Exam

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) In economics, consumption bundles are: 1) _____
A) utility functions.
B) bags used by retail merchants.
C) preference orderings.
D) combinations of goods and services.

Answer: D
Explanation: A)
B)
C)
D)

2) Benoit's preferences are given by the utility function $U(x,y) = 10x + 5y$. He consumes 10 units of good x and 9 units of good y. If he consumes only one unit of x, how many units of y must he consume in order to be as well off as before? 2) _____
A) 10 B) 27 C) 18 D) 30

Answer: B
Explanation: A)
B)
C)
D)

3) Smoking can lead to lung cancer and premature death. Which of the following would an economist use to explain why people smoke? 3) _____
A) Smokers exhibit irrational behaviour.
B) Smokers face tradeoffs.
C) Since smoking is addictive, smokers need to smoke.
D) Smokers are not maximizers.

Answer: B
Explanation: A)
B)
C)
D)

4) Which of the following preference orderings violates the transitivity assumption? 4) _____
A) Bananas are indifferent to Oranges, Bananas are preferred to Apples, Apples are preferred to Bananas.
B) Apples are preferred to Oranges, Oranges are preferred to Bananas, Apples are preferred to Bananas.
C) Oranges are indifferent to Bananas, Bananas are indifferent to Apples, Apples are indifferent to Oranges.
D) Bananas are preferred to Apples, Apples are indifferent to Oranges, Bananas are preferred to Oranges.

Answer: A
Explanation: A)
B)
C)
D)

5) If an indifference curve is smooth and convex to the origin, then: 5) _____
A) the two goods are said to be concave combinations of each other.
B) there is a diminishing marginal rate of substitution.
C) the two goods are said to be convex combinations of each other.
D) the indifference curve is said to be normal.

Answer: B
Explanation: A)
B)
C)
D)

6) Economists assume that an individual's preference orderings include all of the following except: 6) _____
A) transitivity.
B) preference or indifference.
C) homogeneity.
D) completeness.

Answer: C
Explanation: A)
B)
C)
D)

7) The fact that I'm willing to eat tater tots when french fries are not available illustrates: 7) _____
A) diminishing MV.
B) maximization.
C) substitution.
D) inconsistency.

Answer: C
Explanation: A)
B)
C)
D)

8) Employees demand more more for overtime work because: 8) _____
A) they are greedy.
B) longer hours are tiresome.
C) only the hardworking ones self-select for extra hours.
D) working extra hours makes them less willing to trade off leisure for income.

Answer: D
Explanation: A)
B)
C)
D)

9) If we consider the bundles A = (5,30) and B = (6,40), then: 9) _____
A) the consumer is indifferent between A and B.
B) A is preferred to B.
C) utility at point A is lower than the utility at point B.
D) B is preferred to A.

Answer: D
Explanation: A)
B)
C)
D)

10) Which of the following is consistent with the transitivity assumption? 10) _____

A) If A>B and A>C then B>C.
B) If A<B and A<C then C>A
C) If A>B and A>C then B=C.
D) If A>B and A=C then B<C.

Answer: D
Explanation: A)
B)
C)
D)

11) A vegetarian's indifferent curve in a space defined by hamburgers on the horizontal axis and broccoli on the vertical axis: 11) _____

A) is concave to the origin.
B) is horizontal.
C) is vertical.
D) cannot be defined.

Answer: B
Explanation: A)
B)
C)
D)

12) Which of the following is not a reason that economists use the assumption that indifference curves are convex? 12) _____

A) It directs attention to the relevant part of the curve.
B) It is measurable.
C) It is convenient.
D) It is reasonable.

Answer: B
Explanation: A)
B)
C)
D)

13) Jane's utility function is $U(x,y) = 2xy$. She has 2 units of good x and 4 units of good y. Tim's utility function is $U(x,y) = 5x + 2y$. He has 4 units of good x and 1 unit of good y. We can conclude that: 13) _____

A) each prefers their own bundle to the other's bundle.
B) Jane prefers Tim's bundle to her own, but Tim prefers his own bundle to Jane's.
C) each prefers the other's bundle to their own.
D) Tim prefers Jane's bundle to his own, but Jane prefers her own bundle to Tim's.

Answer: A
Explanation: A)
B)
C)
D)

14) Which of the following assumptions is not generally applied to an indifference curve? 14) _____

A) transitive
B) smooth
C) convex
D) diminishing MRS

Answer: A
Explanation: A)
B)
C)
D)

15) If the marginal rate of substitution is a constant (5, for example), then indifference curves are not: 15) _____
A) smooth. B) straight lines.
C) downward sloping. D) kinked.

Answer: D
Explanation: A)
B)
C)
D)

16) People driving on a four-lane expressway during the rush hour tend to distribute their vehicles fairly evenly among the four lanes because: 16) _____
A) their tastes and preferences differ. B) the law of large numbers is operating.
C) they all tend to be maximizers. D) they choose lanes on a random basis.

Answer: C
Explanation: A)
B)
C)
D)

17) Overtime pay is higher than regular pay because: 17) _____
A) foregone leisure hours in addition to the ones for regular work are valued lower.
B) employers want to insure quality work after hours.
C) labour unions have the upper hand in the Canadian economy.
D) foregone leisure hours in addition to the ones for regular work are valued higher.

Answer: D
Explanation: A)
B)
C)
D)

18) Carl has the utility function $U(x,y) = 2xy$. His indifference curve passing through the bundle (4,3) must also pass through the point where x is equal to 6 and y is equal to: 18) _____
A) 12. B) 24. C) 2. D) 10.

Answer: C
Explanation: A)
B)
C)
D)

19) Assume that when you get home today, there is a letter in your mailbox from Joe Granburg, the stock market wizard. He has the latest expert advice for you about purchasing stocks. You should: 19) _____
A) immediately phone your broker and follow his advice.
B) wonder why Joe didn't follow his own advice rather than sell the information.
C) only follow his advice if it details accurate past trends in stock prices.
D) only follow his advice if he has good information about the future income streams of those companies whose stock he recommends you purchase.

Answer: B
Explanation: A)
B)
C)
D)

20) Nonsatiation implies that consumption bundles: 20) _____
A) which are nearer the origin are preferred.
B) which contain more of all goods are preferred.
C) which contain fewer of all goods are preferred.
D) which contain more of one good and less of another are preferred.

Answer: B
Explanation: A)
B)
C)
D)

21) Given the utility function $U(x,y) = x^2 + y$, which of the following preference statements is true? 21) _____
A) (2,3) is preferred to (3,2)
B) (2,1) is indifferent to (1,4)
C) (2,1) is indifferent to (1,3)
D) (2,1) is preferred to (1,2)

Answer: B
Explanation: A)
B)
C)
D)

22) Traffic in the city moves along as well as it does (i.e., few accidents, reasonable speed) because: 22) _____
A) drivers are usually concentrating intently on their own welfare.
B) people take others' goals and interests into account.
C) insurance does not cover all the costs of an accident.
D) almost all drivers have the same attitude regarding safety and speed.

Answer: A
Explanation: A)
B)
C)
D)

23) If the utility number associated with consumption bundle a is exactly the square root of the utility number associated with bundle b, then: 23) _____
A) bundle b offers as much utility as two of bundle a.
B) bundle a is preferred to bundle b.
C) bundle b is twice as desirable as a.
D) bundle b is preferred to bundle a.

Answer: D
Explanation: A)
B)
C)
D)

24) If the utility number associated with consumption bundle a is exactly half the utility number associated with bundle b, then: 24) _____

A) bundle b is twice as desirable as a.
B) bundle b is preferred to bundle a.
C) bundle b offers as much utility as two of bundle a.
D) bundle a is preferred to bundle b.

Answer: B
Explanation: A)
B)
C)
D)

25) Indifference curves provide a way to graphically represent: 25) _____

A) the income level of an individual.
B) an individual's preferences.
C) the relative price of goods.
D) the constraints faced by consumers.

Answer: B
Explanation: A)
B)
C)
D)

26) The utility function assigns a utility number that is higher for: 26) _____

A) more expensive bundles.
B) more preferred bundles.
C) less preferred bundles.
D) bundles which the individual is indifferent between.

Answer: B
Explanation: A)
B)
C)
D)

27) Consider the following preference statements: (7, 9) is preferred to (5, 8); (18, 0) is preferred to (7, 9); and (5, 8) is preferred to (6, 5). If the individual's preferences are consistent, then the preferences ordering over these four consumption bundles is: 27) _____

A) (7, 9), (5, 8), (18, 0), (6, 5).
B) (18, 0), (5, 8), (7, 9), (6, 5).
C) (18, 0), (7, 9), (5, 8), (6, 5).
D) (5, 8), (6, 5), (18, 0), (7, 9).

Answer: C
Explanation: A)
B)
C)
D)

28) The rate at which a consumer is willing to exchange one good for another, and maintain a constant level of satisfaction is: 28) _____

A) the marginal rate of substitution. B) the relative price ratio.
C) the value of marginal product. D) the relative expenditure ratio.

Answer: A
Explanation: A)
B)
C)
D)

29) Indifference curves are not: 29) _____

A) downward sloping. B) continuous.
C) insatiable. D) intersecting.

Answer: D
Explanation: A)
B)
C)
D)

30) Which of the following is a psychological assumption? 30) _____

A) self interest B) common property
C) perfect competition D) resource endowment

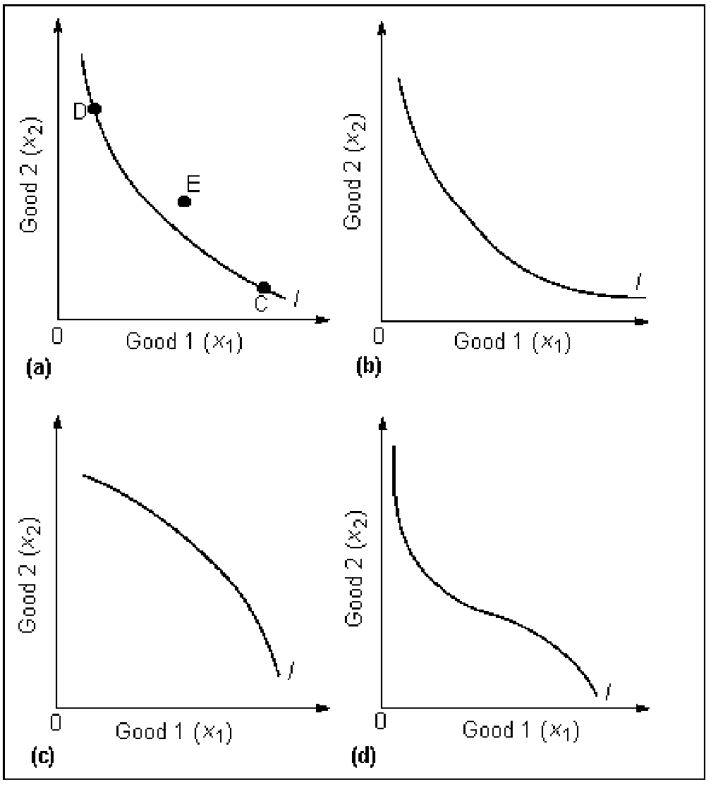
Answer: A
Explanation: A)
B)
C)
D)

31) Which of the following is not required for the existence of a utility function? 31) _____

A) completeness B) universality C) continuity D) nonsatiation

Answer: B
Explanation: A)
B)
C)
D)

Figure 2A



32) In Figure 2A (a): 32) _____

A) c is preferred to d, d is preferred to e, e is preferred to c.
B) e is preferred to c, e is preferred to d, c is indifferent to d.
C) c is preferred to e, d is preferred to e, c is indifferent to d.
D) d is indifferent to c, d is indifferent to e, e is indifferent to c.

Answer: B
Explanation: A)
B)
C)
D)

33) Tim consumes goods x and y. His utility function is given by $U(x,y) = y(x + 5)$. Which of the following is true? 33) _____

A) Tim prefers bundle (1,2) to bundle (2,1)
B) Tim likes good x but hates good y.
C) Tim likes good y but hates good x.
D) Tim prefers bundle (7,3) to bundle (3,7).

Answer: D
Explanation: A)
B)
C)
D)

34) If an indifference curve has a kink, then: 34) _____

A) the indifference curve is not convex to the origin.
B) the marginal rate of substitution is a meaningless concept.
C) preferences are normal.
D) the marginal rate of substitution is undefined at the kink.

Answer: B
Explanation: A)
B)
C)
D)

35) Utility functions assign a: 35) _____

A) preference ordering to each individual.
B) service truck to each customer request.
C) unique number to each indifference curve.
D) unique indifference curve to each number.

Answer: C
Explanation: A)
B)
C)
D)

36) Sheila has preferences represented by the utility function $U(x, y) = 8x + 4y$. She consumes 12 units of good x and 3 units of good y. If her consumption of good x is lowered to 10, how many units of y must she have in order to be exactly as well off as before? 36) _____

A) 10 units of good y
B) 5 units of good y
C) 12 units of good y
D) 7 units of good y

Answer: D
Explanation: A)
B)
C)
D)

37) If Henry decides to give up his social life in order to be more productive at work, an economist would consider this: 37) _____

A) hedonistic.
B) inevitable.
C) one of life's many trade offs.
D) contrary to maximizing behaviour.

Answer: C
Explanation: A)
B)
C)
D)

38) If the indifference curves for some individual are vertical straight lines, the utility function is: 38) _____

A) $U(x,y) = x + 2y$. B) $U(x,y) = xy$. C) $U(x,y) = x^2 + 5$. D) $U(x,y) = 2xy^2$.

Answer: C
Explanation: A)
B)
C)
D)

39) If the utility number associated with consumption bundle a is exactly twice the utility number associated with bundle b, then: 39) _____

A) bundle a is preferred to bundle b.
B) bundle b is preferred to bundle a.
C) bundle a offers as much utility as two of bundle b.
D) bundle a is twice as desirable as b.

Answer: A
Explanation: A)
B)
C)
D)

40) The value of a good is determined by: 40) _____

A) the amount of resources used to produce it.
B) the maximum amount of goods in the market.
C) the amount of time it takes to produce it.
D) the maximum amount that one is willing to sacrifice to get it.

Answer: D
Explanation: A)
B)
C)
D)

41) Scarcity means that: 41) _____

A) our desire for a good exceeds the amount that is freely available.
B) at the current market price there is a shortage of the good.
C) we are unable to find a particular good in any of the stores we visit.
D) a particular good is difficult to produce.

Answer: A
Explanation: A)
B)
C)
D)

42) If Jane's utility function is given by $U = xy$: 42) _____

A) Jane prefers bundle (1,3) to bundle (2,5).
B) Jane is indifferent between bundle (2,2) and bundle (2,1).
C) Jane prefers bundle (2,2) to bundle (3,3).
D) Jane is indifferent between bundle (1,2) and bundle (2,1).

Answer: D
Explanation: A)
B)
C)
D)

43) The utility function $U(x_1,x_2) = \min(x_1,x_2)$ is an apt description of preferences when: 43) _____

A) x_1 is money and x_2 is cocaine.
B) x_1 is \$5 bills and x_2 is \$5 bills.
C) x_1 is a Coke and x_2 is a Pepsi.
D) x_1 is a left hand glove and x_2 is a right hand glove.

Answer: D
Explanation: A)
B)
C)
D)

44) If x_1 is good and x_2 is bad, then indifference curves: 44) _____

A) have a positive slope. B) cannot be linear.
C) have a negative slope. D) are not smooth.

Answer: A
Explanation: A)
B)
C)
D)

45) When two goods are perfect substitutes, they will have: 45) _____

A) indifference curves with a slope equal to +1.
B) indifference curves that slope upward.
C) linear indifference curves.
D) indifference curves that are kinked.

Answer: C
Explanation: A)
B)
C)
D)

46) For the utility function: $U = x + y^2$, the MRS is given by: (calculus required) 46) _____

A) $x/2$. B) $1/2y$. C) 1/2. D) $x/2y$.

Answer: B
Explanation: A)
B)
C)
D)

47) The nonsatiation assumption says that given any two consumption bundles, if bundle 1 has more of one good and does not contain less of any other good then: 47) _____

A) the individual is indifferent between bundle 1 and all other bundles.
B) bundle 1 is never preferred to others.
C) all other bundles are preferred to bundle 1.
D) bundle 1 is preferred to other bundles.

Answer: D
Explanation: A)
B)
C)
D)

48) The completeness assumption implies that: 48) _____
A) indifference curves are convex.
B) the individual is indifferent between all bundles.
C) indifference curves are smooth.
D) any two points in the x - y space can be ranked.

Answer: D
Explanation: A)
B)
C)
D)

49) Horizontal indifference curves imply that: 49) _____
A) the goods are perfect complements.
B) the consumer gets no utility from the Y axis good.
C) the consumer gets no utility from the X axis good.
D) the goods are perfect substitutes.

Answer: C
Explanation: A)
B)
C)
D)

50) The utility function $U(x,y) = 2x + y$ is an apt description of the preferences when: 50) _____
A) x is a left shoe and y is a right shoe. B) x is nickels and y is quarters.
C) x is nickels and y is dimes. D) x is pizza and y is cola.

Answer: C
Explanation: A)
B)
C)
D)

51) A representative indifference curve for some individual is $c = x_1+2x_2$, where c is a number greater than or equal to zero. Which of the following is a utility function for the individual? 51) _____
A) $x_1 - x_2$ B) x_1x_2 C) $20 + x_1 + 2x_2$ D) $2x_1 + x_2$

Answer: C
Explanation: A)
B)
C)
D)

52) An indifference curve represents: 52) _____
A) a complete preference ordering.
B) consumption bundles of equivalent value.
C) average preferences.
D) complete apathy.

Answer: B
Explanation: A)
B)
C)
D)

53) Mary's utility function is $U(x,y) = 4x^{1/2} + y$. She has 25 units of x and 12 units of y. If her consumption of x is reduced to 0, how many units of y would she need in order to be exactly as well off as before? 53) _____

A) 112 units B) 32 units C) 37 units D) 48 units

Answer: B

Explanation: A)
B)
C)
D)

54) Anna's preferences can be expressed by the utility function $U(x_1, x_2) = x_1 + x_2$. Which of the following does NOT represent the same preferences? 54) _____

A) $U(x_1, x_2) = (x_1 + x_2)2$ B) $U(x_1, x_2) = \ln(x_1 + x_2) + 12$

C) $U(x_1, x_2) = x_1 + 4x_2$ D) $U(x_1, x_2) = 1000(x_1 + x_2)$

Answer: C

Explanation: A)
B)
C)
D)

55) Which of the following assumptions implies that bundles on indifference curves further from the origin are preferred to bundles closer to the origin? 55) _____

A) non-satiation. B) transitivity. C) homogeneity D) completeness.

Answer: A

Explanation: A)
B)
C)
D)

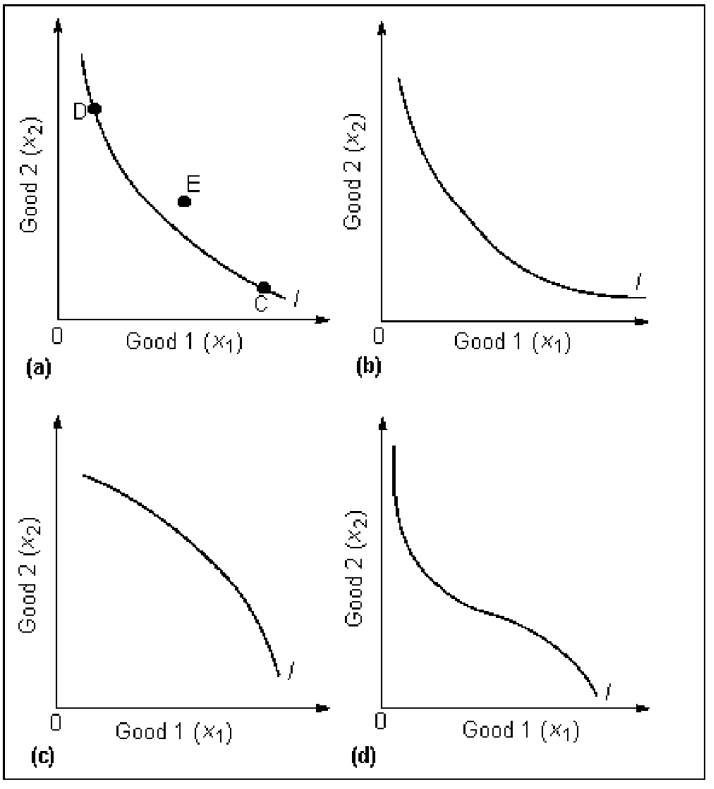
56) Given the utility function $U(x_1,x_2) = x_1 + 2x_2$, the marginal rate of substitution (MRS) is: 56) _____

A) equal to 1/2. B) undefined. C) equal to 2. D) zero.

Answer: A

Explanation: A)
B)
C)
D)

Figure 2A



57) In Figure 2A, which of the following curves represents a weakly convex indifference curve? 57) _____

A) Figure 2A (a) B) Figure 2A (b) C) Figure 2A (c) D) Figure 2A (d)

Answer: B

Explanation: A)
B)
C)
D)

58) If Al's indifference curves are downward sloping straight lines, then Al's marginal rate of substitution is: 58) _____

A) increasing. B) constant. C) zero. D) diminishing.

Answer: B

Explanation: A)
B)
C)
D)

59) If an individual turns down more spinach at dinner, this individual: 59) _____

A) is violating the principle of diminishing marginal rate of substitution.
B) is not maximizing.
C) is not violating any postulates and could still be maximizing.
D) is violating the principle of substitution.

Answer: C
Explanation: A)
B)
C)
D)

60) Indifference curves between left shoes and right shoes are: 60) _____

A) smooth and convex. B) upward sloping.
C) downward sloping straight lines. D) L-shaped.

Answer: D
Explanation: A)
B)
C)
D)

61) Suppose Jane enjoys coffee (x) but is allergic to tea (y). Which of the following utility functions would best represent Tim's utility function for coffee and tea? 61) _____

A) $U(x,y) = \min[x,y]$ B) $U(x,y) = x + y$
C) $U(x,y) = xy$ D) $U(x,y) = x/y$

Answer: D
Explanation: A)
B)
C)
D)

62) If people regard pollution as a bad thing, then their indifference curves for pollution and income (P, I) are: 62) _____

A) kinked. B) upward sloping.
C) undefined. D) convex.

Answer: B
Explanation: A)
B)
C)
D)

63) When Doug is asked whether he would prefer sweetbreads and kumquats or tripe and starfruit, he replies "I don't know". This is a violation of which assumption? 63) _____

A) Non-satiation B) Consistency. C) Completeness D) Transitivity

Answer: C
Explanation: A)
B)
C)
D)

64) Given the following utility function, $U(x_1,x_2) = x_1 * x_2$, which of the following does not represent the same preference ordering: 64) _____

A) $x_1x_2 + 15$. B) $(x_1x_2)^2$. C) $x_1 + x_2$. D) $x_1x_2 - 1000$.

Answer: C

Explanation: A)
B)
C)
D)

65) If x_1 is \$20 bills and x_2 is \$100 bills, then: 65) _____

A) the utility function is $x + 5z$.
B) indifference curves have many kinks.
C) the marginal rate of substitution is 5.
D) the marginal rate of substitution is 1/5.

Answer: D

Explanation: A)
B)
C)
D)

66) The increase in the size of shopping carts for the past three decades is due to: 66) _____

A) the increase in the income per capita over time.
B) the intention of store owners to sell more.
C) the decrease in the cost of producing the carts.
D) the increase in the opportunity cost of time.

Answer: D

Explanation: A)
B)
C)
D)

67) The nonsatiation assumption implies that: 67) _____

A) indifference curves do not cross.
B) indifference curves have a negative slope.
C) indifference curves have a positive slope.
D) indifference curves are continuous.

Answer: B

Explanation: A)
B)
C)
D)

68) Given the utility function $U(x_1,x_2) = \min(x_1,x_2)$, the marginal rate of substitution when x_1 equals x_2 is: 68) _____

A) undefined. B) zero. C) infinite. D) one.

Answer: A

Explanation: A)
B)
C)
D)

69) Which of the following statements about indifference curve analysis is false? 69) _____

A) Indifference curve analysis is identical to the *n*-good problem.
B) Indifference curve analysis is a special case of the *n*-good problem.
C) Indifference curve analysis simplifies the *n*-good problem for detailed study.
D) Indifference curve analysis relies on the same assumptions as the *n*-good problem.

Answer: A
Explanation: A)
B)
C)
D)

70) Cheryl is always willing to trade 3 cheeseburgers for a bucket of shrimp. Her indifference curves are: 70) _____

A) bowed in to the origin
B) straight lines
C) L-shaped
D) bowed out from the origin

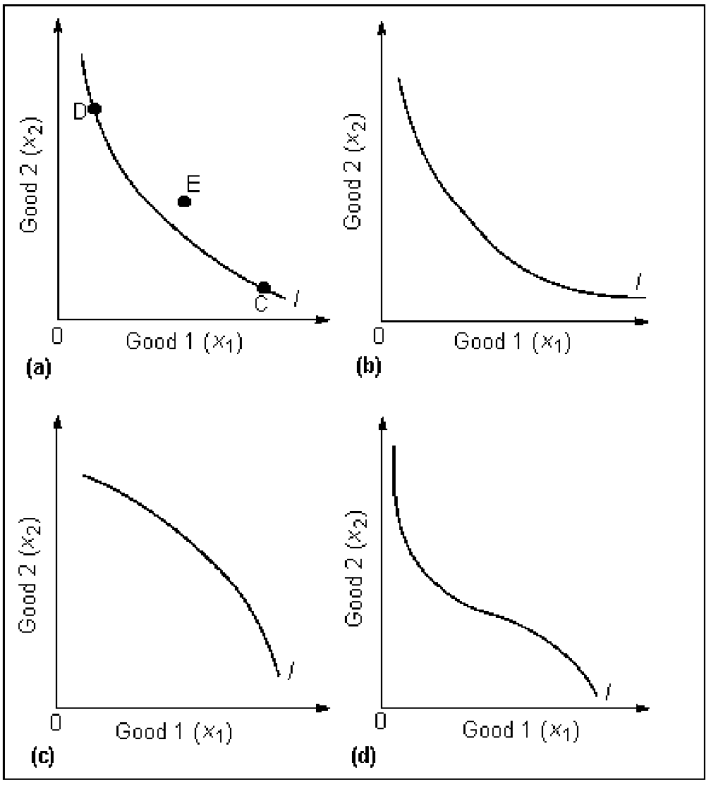
Answer: B
Explanation: A)
B)
C)
D)

71) Which of the following are necessary assumptions to guarantee that an individual can consistently rank any set of consumption bundles? 71) _____

A) completeness and non-satiation
B) transitivity and non satiation
C) completeness and universality
D) transitivity and completeness

Answer: D
Explanation: A)
B)
C)
D)

Figure 2A



72) In Figure 2A, the utility function for some individual is $U(x_1,x_2)=x_1x_2$. An indifference curve for this individual is depicted in: 72) _____

A) Figure 2A (a). B) Figure 2A (b). C) Figure 2A (c). D) Figure 2A (d).

Answer: A

Explanation: A)
B)
C)
D)

73) Which of the following is a scarce commodity? 73) _____

A) fresh air B) stock market advice
C) air D) pollution

Answer: A

Explanation: A)
B)
C)
D)

74) A consumer's set of indifference curves provides: 74) _____
A) a relative ranking of bundles that provide more of all goods.
B) a mechanism to determine market equilibria.
C) a complete ranking of all possible consumption bundles.
D) a ranking of a set of bundles on an indifference curve.

Answer: C
Explanation: A)
B)
C)
D)

75) The continuity assumption implies that: 75) _____
A) the indifference curves are smooth. B) the indifference curves are continuous.
C) the indifference curves never cross. D) the indifference curves are convex.

Answer: B
Explanation: A)
B)
C)
D)

76) Given the utility function $U(x_1,x_2) = \min(x_1,x_2)$, the marginal rate of substitution when x_1 exceeds x_2 is: 76) _____
A) undefined. B) one. C) zero. D) infinite.

Answer: C
Explanation: A)
B)
C)
D)

77) Which of the following is required for the existence of a utility function? 77) _____
A) transitivity B) relativity C) universality D) satiation

Answer: A
Explanation: A)
B)
C)
D)

78) The transitivity assumption implies that: 78) _____
A) indifference curves measure preferences. B) indifference curves are convex.
C) indifference curves never cross. D) indifference curves are smooth.

Answer: C
Explanation: A)
B)
C)
D)

79) If an indifference curve is convex, the marginal rate of substitution is not: 79) _____
A) the rate at which an individual is willing to trade goods.
B) constant.
C) a function.
D) minus one times the slope of an indifference curve.

Answer: B
Explanation: A)
B)
C)
D)

80) The nonsatiation assumption: 80) _____
A) is saying that individuals always maximize.
B) is a formal way of saying that more is always better.
C) implies that indifference curves have a positive slope.
D) is a well founded empirical truth.

Answer: B
Explanation: A)
B)
C)
D)

81) People smooth out consumption over time: 81) _____
A) because they become wiser as they age.
B) because older people require less consumption.
C) because utility of consumption increases with age.
D) to raise their level of utility.

Answer: D
Explanation: A)
B)
C)
D)

82) Tom currently has 100 units of x_1 and 50 units of x_2, and Jan has 50 units of x_1 and 100 units of x_2. 82) _____
If Tom's marginal rate of substitution is 10, and Jan's is 1:
A) Pareto-improving trades involve Jan giving up x_2 for x_1.
B) Pareto-improving trades involve Tom giving up x_1 for x_2.
C) Pareto-improving trades between Jan and Tom do not exist.
D) Pareto-improving trades exist but cannot be assessed given the above information.

Answer: B
Explanation: A)
B)
C)
D)

83) One of the factors influencing the increase in the size of shopping carts for the past three decades is: 83) _____
A) the increase in the cost of produce storage at home.
B) the average weight of Canadians increase by 15%.
C) the continued entrance of women into the workforce.
D) the fact that people eat out less.

Answer: C
Explanation: A)
B)
C)
D)

84) The slope of an indifference curve reflects: 84) _____
A) the income of a consumer.
B) the relative value that a consumer places on one commodity compared to another.
C) the relative price of two commodities.
D) the utility number associated to the utility function.

Answer: B
Explanation: A)
B)
C)
D)

85) Utility numbers provide: 85) _____
A) positive information to society.
B) precise differences between consumption bundles.
C) normative information to society.
D) positive information to individuals.

Answer: D
Explanation: A)
B)
C)
D)

86) The basic reason there are so many excellent substitutes for water in almost all Canadian cities is that: 86) _____
A) the demand for water is inelastic.
B) the supply of water is limited.
C) there are so many alternative drinks readily available in the marketplace.
D) water is so inexpensive that people use it for many different purposes.

Answer: D
Explanation: A)
B)
C)
D)

87) Consider the choice between an economic bad, air pollution, and a measure of expenditure on all other goods, income. The MRS of the indifference curves in this space: 87) _____

A) is zero. B) is positive.
C) is negative. D) is not defined properly.

Answer: B
Explanation: A)
B)
C)
D)

88) Given the following utility function, $U(x_1,x_2) = x_1 + x_2$, which of the following preference statements is not true? 88) _____

A) (1, 9) is preferred to (3, 5) B) (1, 4) is indifferent to (2, 2)
C) (100, 0) is preferred to (1, 1) D) (4, 4) is indifferent to (3, 5)

Answer: B
Explanation: A)
B)
C)
D)

89) Along a standard, downward sloping, convex indifference curve the marginal rate of substitution is: 89) _____

A) constant. B) decreasing. C) positive. D) increasing.

Answer: B
Explanation: A)
B)
C)
D)

90) Consider four consumption bundles, denoted by A, B, C, and D. Which of the following sets of preference statements violates the transitivity assumption? 90) _____

A) D is preferred to C, C is preferred to B, B is preferred to A, C is preferred to A.
B) A is preferred to B, B is preferred to C, C is preferred to D, A is preferred to C.
C) D is preferred to B, C is preferred to A, A is preferred to B, B is preferred to C.
D) A is preferred to C, B is preferred to A.

Answer: C
Explanation: A)
B)
C)
D)

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

91) Sharon's utility function can be expressed as $U(x_1, x_2) = 7x_1^{0.25}x_2^{0.75}$. How much good 2 is she willing to give up to get one unit of good 1 if she currently has 10 units of good 1 and 30 units of good 2? 91) _____

Answer: Sharon's MU of good 1 is $(7/4)x_1^{-0.25}x_2^{0.75}$ and her MU of good 2 is $(21/4)x_1^{0.25}x_2^{-.075}$.
Thus, her MRS is $1/3(x_2/x_1)$. At her current level, she is willing to give up 1 unit of x_2 to get 1 unit of x_1.
Explanation:

92) When asked if he wants another beer, Kevin says "no thanks". Is this a violation of the non-satiation assumption? 92) _____

Answer: No, it is possible for an individual to reach a satiation point with a particular good, when the marginal utility reaches zero. However, most economists assume that consumers are never satiated across all goods.
Explanation:

93) Is the indifference curve between ice cream and garbage positively sloped? 93) _____

Answer: Yes, because garbage is an "economic bad".
Explanation:

94) Compute the MRS for the indifference curve $x_1 + x_2 = c$. Is it diminishing? 94) _____

Answer: The MRS is equal to 1. For this utility function the MRS is constant.
Explanation:

95) Explain the difference between ordinal and cardinal utility. 95) _____

Answer: The theory of utility used by economists is an ordinal one, i.e. it reveals only the relative order of consumer bundles. It does not say anything about the distance between bundles in terms of desirability.
Explanation:

96) Is an indifference curve defined as a set of bundles that a consumer with a given income can afford, and among which he or she is indifferent? 96) _____

Answer: No. The definition of an indifference curve has nothing to do with affordability.
Explanation:

97) The nonsatiation assumption implies that more is preferred to less. Can two bundles that contain different amounts of good 1 but the same amount of good 2 be on the same indifference curve? 97) _____

Answer: No, except when the two goods are perfect complements.
Explanation:

98) Does a diminishing marginal rate of substitution imply that an individual requires increasing amounts of one good as he gives up more and more of the other good to remain at the same utility level? 98) _____

Answer: Yes. This is the definition of diminishing MRS.
Explanation:

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

99) Consider the following utility functions:

i) $U(x, y) = xy^{1/2}$

ii) $U(x, y) = 10xy$

iii) $U(x, y) = 3x + 4y$

iv) $U(x, y) = 2x + ln(y)$

v) $U(x, y) = x^3$

a) Construct an indifference curve for each of these functions.

b) Calculate the MRS for each of these functions. (Calculus required)

Answer: a) i), ii) and iv) indifference curve are smooth and convex; iii) indifference curve is a downwards sloping straight line; v) indifference curve is a vertical straight line.
b) i) MRS = $3y/x$; ii) MRS = y/x; iii) MRS = 3/4; iv) MRS = $2y$; v) MRS = infinity.

100) Consider the following list of statements. Each statement in the list means the same thing as one of the other statements. Identify the pairs of statements which are equivalent:

a) consumers always prefer to have more of a good;

b) consumers' preferences are complete;

c) consumers' preferences are transitive;

d) every market basket has an indifference curve associated with it;

e) indifference curves are bowed in to the origin;

f) indifference curves are downward sloping;

g) indifference curves do not cross;

h) a diminishing MRS is a characteristic of consumer preferences.

Answer: e) and h), c) and g), b) and d), a) and f).

101) Define the Panglossian dilemma and illustrate it with an example.

Answer: If the economic agents within a model have maximized, it must be that all possible gains from trade and production have been taken advantage of. This, in turn, means that the economic model in question cannot possibly offer the economist an insight into how to improve the world with policy prescription. This is the Panglossian dilemma, named after a character in Voltaire's classic work Candide. The upshot of this is that, even if an economist can imagine a better world than the one we live in, his or her model already implied that efficiency has been attained. The world is efficient and "we cannot learn to build a better mousetrap."

102) Consider the following utility function:

$U(x, y) = 2x + 3y$

a) Draw the indifference curve associated with utility numbers 12 and 24.

b) How does MRS change as we move from one indifference curve to another along the horizontal line $y = 2$? What about when $y = 3$?

Answer: a) Indifference curves are downward sloping straight lines. When $U = 12$, the indifference curve crosses the horizontal line at x=6 and the vertical line at $y = 4$. When $U = 24$, the indifference curve crosses the horizontal line at $x = 12$ and the vertical line at $y = 4$..
b) The MRs is constant at every point on the indifference curve and it is equal to 3/2. Therefore, there is no change in MRS as we move from one point to another along an indifference curve or when we move from one indifference curve to another. In this case, x and y are perfect substitutes.

103) Jane's utility function is given by: $U(x, y) = xy^2$.

i) Is Jane indifferent between bundles (2,1) and (1,2)?

ii) Suppose Jane consumes 3 units of x and 2 units of y. If Jane increases her consumption of x by 1 unit but decreases her consumption of y by 1 unit, will she move to a lower indifference curve?

iii) Calculate the MRS when $x = 3$ and $y = 2$. (Calculus required)

Answer: i) No, Jane prefers (1,2) to (2,1).

ii) Yes, her utility decreases from $U = 12$ to $U = 4$ and therefore she moves to a lower indifference curve.

iii) When $x = 3$ and $y = 2$, MRS = 1/3.

104) Consider the following utility function: $U(x,y) = 2y + x^{1/3}$

a) What is the shape of an indifference curve (e.g., smooth, kinked, straight line)? Is the MRS diminishing?

b) How does the MRS change as you move from the indifference curve associated with the utility number 8 to the indifference curve associated with the utility number 27 when $x = 2$? What about when $x = 3$? (Calculus required)

Answer: a) The indifference curves are downward sloping, smooth and bowed in to the origin. They intersect both the horizontal and vertical axes. The MRS is diminishing.

b) MRS = $(1/6)x^{-2/3}$ doesn't change as you move along a vertical line because does not depend on y.

Answer Key
Testname: C2

1) D
2) B
3) B
4) A
5) B
6) C
7) C
8) D
9) D
10) D
11) B
12) B
13) A
14) A
15) D
16) C
17) D
18) C
19) B
20) B
21) B
22) A
23) D
24) B
25) B
26) B
27) C
28) A
29) D
30) A
31) B
32) B
33) D
34) B
35) C
36) D
37) C
38) C
39) A
40) D
41) A
42) D
43) D
44) A
45) C
46) B
47) D
48) D
49) C
50) C

51) C
52) B
53) B
54) C
55) A
56) A
57) B
58) B
59) C
60) D
61) D
62) B
63) C
64) C
65) D
66) D
67) B
68) A
69) A
70) B
71) D
72) A
73) A
74) C
75) B
76) C
77) A
78) C
79) B
80) B
81) D
82) B
83) C
84) B
85) D
86) D
87) B
88) B
89) B
90) C

91) Sharon's MU of good 1 is $(7/4)x_1^{-0.25}x_2^{0.75}$ and her MU of good 2 is $(21/4)x_1^{0.25}x_2^{-.075}$.
Thus, her MRS is $1/3(x_2/x_1)$. At her current level, she is willing to give up 1 unit of x_2 to get 1 unit of x_1.

92) No, it is possible for an individual to reach a satiation point with a particular good, when the marginal utility reaches zero. However, most economists assume that consumers are never satiated across <u>all</u> goods.

93) Yes, because garbage is an "economic bad".

94) The MRS is equal to 1. For this utility function the MRS is constant.

95) The theory of utility used by economists is an ordinal one, i.e. it reveals only the relative order of consumer bundles. It does not say anything about the distance between bundles in terms of desirability.

96) No. The definition of an indifference curve has nothing to do with affordability.

97) No, except when the two goods are perfect complements.
98) Yes. This is the definition of diminishing MRS.
99) a) i), ii) and iv) indifference curve are smooth and convex; iii) indifference curve is a downwards sloping straight line; v) indifference curve is a vertical straight line.
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b) The MRs is constant at every point on the indifference curve and it is equal to 3/2. Therefore, there is no change in MRS as we move from one point to another along an indifference curve or when we move from one indifference curve to another. In this case, x and y are perfect substitutes.
103) i) No, Jane prefers (1,2) to (2,1).
ii) Yes, her utility decreases from $U = 12$ to $U = 4$ and therefore she moves to a lower indifference curve.
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