

NAME: _____

STUDENT ID: _____

Final Exam

ECON 101, Section 2

summer 2004

Ying Gao

Instructions – Please read carefully!

1. Print your name and student ID number at the top of this cover sheet.
2. Check that your exam contains 60 multiple choice questions and 3 short answer questions
3. You will have two hours to complete the exam. You are responsible for keeping track of the time - pace yourself wisely.

Multiple choice questions 1-60 (1.5 points each)

1. The study of how firms interact in a market is a (c)
 - a. waste of time
 - b. normative subject
 - c. microeconomic topic
 - d. topic in political science
 - e. macroeconomic topic

2. Usually, disagreements among economists (c)
 - a. are positive in nature
 - b. are minor and rarely lead to different policies or conclusions
 - c. are normative in nature
 - d. occur as the result of a mistake made by an economist
 - e. occur because economic models are more complex, and subject to error, than the real world

3. "The Consumer Price Index increased by 4.2 percent in the first quarter of this year." What type of statement is this? (c)
 - a. normative
 - b. negative
 - c. positive
 - d. subjective
 - e. biased

4. The study of economics would be superfluous if _____ did *not* exist. (e)
 - a. demand
 - b. capital
 - c. corporations
 - d. profit

e. scarcity

5. The opportunity cost of a particular activity is the sum of the benefits that could have been received from all foregone activities. (b)

- a. True
- b. False

6. Suppose your friends take you out for dinner on your birthday and you have a much better time than you would have had doing anything else. There is still an opportunity cost, even though they will not let you pay for anything. (a)

- a. True
- b. False

7. A professional basketball players' union negotiates a contract that dramatically increases all players' salaries. How would this influence the opportunity cost for a player who was considering giving up basketball to pursue a career in broadcasting? (d)

- a. it would not affect the opportunity cost of playing basketball or of broadcasting
- b. it would increase the opportunity cost of continuing to play professional basketball
- c. it would cause the production possibilities frontier to become convex
- d. it would increase the opportunity cost of becoming a broadcaster
- e. it should have no bearing on the player's decision from an economic standpoint

8. Carl is considering attending a concert with a ticket price of \$35. He estimates that the cost of driving to the concert and parking there will total an additional \$20. In order to attend the concert, Carl will have to take time off from his part-time job. He estimates that he will lose 5 hours at work, at a wage of \$6 per hour. Carl's opportunity cost of attending the concert equals (e)

- a. \$35
- b. \$55
- c. \$30
- d. \$65
- e. \$85

9. As a society produces more and more of one good, it must give up increasing amounts of the alternative good. This demonstrates the (c)

- a. law of demand
- b. convexity of the production possibilities frontier
- c. law of increasing opportunity cost
- d. principle of productive inefficiency
- e. effects of shifts in the level of technology

10. Which of the following statements about markets is false? (d)

- a. markets are used to allocate resources in market systems
- b. markets can vary in geographical size
- c. prices are used to allocate goods in markets
- d. markets are used to allocate resources in centrally-planned socialist economic systems

e. supply and demand explains how prices are set in competitive markets

11. Suppose that a large dairy farmer is able to raise the market price of milk by withholding milk supply from the market. In this instance, (d)

- a. the milk market is perfectly competitive
- b. buyers will decrease their demand for milk
- c. buyers will increase their demand for milk
- d. the milk market is imperfectly competitive
- e. the milk market will collapse in the long run

12. Which of the following would *not* cause the demand curve for college football tickets to shift? (c)

- a. an increase in the price of professional football tickets
- b. a decrease in the price of college basketball tickets
- c. an increase in the price of college football tickets
- d. a drop in student incomes
- e. an increase in student preferences for college football tickets

13. A good is said to be a normal good when (b)

- a. decreases in income lead to an increase in demand for the good
- b. decreases in income lead to a decrease in demand for the good
- c. increases in income lead to a decrease in demand for the good
- d. increases in price lead to a decrease in the quantity demanded of the good
- e. increases in price lead to a decrease in demand for the good

14. Which of the following best defines quantity supplied? (a)

- a. the amount of a good sellers would choose to produce, in a given set of circumstances
- b. the amount of a good sellers will be able to sell, in a given set of circumstances
- c. the various amounts of a good sellers would like to sell over various sets of circumstances
- d. the amount of a good sellers would like to sell if they could choose the price for which it sold
- e. the amount of a good that sellers would be able to sell if they could choose the price for which it sold

15. If the same dairy can produce either whole milk or skim milk, an increase in the profitability of whole milk results in a(n) (c)

- a. decrease in the quantity supplied of whole milk
- b. increase in the supply of whole milk
- c. decrease in the supply of skim milk
- d. increase in the supply of skim milk
- e. decrease in the quantity supplied of skim milk

16. An excess supply of rice in a competitive market would indicate that (e)

- a. the problem of scarcity has been solved in that market
- b. buyers want to purchase more rice at the current price than the sellers want to sell
- c. the market will not be able to approach equilibrium
- d. the entire supply curve must shift to the left in order to attain equilibrium
- e. the current price exceeds the equilibrium price

17. If both the demand and supply curves for computers shift to the right, the price of computers may rise, fall, or remain unchanged. (a)

- a. True
- b. False

18. Suppose that the market for lima beans is in equilibrium, and both the supply and demand curves for lima beans shift to the left. As a result, the equilibrium price _____ and the equilibrium quantity will _____. (d)

- a. will fall; fall
- b. will fall; rise
- c. will rise; fall
- d. cannot be determined; fall
- e. cannot be determined; rise

19. A government-imposed price ceiling below the market's equilibrium price will create an excess demand for the product. As a result of the excess demand, either the demand curve will tend to shift to the left or the supply curve will shift to the right-or both. (b)

- a. True
- b. False

20. The price elasticity of demand (c)

- a. is negative for price increases and positive for price decreases
- b. is positive for price increases and negative for price decreases
- c. is negative for goods that follow the law of demand
- d. is positive for goods that follow the law of demand
- e. could be positive or negative depending on the change in buyers' incomes that accompanies a price change

21. If a 10 percent rise in the price of bananas leads to a 20 percent reduction in the quantity of bananas demanded, then the price elasticity of demand is -0.50. (b)

- a. True
- b. False

22. When demand is price elastic, a decrease in price results in a(n) (e)

- a. decrease in total expenditure on the good
- b. unfavorable shift in tastes and preferences
- c. decrease in total revenue to the seller
- d. increase in supply of the good
- e. increase in total expenditure on the good

23. When demand is price inelastic, (d)

- a. price and total revenue change in opposite directions
- b. a seller should decrease the price to increase total revenue
- c. too few goods are being produced from society's point of view
- d. price and total revenue change in the same direction

e. the market can never be in equilibrium

24. As a result of heavy spring rains in the Midwestern states, the corn crop declined sharply. If corn growers experienced an increase in sales revenue, the demand for corn must be (b)

- a. price-elastic
- b. price-inelastic
- c. unitary elastic
- d. perfectly inelastic
- e. perfectly elastic

25. The long-run price elasticity of demand for a good tends to be (c)

- a. positive, while the short-run elasticity is negative
- b. smaller (in absolute value) than the short-run price elasticity
- c. larger (in absolute value) than the short-run price elasticity
- d. negative, while the long-run elasticity is positive
- e. the same as the short-run elasticity

26. If food is measured on the horizontal axis of a budget line diagram, and clothing is measured on the vertical axis, the slope of the budget line (e)

- a. may be positive if the price of clothing is high enough
- b. may be positive if the price of food is high enough
- c. may be positive if income is large enough
- d. equals minus the maximum consumption of food divided by the maximum consumption of clothing
- e. equals minus the maximum consumption of clothing divided by the maximum consumption of food

Table-1

Income = \$ 100

Price per Ticket = \$20

Price per Compact Disk \$ 10

Quantity of Concert Ticket	Quantity of Compact Disks
5	0
4	2
3	4
2	6
1	8
0	10

27. Joe spends all of his money on concert tickets and compact disks. Table -1 shows his budget constraint when his income is \$100. The price of a ticket is \$20, while the price of a compact disk is \$10. If Joe currently buys 3 tickets and would like to purchase a fourth, his opportunity cost would be (d)

- a. 1 compact disk
- b. \$20
- c. \$10
- d. 2 compact disks
- e. 4 compact disks

28. The slope of the budget line (b)

- a. is always -1
- b. represents the opportunity cost of consuming more units of the good measured on the horizontal axis
- c. increases as more of one good is consumed
- d. decreases as more of one good is consumed
- e. is negative because of the law of demand

29. Suppose that Trey spends all of his income on vacation trips and textbooks. If the price of a trip is \$200 and the price of a textbook is \$50, then the slope of his budget line (assuming vacation trips are measured on the vertical axis) would be (e)

- a. -4
- b. 4
- c. 0.25
- d. -1.75
- e. -0.25

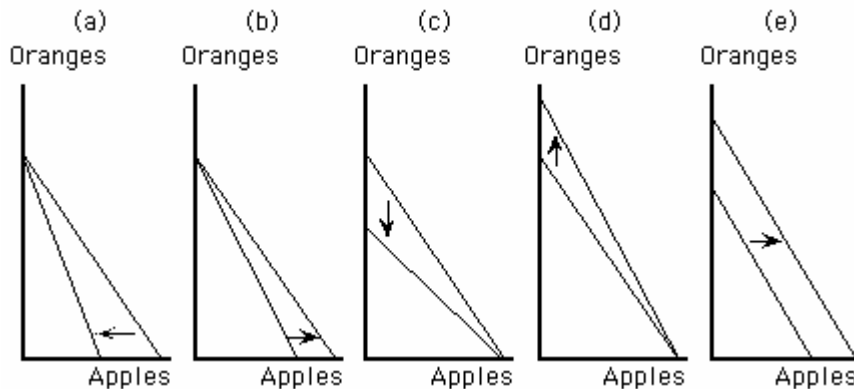
30. If income decreases, there will be a parallel inward shift of the budget line. (a)

- a. True
- b. False

31. An increase in the price of the good measured on the vertical axis of a budget line diagram will (d)

- a. cause a parallel outward shift of the budget line
- b. leave the budget line unchanged
- c. cause a parallel inward shift of the budget line
- d. make the budget line flatter
- e. make the budget line steeper

Figure-1



32. Which panel in Figure-1 shows the effect of a decrease in the price of apples, other things constant?
(b)

- a. panel a
- b. panel b
- c. panel c
- d. panel d
- e. panel e

33. Which panel in Figure-1 shows the effect of an increase in income, other things constant, if apples and oranges are both normal goods? (e)

- a. panel a
- b. panel b
- c. panel c
- d. panel d
- e. panel e

34. Which panel in Figure-1 shows the effect of an increase in the price of oranges, other things constant?
(c)

- a. panel a
- b. panel b
- c. panel c
- d. panel d
- e. panel e

35. Which panel in Figure -1 shows the combined effects of an increase in the price of oranges and a decrease in the price of apples? (e)

- a. panel a
- b. panel b
- c. panel c
- d. panel d
- e. none of these

36. If the price of good X (measured on the horizontal axis of a budget line diagram) increases at the same time that the price of good Y (measured on the vertical axis) decreases, the budget line (b)

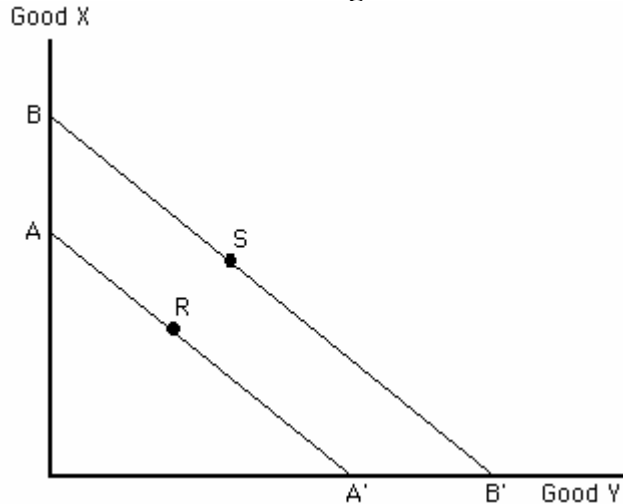
- a. will become flatter
- b. will become steeper
- c. could become either steeper or flatter, depending on the sizes of the price changes
- d. will rotate about its original point of intersection with the horizontal axis
- e. will shift outward, but not in a parallel fashion

37. Imagine a budget line depicting a consumer's possible allocation of a given income between fruit and vegetables. If the consumer's income increases at the same time the price of vegetables rises, the budget line's intercept with the (e)

- a. fruit axis will be unaffected
- b. fruit axis will move toward the origin
- c. vegetable axis will be unaffected

- d. fruit axis will move to the origin
- e. vegetable axis might remain unchanged, more toward the origin, or more away from the origin

Figure-2



38. Suppose that a consumer used to be at point R on budget line AA' in Figure-2, and is now at point S on line BB'. Which of the following is true if the consumer enjoys both goods? (a)
- a. the utility level at point S is higher than at point R
 - b. good X is an inferior good
 - c. the consumer's income fell
 - d. the price of X has risen
 - e. the utility level at point S is lower than at point R
39. Suppose that a consumer used to enjoy being at point S on budget line BB' in Figure-2, and is now at point R on line AA'. Which of the following is true? (c)
- a. the price of X has risen
 - b. the price of X has fallen
 - c. the consumer's income fell
 - d. the utility level at point R is higher than at point S
 - e. the substitution effect is positive
40. Marginal utility (d)
- a. increases as more of a good is consumed
 - b. increases as the total utility of consuming a good increases
 - c. is the same as the utility of consuming a good
 - d. is the same as the utility of consuming an additional unit of a good
 - e. is the same for all units of a good, but varies from one consumer to another
41. As Reba consumes four slices of pizza, her total utility rises from 0 to 18, to 24, to 28, and to 30, respectively. What is her marginal utility of the fourth slice of pizza? (c)
- a. 28
 - b. 24

- c. 2
- d. 7
- e. 8

42. Tim receives the following marginal utilities from his first five classes of the semester: 100, 80, 60, 40, and 30. What is the total utility of his three favorite classes? (d)

- a. 60
- b. 80
- c. 200
- d. 240
- e. -20

43. According to the assumption of consumer rationality, a consumer who prefers one head of broccoli to one head of cauliflower, one head of cauliflower to one package of brussels sprouts, and one (d)

- a. package of brussels sprouts to one head of cabbage, must prefer a head of cabbage to a head of cauliflower
- b. package of brussels sprouts to one head of cabbage, must prefer a head of broccoli to any other vegetable
- c. package of brussels sprouts to one head of cabbage, must prefer a package of brussels sprouts to a head of cauliflower
- d. package of brussels sprouts to one head of cabbage, must prefer a head of cauliflower to a head of cabbage
- e. head of cabbage to one package of brussels sprouts, must prefer the package of brussels sprouts to a head of broccoli

44. The phrase "more is better" implies that (b)

- a. marginal utility always rises as consumption rises
- b. total utility always rises as consumption rises
- c. marginal utility rises faster than total utility
- d. total utility eventually reaches a maximum and then decreases as more of the good is consumed
- e. marginal utility is negative

45. Suzy spends all of her income on potato chips and textbooks. To maximize her total utility, she should (b)

- a. allocate her income so that the marginal utilities of potato chips and textbooks are equal
- b. allocate her income so that the marginal utilities per dollar spent on potato chips and textbooks are equal
- c. change her eating habits
- d. choose a consumption point that is inside her budget constraint
- e. allocate her income so that the total utilities of potato chips and textbooks are equal

46. If bread costs \$1 per pound and meat costs \$4 per pound, a consumer whose marginal utility of meat equals 80 utils per pound is maximizing utility only if the marginal utility per pound of bread equals (d)

- a. 4 utils

- b. 5 utils
- c. 10 utils
- d. 20 utils
- e. 80 utils

47. Kate laments that she receives less additional utility from each additional automobile. Being an economist, she estimates that the total utility she receives from one, two, and three automobiles are 15,000, 27,000, and 36,000, respectively. If the price of an automobile is \$15,000, then what is the marginal utility per dollar spent on the second automobile? (b)

- a. 1.8
- b. 0.8
- c. 27,000
- d. 12,000
- e. 0.6

48. Jeffrey spends all of his income on warm-up suits and running shoes, and the price of a warm-up suit is four times as large as the price per pair of shoes. Then, in order to maximize total utility, Jeffrey should (d)

- a. buy four times as many warm-up suits as pairs of running shoes
- b. buy four times as many pairs of running shoes as warm-up suits
- c. divide his income equally between warm-up suits and running shoes
- d. buy both items until the marginal utility of a warm-up suit is four times the marginal utility of a pair of running shoes
- e. buy both items until the marginal utility of a pair of running shoes is four times the marginal utility of a warm-up suit

49. If a person could increase total utility by purchasing more candy and fewer apples, then the (c)

- a. total utility of candy must exceed the total utility of apples
- b. marginal utility of candy must exceed the marginal utility of apples
- c. marginal utility per dollar spent on candy must exceed the marginal utility per dollar spent on apples
- d. total utility per dollar spent on candy must exceed the total utility per dollar spent on apples
- e. marginal utility per dollar spent on candy must be less than the marginal utility per dollar spent on apples

50. Suppose you have spent your entire budget and the marginal utilities per dollar spent on all the goods you buy are equal. Which of the following is true? (c)

- a. you are not being rational
- b. there is a way to increase your utility by reallocating your purchases
- c. you will reduce your utility if you allocate your income in any other way
- d. you are minimizing your total utility
- e. you have chosen a consumption bundle that lies below your budget line

51. The income effect of a lower price for good A (c)

- a. invariably leads a consumer to buy more of good A, because the combination of unchanged money income and lower price raises that consumer's real income or purchasing power

- b. invariably leads a consumer to buy less of good A because the combination of unchanged money income and lower price encourages that consumer to buy more of other goods
- c. may lead to a larger, smaller, or even an unchanged quantity of good A demanded; it all depends on the nature of the good itself
- d. creates a change in the good's relative price and, therefore, causes the consumer to substitute good A in place of other goods
- e. causes a parallel outward shift of the budget line, enabling the consumer to buy more of all goods than before

52. Higher education is a normal good. If its price falls, (d)

- a. the quantity demanded of higher education will fall
- b. the substitution and income effects work in opposite directions
- c. the income effect is negative
- d. higher education will satisfy to the law of demand
- e. real purchasing power will fall

53. If the physical plant for a corporation is considered to be a fixed input, then (b)

- a. it is held constant in the long run
- b. it can be changed in the long run
- c. labor must be a variable input
- d. technology must be changing
- e. the firm will lose money in the short run except under perfect competition

54. In considering a firm's planning horizon, the long run refers to (c)

- a. a period of one year or more
- b. the term to which the current board of directors has been elected
- c. the period in which all of the firm's inputs can be varied
- d. the period in which at least one of the firm's inputs is fixed
- e. the period in which the level of available technology is fixed

55. The law of diminishing marginal returns suggests that as more of a variable input is combined with a fixed input, total output will increase; however, the increases in the firm's output will become ever smaller. (a)

- a. True
- b. False

56. Samantha has been working for a law firm and earning an annual salary of \$90,000. She decides to open her own practice. Her annual expenses will include \$15,000 for office rent, \$3,000 for equipment rental, \$1,000 for supplies, \$1,200 for utilities, and a \$35,000 salary for a secretary/bookkeeper. Samantha will cover her start-up expenses by cashing in a \$20,000 certificate of deposit on which she was earning annual interest of \$1,000. Assuming that there are no additional expenses, Samantha's total annual cost of production will equal (d)

- a. \$55,200
- b. \$221,400
- c. \$91,000
- d. \$146,200

e. \$56,200

57. Which of the following formulas is *not* correct? (b)

- a. $ATC = AVC + (TFC/Q)$
- b. $TVC = TC/Q$
- c. $TC = TFC + TVC$
- d. $AFC = TFC/Q$
- e. $TVC = AVC \times Q$

58. At a firm's current output level of 200 units per week, it has 10 employees at a weekly wage of \$500 each. Raw materials, which are ordered and delivered daily, cost \$1,000 per week. The weekly cost of the firm's capital is \$1,250. Which of the following statements is correct? (b)

- a. total variable cost is \$5,000; total fixed cost is \$2,250; total cost is \$7,250
- b. total variable cost is \$6,000; total fixed cost is \$1,250; total cost is \$7,250
- c. total variable cost is \$1,250; total fixed cost is \$6,000; total cost is \$7,250
- d. total variable cost is \$2,250; total fixed cost is \$500; total cost is \$2,750
- e. total variable cost is \$1,500; total fixed cost is \$1,250; total cost is \$2,750

59. As a firm increases its output in the short run, average fixed cost (c)

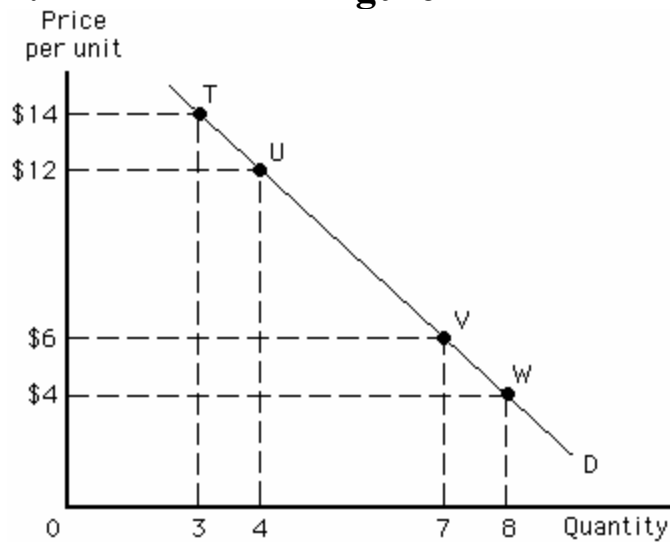
- a. rises steadily
- b. falls and then rises
- c. falls steadily
- d. rises and then falls
- e. remains unchanged

60. Which of the following is true about the relationships among various cost curves? (A)

- a. when MC exceeds ATC, ATC must be rising
- b. when MC exceeds ATC, ATC could be rising or falling
- c. when ATC is falling, MC must exceed ATC
- d. when TC is rising, MC must exceed TC
- e. TC falls when AFC falls

Short Answer Questions:

1. Figure-2



Note: using mid point method in the following calculation

(1) calculate the price elasticity of demand between points T and U. (**show the steps**) (1.5 pts)

-1.86

(2) calculate the price elasticity of demand between points V and W. (**show the steps**) (1.5 pts)

-0.33

2.

Table-2

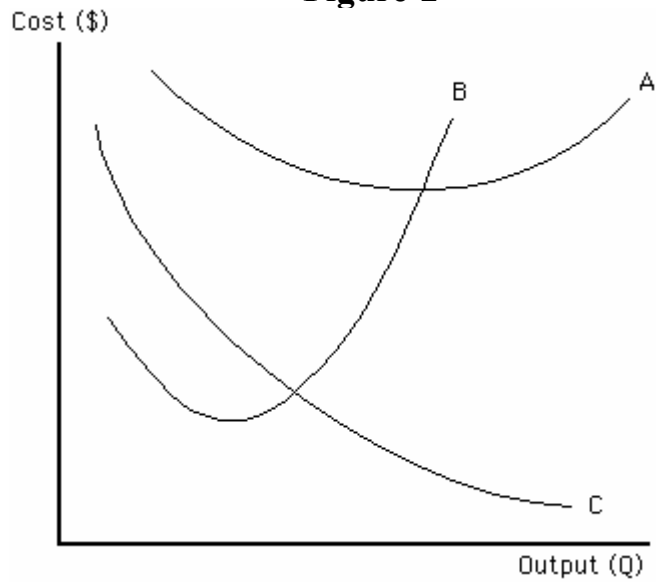
Short-run Costs	
Output	TVC
0	\$ 0
10	\$200
20	\$350
30	\$575
40	\$900

(1). Table-2 shows a firm's total variable cost for different daily output levels. In addition, the firm has total fixed cost of \$50 per day. If output increases from 20 to 30 units, average total cost rises from \$20 to \$20.83 and marginal cost is \$22.5? (3 points)
(please show the steps in the blank below)

(2) At an output level of 20 units, average variable cost is \$17.5, average fixed cost is \$2.50 (2 points)
(show the steps)

3.

Figure-2



- (1) Figure-2 shows three different cost curves, labeled A, B, and C, for a firm. Which of these curves is most likely to represent average fixed cost? _____C_____ (A, B or C) (1 point)
- (2) Which of these curves could most likely represent marginal cost? ___B___ (A, B or C) (1 point)