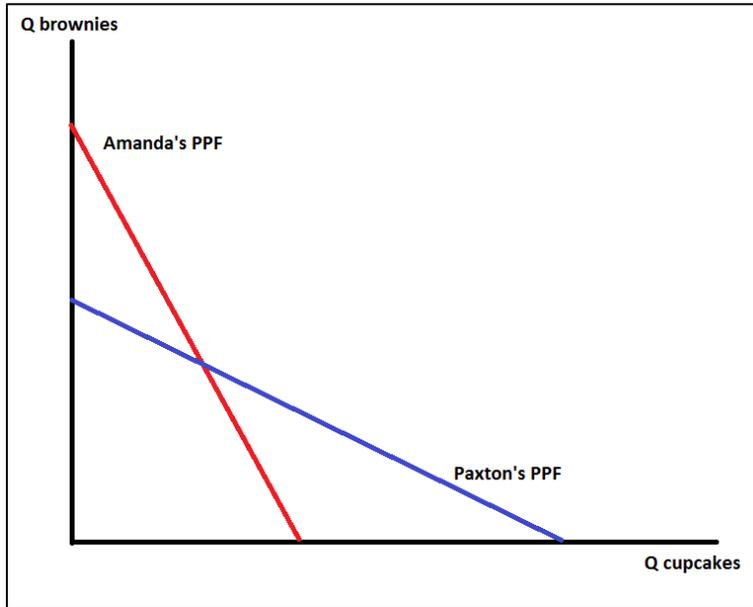
Jennifer and Brad are two secretaries in a local office. In one hour, Jennifer can send 30 emails or she can type 15 pages. In the same amount of time, Brad can send 25 emails or type 10 pages.

1. ____ has the absolute advantage in sending emails while ____ has the absolute advantage in typing pages.
 - a. Jennifer; Jennifer
 - b. Jennifer; Brad
 - c. Brad; Jennifer
 - d. Brad; Brad

2. What is Brad's marginal cost of sending 1 email?
 - a. 1/2 of a typed page
 - b. 2/5 of a typed page
 - c. 2 typed pages
 - d. 2.5 typed pages

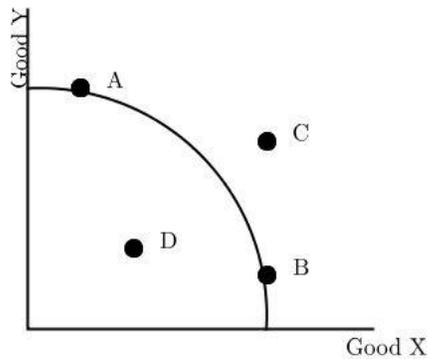
3. The person with the comparative advantage in sending emails has the ____ marginal cost of sending an email. Based on this fact, ____ has the comparative advantage in sending emails.
 - a. Lower; Jennifer
 - b. Lower; Brad
 - c. Higher; Jennifer
 - d. Higher; Brad

4. Assume that Jennifer and Brad work together to send emails and type pages. Which of the following points would NOT be on Jennifer and Brad's joint production possibility frontier? (Note: It does not matter which task you measure on which axis for this problem. If it helps, assume that emails are on the x-axis and pages are on the y-axis).
 - a. 55 emails and 0 pages
 - b. 30 emails and 10 pages
 - c. 25 emails and 15 pages
 - d. 0 emails and 25 pages



5. Based on the graph above, _____ has the absolute advantage in brownie making, while _____ has the comparative advantage in brownie making.
- Paxton; Amanda
 - Amanda; Paxton
 - Paxton; Paxton
 - Amanda; Amanda

Use the figure below to answer question #6:



6. Compared to point A, the marginal cost of producing good Y at point B is
- Higher
 - The same
 - Lower
 - More information is needed to answer this question.

7. If a large amount of skilled labor immigrates into the country, which allows the available resources to produce more of goods X and Y, which of the following would occur?
 - a. The y-intercept of the PPF will rise, and the x-intercept of the PPF will fall.
 - b. The y-intercept of the PPF will rise, and the x-intercept of the PPF will rise.
 - c. The y-intercept of the PPF will fall, and the x-intercept of the PPF will fall.
 - d. The y-intercept of the PPF will fall, and the x-intercept of the PPF will rise.

Use the following information to answer questions #8-#9.

The table below represents different points along a production possibilities frontier:

Quantity of Cars	Quantity of Cookies
4	0
3	1000
2	1750
1	2250
0	2500

8. What is the marginal cost of producing the second car?
 - a. 500 cookies
 - b. 750 cookies
 - c. 1750 cookies
 - d. 2750 cookies

9. Which of the following points would be considered infeasible?
 - a. (0 cars, 2000 cookies)
 - b. (2 cars, 1750 cookies)
 - c. (2.5 cars, 300 cookies)
 - d. (3 cars, 1500 cookies)

10. Which of the following would decrease the demand for movie tickets?
 - a. An increase in the price of movie tickets
 - b. A decrease in the price of popcorn, a complement in consumption
 - c. An decrease in income, and movie tickets are a normal good
 - d. Both a & c are correct

11. How does a decrease in demand for movie tickets affect equilibrium in the market for movie tickets?
 - a. Equilibrium price will rise, and equilibrium quantity will be indeterminate
 - b. Equilibrium price will fall, and equilibrium quantity will fall
 - c. Equilibrium price will fall, and equilibrium quantity will rise
 - d. Equilibrium price will be indeterminate, and equilibrium quantity will fall

12. Suppose the market for coffee beans is currently in equilibrium. The producers think the price of coffee beans will be lower next month than it is currently (consumers do not have these beliefs). What will occur to the current equilibrium price and quantity of coffee beans?
- Price falls, quantity increases
 - Price falls, quantity falls
 - Price increases, quantity falls
 - Price increases, quantity increases
13. If two goods are complements in production,
- An increase in the price of one good results in an increase of supply of the other good
 - An increase in the price of one good results in an increase of demand of the other good
 - A change in the price of one good has no effect on the equilibrium quantity of the other good
 - The two goods can be produced using the same resources
14. Skim milk and cream are complements in production. Suppose the price of cream increased. At the same time, “Got Milk?” campaign about the benefits of drinking milk became very popular in the media, therefore increasing consumer tastes. Compared to the current equilibrium price and quantity of milk, the new equilibrium in the market for milk will have:
- Higher price; lower quantity
 - Higher price; indeterminate quantity
 - Indeterminate price; higher quantity
 - Lower price; higher quantity
15. If the demand curve is downward sloping while the supply curve is upward sloping, which of the following is *always* true when the price rises?
- Consumer surplus rises
 - Producer surplus rises
 - Production efficiency rises
 - Total surplus rises

Use the following information to answer questions #16-#23.

The city of Lafayette has a market for daily mini-van rentals. The inverse demand and supply equations are:

$$P = 30 - Q^d$$

$$P = 6 + 2Q^s$$

where Q^d = quantity demanded and Q^s = quantity supplied.

16. What is the marginal benefit of the 12th mini-van rental?
 - a. \$1
 - b. \$3
 - c. \$18
 - d. \$30

17. At a price of \$26, there exists a _____ of _____ vans.
 - a. Shortage; 2
 - b. Shortage; 4
 - c. Surplus; 2
 - d. Surplus; 6

18. What is the market equilibrium (Q^* , P^*), where Q^* is the equilibrium quantity and P^* is the equilibrium price?
 - a. (2, \$28)
 - b. (5, \$16)
 - c. (8, \$22)
 - d. (12, \$30)

19. When the market achieves equilibrium, what is the value of consumer surplus?
 - a. \$0
 - b. \$32
 - c. \$64
 - d. \$96

20. Suppose the government imposes a price floor of \$16. Which of the following statements is true?
 - a. There exists a shortage of 9 vans
 - b. The price floor is not binding and therefore has no effect on the market
 - c. The value of deadweight loss is \$13.50
 - d. The market no longer satisfies allocative efficiency

21. Instead of imposing a price floor, the government decides to implement an excise tax of \$6 in the market for rental vans. What is the price sellers receive after the tax is imposed?
- \$18
 - \$22
 - \$24
 - \$26
22. Sellers bear a _____ tax incidence (i.e. tax burden) than consumers. This indicates that supply is _____ elastic than demand.
- Lower; less
 - Lower; more
 - Higher; less
 - Higher; more
23. What is the value of the tax revenue for the government?
- \$3
 - \$36
 - \$48
 - \$150
24. Deadweight loss:
- Exists whenever total surplus is not maximized
 - Can only result from underproduction
 - Occurs at the point that satisfies allocative efficiency
 - Always results from government intervention in a market
25. A binding minimum wage is an example of:
- A price floor
 - A price ceiling
 - An excise tax
 - A market that achieves no deadweight loss

Use the following information to answer questions #26-#27.

Amber owns an ice cream shop. Before, Amber was selling 50 ice cream cones a day at \$2 each. Now, Amber decided to charge \$1 per cone and she now sells 90 ice cream cones in a day.

26. What is the price elasticity of demand for ice cream cones in this price range?
- $6/7 = 0.86$
 - $8/5 = 1.6$
 - $8/21 = 0.38$
 - $5/8 = 0.63$

27. After the price decrease, Amber's total revenue _____. As a result, demand for ice cream cones is _____ between \$1 and \$2.
- Fell; inelastic
 - Fell; elastic
 - Rose; inelastic
 - Rose; elastic
28. The cross price elasticity for Amber's ice cream cones and graham crackers is -0.45. Based on this information we know that ice cream cones and graham crackers are:
- Substitutes in consumption
 - Substitutes in production
 - Normal goods
 - Complements in consumption
29. When supply is perfectly elastic, then the slope of the supply curve is ____.
- Bigger than unity (i.e. 1).
 - Zero.
 - Infinite.
 - Unity.
30. In a particular market (for some arbitrary good), the supply curve is perfectly elastic and the demand curve is downward sloping, which of the following is true if the government imposes an excise tax?
- Consumers bear the entire burden of the tax
 - Consumers and suppliers split the tax burden equally
 - The quantity sold after the tax satisfies allocative efficiency
 - Both a & c
31. Suppose the income elasticity of demand for Kit Kats is -0.4. Then, a 25% increase in the consumer income is associated with ____ in the quantity of Kit Kats demanded.
- 10% increase
 - 10% decrease
 - 90% increase
 - 90% decrease

Use the following information to answer questions #32-#34.

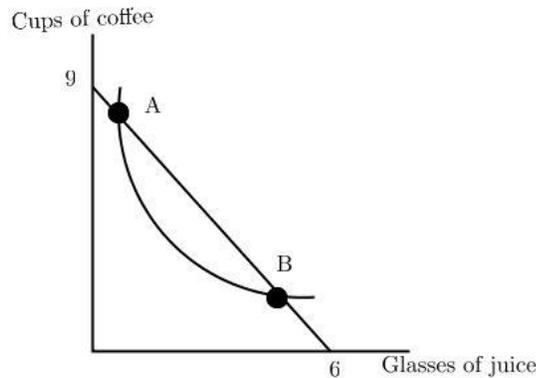
Ella has \$80 to spend each week on cab rides and bus rides. A cab ride costs \$30 and a bus ride costs \$5. The table below shows Ella's marginal utilities of cab rides and bus rides. Use it to answer the following three questions:

Rides per week	Utility from 1 cab ride	Utility from 1 bus ride
1	240	110
2	300	140
3	340	160
4	360	170
5	370	175

32. What is Ella's marginal utility of the 4th bus ride?
- a. 170
 - b. 2
 - c. 10
 - d. 5
33. What is Ella's marginal utility per dollar spent of the 2nd cab ride?
- a. 60
 - b. 2
 - c. 3
 - d. 100
34. If Ella maximizes her utility, she will consume ____ cab rides and ____ bus rides.
- a. 2; 4
 - b. 5; 0
 - c. 3; 3
 - d. 4; 5
35. Wouter spends all his income on soccer balls and sneakers. The price of a soccer ball is \$15 and the price of sneakers is \$50 per pair. The marginal utility for the last soccer ball purchased is 12. The marginal utility for the last pair of sneakers is 40. To maximize his utility, Wouter should buy ____.
- a. More soccer balls and fewer pairs of sneakers
 - b. More pairs of sneakers and fewer soccer balls
 - c. The present combination of goods
 - d. Only sneakers

36. Saniya's marginal utility from her 5th visit to the park is 55 and marginal utility from the 6th visit to a park is 40. Which of the following could be her marginal utility from the 7th visit to a park?
- 50
 - 65
 - 25
 - More information is needed to answer this question.

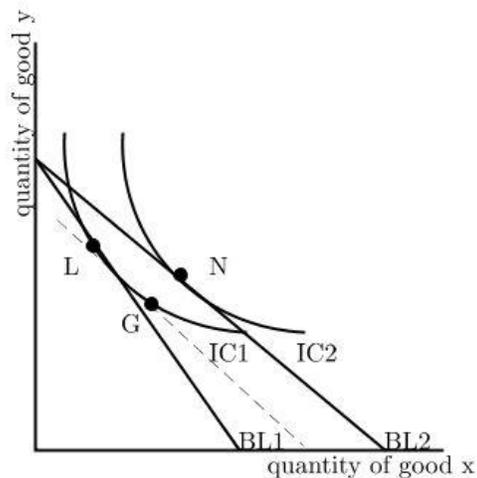
Use the following information to answer questions #37-#40.



37. In the figure above, the consumer spends all of his income on juice and coffee. The price of a cup of coffee is \$3. What is the consumer's income?
- \$18
 - \$20
 - \$27
 - \$33
38. Consider the budget line above. Assume that consumer spends all of his income on coffee and juice. If the price of a cup of coffee is \$3, the price of a glass of juice is ____.
- \$2.50
 - \$2
 - \$3
 - \$4.50

39. In the figure above, which of the following statements is TRUE?
- I. The marginal rates of substitution at points A and B are equal because they are on the same indifference curve.
 - II. The marginal rate of substitution is higher at point A than at point B.
 - III. The consumer maximizes utility by consuming at both points A and B.
- a. Only I
 - b. Both I and III
 - c. Only II
 - d. Both II and III
40. In the figure above, at the best affordable point (i.e. the bundle that maximizes utility), the marginal rate of substitution for a glass of juice is ____.
- a. 9 cups of coffee
 - b. 1.5 cups of coffee
 - c. 2/3 of a cup of coffee
 - d. 1 cup of coffee

Use the following information to answer questions #41-#43.



41. Consider the budget line labeled BL1 in the figure above. Which of the following would shift the budget line to BL2?
- a. An increase in the price of good x
 - b. A decrease in the price of good x
 - c. An increase in the price of good y
 - d. A decrease in the price of good y

42. In the figure above, if the budget line shifts from BL1 to BL2, the substitution effect is illustrated by the movement from ____.
- L to N
 - L to G
 - G to N
 - G to L
43. In the figure above, if the budget line shifts from BL1 to BL2, the demand for good x ____.
- Shifted to the right
 - Shifted to the left
 - Is downward sloping
 - Is perfectly elastic
44. A Giffen good:
- Satisfies the law of demand
 - Is a special type of inferior good
 - Occurs when the substitution and income effects move in the same direction
 - Is found very frequently in society
45. Which of the following is NOT a scarce resource?
- Clean drinking water
 - Oil
 - Student employees at Purdue
 - Trash
46. _____ is an example of a land resource, while _____ is an example of a capital resource.
- Gold; money
 - Oil; a computer
 - A factory; a hammer
 - Money; a school teacher
47. Which of the following statements is an example of a normative statement?
- A shortage puts upward pressure on the market price.
 - Most of the time, taxes create inefficiencies in a market.
 - Scarcity forces us to make tradeoffs.
 - Rent control is unfair and the government should not be allowed to use it.

48. Which of the following is NOT included as part of the opportunity cost?
- Explicit costs
 - Implicit costs
 - Sunk costs
 - All of these costs—explicit, implicit, & sunk—are actually included as part of the opportunity cost
49. Tony can do one of three activities on his Saturday afternoon. He can play tennis, which he values at \$15. He can watch television, which he values at \$10. Finally, he can read his favorite novel, which he values at \$20. Which of the following statements is true?
- The opportunity cost of watching television is \$35
 - If Tony decides to play tennis, he is making a rational decision
 - The opportunity cost of reading the novel is \$15
 - Both b & c are correct
50. Amina has two job offers and she can only accept one of them. Job A offers her a salary of \$65,000 a year. Job B offers her a salary of \$75,000 a year. However, if she accepts Job B, she will incur \$3,000 a year to commute to and from her work. If Amina takes Job B, what is her opportunity cost of doing so?
- \$65,000, the salary she would have obtained if she took Job A; \$3,000 cost of commuting is a sunk cost
 - \$68,000, the salary that she would have obtained if she took Job A and the \$3,000 a year as a cost of commuting
 - \$10,000, the difference between the salaries
 - \$65,000, the salary she would have obtained if she took Job A