1. The budget line
   A) represents the set of all baskets the consumer can afford.
   B) represents the set of all baskets the consumer can afford while spending all available income.
   C) represents the set of all baskets that give the consumer the same level of utility while holding spending constant.
   D) represents the set of all baskets in which the consumer purchases only one of the goods.

2. A set of baskets that a consumer can purchase with a limited amount of income is
   A) Consumer choice
   B) Consumer purchase
   C) Budget Constraint
   D) Budget line

3. Suppose the price of A is $20 per unit, the price of B is $10 per unit, and the consumer's income is $1000 per month. Which of the following baskets is not on the consumer's budget line?
   A) A = 40, B = 20
   B) A = 5, B = 90
   C) A = 2.5, B = 95
   D) A = 20, B = 40

4. Suppose the price of A is $20 per unit, the price of B is $10 per unit, and the consumer's income is $1000 per month. The equation of the budget line is
   A) \(1000 = 10A + 20B\)
   B) \(1000 = 20A + 10B\)
   C) \(20A = 10B\)
   D) \(1000 = A + B\)

5. Evaluate the truthfulness of the following statements.
   I. The budget constraint is a function of consumer preferences.
   II. The budget constraint defines the set of baskets that a consumer can purchase with a specific level of income.
   A) Both I and II are true.
   B) Both I and II are false.
   C) I is true; II is false.
   D) I is false; II is true.
6. Evaluate the truthfulness of the following statements.
   I. All points to the interior of the budget constraint are affordable.
   II. All points that lie on the budget constraint cost the same amount of money.
   A) Both I and II are true.
   B) Both I and II are false.
   C) I is true; II is false.
   D) I is false; II is true.

7. Let \( I \) be the income of the consumer, \( P_x \) be the price of good \( x \) and \( P_y \) be the price of good \( y \). If good \( x \) is measured along the horizontal axis and good \( y \) is measured along the vertical axis, then the “\( x \)-intercept” measures the maximum amount of good \( x \) that the consumer can afford, which can be expressed as
   A) \( \frac{P_x}{P_y} \)
   B) \( \frac{I}{P_y} \)
   C) \( \frac{I}{P_x} \)
   D) \( \frac{P_x}{I} \)

8. If good \( x \) is measured along the horizontal axis and good \( y \) is measured along the vertical axis, then the slope of the budget constraint can be expressed as
   A) \( -\frac{P_x}{P_y} \)
   B) \( -\frac{I}{P_y} \)
   C) \( -\frac{I}{P_x} \)
   D) \( -\frac{P_x}{I} \)

9. If a consumer purchases two goods, food (measured along the \( x \) axis) and housing (measured along the \( y \) axis), and if the price of food is $3 per unit and the price of housing is $400 per unit, then what is the slope of the consumer’s budget constraint if the consumer has an income of $600?
   A) \(-\frac{3}{600}\).
   B) \(-\frac{3}{400}\)
   C) \(-\frac{400}{600}\)
   D) \(-\frac{400}{3}\)
10. Suppose all prices double and income triples. The budget line
   A) will become steeper.
   B) will become flatter.
   C) will shift in toward the origin.
   D) will shift out from the origin.

11. Suppose the price of A is $20 and the price of B is $10 and that good A is plotted on the horizontal axis. If the price of A doubles and the price of B triples, leaving the consumer's income unchanged, the budget line
   A) will become steeper.
   B) will become flatter.
   C) will shift in toward the origin.
   D) will shift out from the origin.

12. Suppose a consumer purchases two goods, A and B, and that the price of A doubles, the consumer's income doubles, and the price of B remains unchanged. If good A is plotted on the horizontal axis, the budget line
   A) will remain unchanged.
   B) will become steeper.
   C) will become flatter.
   D) will shift out from the origin parallel to the original budget line.

13. Identify the statement that is false.
   A) An increase in the amount of income changes the intercepts of the budget constraint but not the slope.
   B) An increase in the price of good x changes both the x-intercept and the slope of the budget constraint.
   C) An increase in the price of good x and an equal percentage increase in the price of good y changes the x-intercept, the y-intercept, and the slope of the budget constraint.
   D) An increase in the price of good x and an increase in the price of good y may or may not change the slope of the budget constraint.
14. If a consumer purchases two goods, food (measured along the x axis) and housing (measured along the y axis), then what happens to the slope of the consumer's budget constraint if the price of food falls?
   A) The new budget constraint shifts inward but is parallel to the original budget constraint.
   B) The new budget constraint pivots inward (towards the origin) along the x axis. The new slope is steeper than the original slope.
   C) The new budget constraint pivots inward (towards the origin) along the x axis. The new slope is flatter than the original slope.
   D) The new budget constraint pivots outward (away from the origin) along the x axis. The new slope is flatter than the original slope.

15. Suppose that a consumer's income triples. However, at the same time, both the price of x and the price of y also triple. This consumer has experienced
   A) an increase in purchasing power.
   B) a decrease in purchasing power.
   C) no change in purchasing power.
   D) a pivot in the budget constraint with an undetermined effect on purchasing power.

17. Economists describe consumer choice as a constrained optimization problem. What is the consumer trying to do?
   A) Maximize income subject to the budget constraint.
   B) Maximize the budget constraint.
   C) Maximize utility subject to the budget constraint.
   D) Minimize spending.

18. Consumer choice of the basket of goods that (a) maximizes utility (b) allows his/her to live within the budget constraint and (c) includes a positive amount of all commodities is the consumer's
   A) Optimal choice
   B) Maximum choice
   C) Interior optimum
   D) Consumer choice
19. At a consumer's interior optimum solution, which of the following will not necessarily hold true?
   A) \( MU_x = MU_y \)
   B) \( \frac{MU_x}{MU_y} = \frac{P_x}{P_y} \)
   C) \( MRS_{x,y} = \frac{MU_x}{MU_y} \)
   D) \( MRS_{x,y} = \frac{P_x}{P_y} \)

20. Suppose the price of \( A \) is $20, the price of \( B \) is $10, and that the consumer is currently spending all available income. At the consumer's current consumption basket the marginal utility of \( A \) is 6 and the marginal utility of \( B \) is 4.
   A) The consumer is currently maximizing utility.
   B) The consumer could increase utility by consuming more of good \( A \) and less of good \( B \).
   C) The consumer could increase utility by consuming more of good \( B \) and less of good \( A \).
   D) Nothing can be said about the consumer's utility because we do not know the consumer's income or utility function.

21. Suppose the price of \( A \) is $20, the price of \( B \) is $10, and that the consumer is currently spending all available income. At the consumer's current consumption basket the marginal utility of \( A \) is 8 and the marginal utility of \( B \) is 2.
   A) The consumer is currently maximizing utility.
   B) The consumer could increase utility by consuming more of good \( A \) and less of good \( B \).
   C) The consumer could increase utility by consuming more of good \( B \) and less of good \( A \).
   D) Nothing can be said about the consumer's utility because we do not know the consumer's income or utility function.
22. Suppose the price of A is $20, the price of B is $10, and that the consumer is currently spending all available income. At the consumer's current consumption basket the marginal utility of A is 8 and the marginal utility of B is 4.
   A) The consumer is currently maximizing utility.
   B) The consumer could increase utility by consuming more of good A and less of good B.
   C) The consumer could increase utility by consuming more of good B and less of good A.
   D) Nothing can be said about the consumer's utility because we do not know the consumer's income or utility function.

23. Suppose the price of good x is $5 and the price of good y is $7. Also, suppose $MU_x = y$ and $MU_y = x$. Which of the following baskets could be an interior optimum?
   A) $x = 5, y = 7$
   B) $x = 4, y = 6$
   C) $x = 7, y = 5$
   D) $x = 6, y = 4$

24. Suppose that $MU_x = y$ and $MU_y = x$. Further suppose that the consumer's budget constraint can be expressed as $20x + 10y = 400$. For this consumer, the optimal amount of good x to buy would be
   A) 5.
   B) 10.
   C) 20.
   D) 40.

25. Suppose that $U(x,y) = \min(3x,y)$. Further suppose that $P_x = $5 per unit and $P_y = $10 per unit and income is $I = $105. For this consumer, the optimal basket to buy would be
   A) $(x,y) = (9,3)$
   B) $(x,y) = (3,1)$
   C) $(x,y) = (1,3)$
   D) $(x,y) = (3,9)$

26. The “equal bang for the buck” idea means that the consumer is equating
   A) the marginal utilities of all of the goods purchased.
   B) the prices of all the goods purchased.
   C) the marginal utilities of the last dollar spent on each good purchased.
   D) the ratios of the last dollar spent on each good purchased.
27. Suppose that the ratio of marginal utility to price for good $A$ is 10, and the ratio of marginal utility to price for good $B$ is 5. Assume that for her current consumption of goods $A$ and $B$ the consumer is experiencing diminishing marginal utility for each good. In order for this consumer to be at her utility maximizing point, she should
A) consume less $A$ and more $B$.
B) consume more $A$ and less $B$.
C) consume more $A$ and more $B$.
D) do nothing – the consumer is already in equilibrium.

28. Which of the following statements is true about the consumer’s expenditure minimization problem?
A) The consumer's expenditure minimization problem results in the same optimal basket as the consumer's utility maximization problem if the required level of utility for the expenditure minimizer is the same as the maximized utility for the utility maximizer.
B) The consumer's expenditure minimization problem has an optimum at an expenditure of zero.
C) The consumer's utility maximization problem results in a tangency between the budget constraint and an indifference curve, whereas the expenditure minimization problem results in a solution where the indifference curve crosses the budget line.
D) The consumer always prefers to maximize utility rather than to minimize expenditure.

30. When given a choice between a cash subsidy and a voucher worth the same dollar amount, but only good for the purchase of a single good,
A) the consumer will always prefer the voucher to the cash subsidy or be indifferent between the two.
B) the consumer will always prefer the cash subsidy to the voucher or would be indifferent between the two.
C) the consumer might prefer the cash subsidy to the voucher or might prefer the voucher to the cash subsidy.
D) the consumer would prefer to receive neither the cash subsidy nor the voucher.

31. When comparing a cash subsidy and a voucher worth the same dollar amount, but only good for the purchase of a single good,
A) a consumer can never be better off with a cash subsidy than with a voucher.
B) a consumer can never be better off with a voucher than with a cash subsidy.
C) a cash subsidy will always make the consumer better off than the consumer would be with a voucher.
D) a voucher will always make the consumer better off than the consumer would be with a cash subsidy.
32. If a consumer states that he is indifferent between receiving a gift certificate for $10 at the local bookstore and receiving $10 cash, we can infer that this consumer
A) would spend less than $10 at the bookstore.
B) would spend at least $10 at the bookstore.
C) would spend more than $10 at the bookstore.
D) would spend exactly $10 at the bookstore.

33. If the government would like to induce a consumer to consume a specific level of some good
A) a cash subsidy system would likely be cheaper for the government than a voucher system.
B) a voucher system would likely be cheaper for the government than a cash subsidy system.
C) the government should only use a cash subsidy system since this always make consumers better off.
D) the government should only use a voucher system since this always makes consumers better off.

37. When analyzing how borrowing and lending affect the consumer's budget constraint, we measure spending in the current time period on the horizontal axis and spending in the future time period on the vertical axis. Assume that the interest rate at which the consumer can lend and borrow is 10%, income in period 1 is $1000 and income in period 2 is $1200. The point of maximum current consumption can be expressed as
A) 1000 + 1200/1.1.
B) 1000(1.1) + 1200.
C) 1000 + 1200 + .1
D) 1000/1.1 + 1200/1.1 + 1.

38. When analyzing how borrowing and lending affect the consumer's budget constraint, we measure spending in the current time period on the horizontal axis and spending in the future time period on the vertical axis. Assume that the interest rate at which the consumer can lend and borrow is 10% and income in period 1 is $1000 while income in period 2 is $1200. The point of maximum future consumption can be expressed as
A) 1000 + 1200/1.1.
B) 1000(1.1) + 1200.
C) 1000+1200+.1.
D) 1000/1.1 + 1200/1.1 + 1.
40. When we do not have information regarding a consumer's indifference map, which of the following analyses can provide additional information regarding the consumer's choices?
   A) Revealed preference analysis.
   B) Indifference curve analysis.
   C) Market basket analysis.
   D) Optimization analysis.

42. Consider the concept of revealed preference. Suppose a consumer chooses basket $A$ over basket $B$ when basket $B$ costs the same amount. The consumer
   A) must find basket $A$ better than basket $B$.
   B) must find basket $B$ better than basket $A$.
   C) must find basket $A$ at least as good as basket $B$.
   D) must find basket $B$ at least as good as basket $A$.

43. Suppose a consumer buys two goods, $x$ and $y$ and has income of $30. Initially $P_x = 3$ and $P_y = 3$ and the consumer chooses basket $A$ with $x = 5$ and $y = 5$. The prices change to $P_x = 4$ and $P_y = 2$ and the consumer chooses basket $B$ with $x = 1$ and $y = 13$.
   A) These choices are consistent with utility maximization.
   B) These choices are not consistent with utility maximization.
   C) With this information it is not possible to determine if these choices are consistent with utility maximization.
   D) Basket $B$ must be strictly preferred to basket $A$.

46. The theory of consumer choice
   A) describes how a consumer chooses between different budget constraints.
   B) describes how a consumer chooses between different income levels.
   C) describes how a consumer allocates her limited income among available goods and services.
   D) describes how a consumer allocates her limited preferences among available income levels.

47. Revealed preferences tells us that if basket $A$ costs less than basket $B$ but the consumer chooses $B$ instead of $A$, then we know that
   A) $A$ is strictly preferred to $B$.
   B) $A$ is at least as preferred to $B$.
   C) $B$ is strictly preferred to $A$.
   D) $B$ is as least as preferred to $A$. 
Answer Key

1. B
2. C
3. D
4. B
5. D
6. A
7. C
8. A
9. B
10. D
11. B
12. B
13. C
14. D
15. C
17. C
18. C
19. A
20. C
21. B
22. A
23. C
24. B
25. D
26. C
27. B
28. A
30. B
31. B
32. B
33. B
37. A
38. B
40. A
42. C
43. A
46. C
47. C