# Economics answers assignment

ECON 312 – Intermediate Microeconomics Due date: 22-02-2100

ASSIGNMENT # 1 STUDENT'S NAME : Devon Rachae SECTION 1 Multiple Choice Questions 1. The theory of consumer behavior is based on certain assumptions. It includes at least the assumption(s) that preferences are: a. complete. b. transitive. c. intransitive. d. both (a) and (b) are correct. e. both (a) and (c) are correct. 2. A consumer prefers market basket A to market basket B, and prefers market basket B to market basket C. Therefore, A is preferred to C. The assumption that leads to this conclusion is: a. transitivity. b. completeness. c. all goods are good. . diminishing MRS. e. assumption of rationality. 3. The assumption that preferences are complete: a. means that a consumer will spend her entire income. b. is unnecessary, as long as transitivity is assumed. c. recognizes that there may be pairs of market baskets that cannot be compared. d. means that between any two market baskets of goods, the consumer can determine that either one is preferred to the other or that she is indifferent between them. 4. A curve that represents all combinations of market baskets that provide the same level of utility to a consumer is called: a. a budget line. b. an isoquant. c. n indifference curve. d. a demand curve. e. none of the above. 5. An upward sloping indifference curve defined over two goods violates which of the following assumptions from the theory of consumer behavior? a. transitivity. b. preferences are complete. c. more is preferred to less. d. all of the above. e. none of the above. 6. The slope of an indifference curve reveals: a. that preferences are complete. b. the marginal rate of substitution of one good for another good. c. the ratio of market prices. d. that preferences are transitive. e. none of the above. 7. Indifference curves are convex to the origin because of: a. ransitivity of consumer preferences. b. the assumption of a diminishing

marginal rate of substitution. c. the assumption that more is preferred to less. d. the assumption of completeness. e. none of the above. 8. Suppose that a market basket of two goods is changed by adding more of one of the goods and subtracting one unit of the other. The consumer will: a. rank the market basket more highly after the change. b. rank the market basket more highly before the change. c. rank the market basket just as desirable as before. d. any one of the above statements may be true. Alvin's preferences for good X and good Y are shown in the diagram below. pic] Figure 3. 1 9. Based on Figure 3. 1, it can be inferred that: a. Alvin does not consider good X as " good. " b. Alvin will never purchase any of good Y. c. Alvin regards good X and good Y as perfect substitutes. d. Alvin regards good X and good Y as perfect complements. e. none of the above. 10. Refer to Figure 3. 1. Which of the following is true concerning Alvin's marginal rate of substitution? a. It is diminishing. b. It is positive. c. It is constant. d. It is zero. 11. Refer to Figure 3. 1. Which assumption concerning preferences do Alvin's indifference curves violate? a.

Diminishing marginal rates of substitution. b. Transitivity of preferences. c. More is preferred to less. d. Completeness. Consider the following three market baskets: Table 3. 1 || Food | Clothing || A | 6 | 3 || B | 8 | 5 || C | 5 | 8 | 12. Refer to Table 3. 1. If preferences satisfy all four of the usual assumptions: a. A is on the same indifference curve as B. b. B is on the same indifference curve as C. c. A is preferred to C. d. B is preferred to A e. both (a) and (b) are correct. 13.

Consider the following three market baskets: || Food | Clothing || A | 15 | 18 || B | 13 | 19 || C | 14 | 17 | If baskets B and C are on the same indifference

curve, and if preferences satisfy all four of the usual assumptions, then: a. A is preferred to C. b. A is preferred to B. c. both (a) and (b) are correct. d. none of the above. 14. Mikey is very picky and insists that his mom make his breakfast with equal parts of cereal and apple juice – any other combination and it ends up on the floor.

Cereal costs 4 cents per tablespoon and apple juice costs 6 cents per tablespoon. If Mikey's mom budgets $8 per month for Mikey's breakfast, how much cereal and juice does she buy? a. 40 tablespoons each of cereal and juice. b. 80 tablespoons each of cereal and juice. c. 40 tablespoons of cereal and 75 tablespoons of juice. d. 100 tablespoons of cereal and 67 tablespoons of juice. 15. Use the following two statements to answer this question: I. If utility is ordinal, a market basket that provides 30 utils provides twice the satisfaction of a market basket that provides 15 utils. II.

When economists first studied utility it was believed that utility was cardinal, but it was later discovered that ordinal preferences are sufficient to explain how most individual decisions are made. a. Both I and II are true. b. I is true, and II is false. c. I is false, and II is true. d. Both I and II are false. 16. If X and Y are perfect substitutes, which of the following assumptions about indifference curves is not satisfied? a. completeness. b. transitivity. c. more is preferred to less. d. diminishing MRS. e. none of the above (All of the above assumptions are satisfied). 17. Use the following two statements to answer this question:

I. According to the three basic assumptions regarding people's preferences, a person will always prefer to earn a living through honest work rather than a

life of crime. II. When we say that preferences are complete, we mean that if a consumer prefers market basket A to market basket B, and prefers market basket B to market basket C, then the consumer prefers market basket A to market basket C. a. Both I and II are true. b. I is true and II is false. c. I is false and II is true. d. Both I and II are false. 18. If Jill's MRS of popcorn for candy is 2 (popcorn is on the horizontal axis), Jill would willingly give up: a. , but no more than 2, units of popcorn for an additional unit of candy. b. 2, but no more than 2, units of candy for an additional unit of popcorn. c. 1, but no more than 1, unit of candy for an additional 2 units of popcorn. d. 2, but no more than 2, units of popcorn for an additional 2 units of candy. 19. A consumer has $100 per day to spend on product A, which has a unit price of $7, and product B, which has a unit price of $15. What is the slope of the budget line if good A is on the horizontal axis and good B is on the vertical axis? a. -7/15. b. -7/100. c. -15/7. d. 7/15. 20. Theodore's budget line has changed from A to B.

Which of the following explains the change in Theodore's budget line? [pic] a. The price of food and the price of clothing increased. b. The price of food increased, and the price of clothing decreased. c. The price of food decreased, and the price of clothing increased. d. The price of food and the price of clothing decreased. e. None of the above. 21. If the quantity of good a (Qa) is plotted along the horizontal axis, the quantity of good b (Qb) is plotted along the vertical axis, the price of good a is Pa, the price of good b is Pb and the consumer's income is I, then the slope of the consumer's budget constraint is: . -Qa/Qb b. –Qb/Qa c. -Pa/Pb d. -Pb/Pa e. I/Pa or I/Pb 22. An increase in income, holding prices constant, can be represented as: a. a

change in the slope of the budget line. b. a parallel outward shift in the budget line. c. an outward shift in the budget line with its slope becoming flatter. d. a parallel inward shift in the budget line. 23. Assume that food is measured on the horizontal axis and clothing on the vertical axis. If the price of food falls relative to that of clothing, the budget line will: a. become flatter. b. become steeper. c. shift outward. d. ecome steeper or flatter depending on the relationship between prices and income. 24. If prices and income in a two-good society double, what will happen to the budget line? a. The intercepts of the budget line will increase. b. The intercepts of the budget line will decrease. c. The slope of the budget line may either increase or decrease. d. Insufficient information is given to determine what effect the change will have on the budget line but we know society is worse-off. e. There will be no effect on the budget line. 25. An individual consumes only two goods, X and Y.

Which of the following expressions represents the utility maximizing market basket? a. MRSxy is at a maximum. b. Px/Py = money income. c. MRSxy = money income. d. MRSxy = Px/Py. e. All of the above. 26. The fact that Alice spends no money on travel: a. implies that she does not derive any satisfaction from travel. b. implies that she is at a corner solution. c. implies that her MRS does not equal the price ratio. d. any of the above are possible. 27. The price of lemonade is $0. 50; the price of popcorn is $1. 00. If Fred has maximized his utility by purchasing lemonade and popcorn, his marginal rate of substitution will be: . 2 lemonades for each popcorn. b. 1 lemonades for each popcorn. c. 1/2 lemonade for each popcorn. d. indeterminate unless more information on Fred's marginal utilities is provided. 28. When Joe

maximizes utility, he finds that his MRS of X for Y is greater than Px/Py. It is most likely that: a. Joe's preferences are incomplete. b. Joe's preferences are irrational. c. Joe is not consuming good X. d. Joe is not consuming good Y. 29. The principle of revealed preference would say that if Xavier chooses market basket A over market basket B then: a. f A is more expensive than B, then Xavier must prefer A over B. b. if A is more expensive than B, then Xavier must prefer B over A. c. if A is less expensive than B, then Xavier must prefer A over B. d. if A is less expensive than B, then Xavier must prefer B over A. 30. Denise is shopping for lobsters and eclairs. When she faces budget line b1, she chooses market basket A over market basket B. When she faces budget line b2, she chooses basket B over basket C. Which assumption of consumer theory helps us determine Denise's preference ordering over basket A and basket C? . completeness b. more is better than less c. transitivity d. convexity 31. Marginal utility measures: a. the slope of the indifference curve. b. the additional satisfaction from consuming one more unit of a good. c. the slope of the budget line. d. the marginal rate of substitution. e. none of the above. Scenario 1: Andy derives utility from two goods, potato chips (Qp) and Cola (Qc). Andy receives zero utility unless he consumes some of at least one good. The marginal utility that he receives from the two goods is given as follows: Qp | MUp | Qc | MUc | | 1 | 12 | 1 | 24 | | 2 | 10 | 2 | 22 | | 3 | 8 | 3 | 20 | | 4 | 6 | 4 | 18 | | 5 | 4 | 5 | 16 | | 6 | 2 | 6 | 14 | | 7 |-2 | 7 | 12 | | 8 |-4 | 8 | 10 | 2. Refer to Scenario 1. What is the total utility that Andy will receive if he consumes 5 units of potato chips (Qp) and no Cola drink (Qc)? a. 4 utils. b. 10 utils. c. 30 utils. d. 40 utils. e. none of the above. 33. Refer to Scenario 1. If the price of potato chips is $0. 50 and the price of Cola is $4. 00, and Andy has an unlimited income, how many units of

potato chips will he consume? a. 5 b. 6 c. 7 d. 8 e. none of the above 34. Refer to Scenario 1. If the price of potato chips is $0. 50 and the price of Cola is $4. 0, and Andy has an income of $14. 50, how many units of potato chips will he consume? a. 5 b. 6 c. 7 d. 8 e. none of the above 35. When a person consumes two goods (A and B), that person's utility is maximized when the budget is allocated such that: a. the marginal utility of A equals the marginal utility of B. b. the marginal utility of A times the price of A equals the marginal utility of B times the price of B c. the ratio of total utility of A to the price of A equals the ratio of the marginal utility of B to the price of A. d. he ratio of the marginal utility of A to the price of A equals the ratio of the marginal utility of B to the price of B. 36. If Px = Py, then when the consumer maximizes utility, a. X must equal Y. b. MU(X) must equal MU(Y). c. MU(X) may equal MU(Y), but it is not necessarily so. d. X and Y must be substitutes. 37. Alfred derives utility from consuming iced tea and lemonade. The marginal utility he receives from iced tea is 16 utils, and the marginal utility he receives from lemonade is 8 utils. Instead of consuming this bundle, Alfred should: . buy more iced tea and less lemonade. b. buy more lemonade and less iced tea. c. buy more iced tea and lemonade. d. buy less iced tea and lemonade. e. none of the above is necessarily correct. SECTION 2 SHORT-ANSWER PROBLEMS 1. Each of the following consumers exhibit behavior that violates one of the basic assumptions of consumer preferences. Identify the assumption that is violated for each individual. • Art says that he can watch 2 movies a week but couldn't be paid to watch another movie after that. a. More is preferred than less Alex says that he prefers going to a movie over hiking. He also indicates that he prefers hiking to swimming. Alex then states that he would rather go swimming than go to

a movie. b. Transitivity • Alicia says that she prefers hiking to watching a movie but can't determine her preferences for swimming. c. Completeness 2. Consider Gary's utility function: U(X, Y) = 5 XY, where X and Y are two goods. If the individual consumed 10 units of X and received 250 units of utility, how many units of Y must the individual consume? a. 5* 10* Y = 250 50Y = 250

Y = 250/50 Y = 5 3. In the theory of consumer behavior, certain axioms about the nature of preferences imply that indifference curves cannot cross. Which axioms imply this? Explain your answer using a diagram and using words. a. The axiom that implies this is the assumption that more is preferred to less. If the curves U1 and U2 intersect it violates one of the assumptions of consumer theory that more is better than less. In the diagram the consumer should be indifferent among the baskets A, B, and D since A and D lie on the same indifferent curve as A and B.

However from the diagram above, it can be seen that B should be preferred to D since D contain more of both goods. 4. The local mall has a make-your-own sundae shop. They charge customers 35 cents for each fresh fruit topping and 25 cents for each processed topping. Barbara is going to make herself a sundae. The total utility that she receives from each quantity of topping is given by the following table: Fresh Fruit ToppingProcessed Topping # of UnitsTotal Utility# of UnitsTotal Utility 110110 218220 324310 42840 5305-10 6286-20 247-30 8188-40 9109-50 10-610-60 a. What is the marginal utility of the 6th fresh fruit topping? Mu = -2 b. Of the two toppings, which would Barbara purchase first? Explain. Barbara would choose the first unit of processed fruit since the marginal utility derived per dollar from consuming this will be greater than consuming one unit of fresh fruit (same

amount utility will be derived by purchasing one unit of process fruit which is 10 cents cheaper than purchasing one unit of fresh fruit which will give same level of utility). . If Barbara has $1. 55 to spend on her sundae, how many fresh fruit toppings and processed toppings will she purchase to maximize utility?

| Fresh Fruit Topping | Total Utility | MU | MUF/PF | Processed Topping | Total Utility | MU | MUp/PP |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 10 | 10 | 28. | 1 | 10 | 10 | 40 |
| 3 | 24 | 6 | 17. 1 | 3 | 10 | -10 | -40 |
| 5 | 30 | 2 | 5. 7 | 5 | -10 | -10 | -40 |
| 7 | 24 | -4 | -11. 4 | 7 | -30 | -10 | -40 |
| 9 | 10 | -8 | -22. 5 | 9 | -50 | -10 | -40 |

| Fresh | Processed | Balance on Budget |
| --- | --- | --- |
| 1 | 1. 30 | |
| 1 | 1. 05 | |
| 1 | | 0. 0 |
| 1 | | 0. 35 |
| 1 | | 0. 35 |
| 3 Fresh Fruit | 2 Processed Fruit | 0 |

d. If money is no object, how many fresh fruit toppings and processed toppings will Barbara purchase to maximize utility?

If money was no object Barbara will buy 5 fresh fruit toppings and 2 processed toppings as these utilities fall within the positive range for utility.

e. Which of the basic assumptions of preferences are violated by preferences shown in the table above? More is better than less. 5. Suppose the table below lists the price and consumption levels of food and clothing during 1990 and 2000. Calculate a Laspeyres and Paasche index using 1990 as the base year.

| Year | Prices | | Consumption | |
| --- | --- | --- | --- | --- |
| | Food | Clothing | Food | Clothing |
| 1990 | 5. 00 | 3. 00 | 100 | 75 |
| 2000 | 6. 25 | 3. 35 | 110 | 87 |

Laspeyres 6. 25 * 100 + 3. 35 * 75/5. 00 * 100 + 3. 00 * 75 = 876. 25/725 = 1. 21

Paasche 6. 25 * 110+ 3. 35 * 87/5. 0 * 110 + 3. 00 * 87 = 978. 95/811 = 1. 21

6. Key Question You are choosing between two goods, X and Y, and your marginal utility from each is as shown below. If your income is $9 and the prices of X and Y are $2 and $1, respectively, what quantities of each will

you purchase to maximize utility? What total utility will you realize? Assume that, other things remaining unchanged, the price of X falls to $1. What quantities of X and Y will you now purchase? Using the two prices and quantities for X, derive a demand schedule (price-quantity-demanded table) for X. Units | MUx | TUx | | of X | | | | | 1 | 8 | | | 1 | 7 | | | 1 | 6 | | | 1 | 5 | | 1 | | 3 | | | 1 | 2 | | 1 | | 0 | | 2 X | 5Y | | Total Utility realized will be 39 After the Price of X falls to $1 X | Y | Balance on budget | | 1 | | 8 | | 1 | | 7 | | | 1 | 6 | | | 1 | 5 | | | 1 | 4 | | 1 | | 3 | | | 1 | 2 | | | 1 | 1 | | 1 | | 0 | | 4 X | 5Y | | Demand Schedule for X | Price of X | Quantity of X demanded | |$ 2 | 2 | |$1 | 4 | —————————- Instructions: Answer ALL Questions in Section 1 Instructions: Answer ALL Questions in Section 2