Chapter Two

1. The equilibrium price in a market is the price where
   a. supply equals demand
   b. no surpluses or shortages result
   c. no pressures cause price or quantity to change
   d. all of the above
   e. none of the above

2. When price supports are binding, the quantity exchanged is determined by the quantity
   a. demanded
   b. supplied
   c. demanded, if it is larger than supply
   d. supplied, if it is larger than demand
   e. none of the above

3. When population grows, the demand curve for a good will
   a. shift in
   b. shift out
   c. remain unaffected
   d. shift in or out depending on what kind of good
   e. none of the above

4. Hardware and software for computers are complements. If the price of computer hardware falls, the market for computer software will see equilibrium
   a. price and quantity fall
   b. price rise but quantity fall
   c. price fall but quantity rise
   d. price and quantity rise
   e. no change in price or quantity

5. If there is an increase in the price of cocoa (an input), the market for premium chocolate will see equilibrium
   a. price and quantity fall
b. price rise but quantity fall  
c. price fall but quantity rise  
d. price and quantity rise  
e. no change in price or quantity  

6. The supply curve is $P = 4Q_s$ and demand is perfectly elastic at $P = 20$. Before any tax is imposed, the equilibrium quantity is:  
a. 4  
b. 5  
c. 16  
d. 20  
e. none of the above  

7. If sellers must pay a tax of $4 per unit, what quantity is exchanged?  
a. 4  
b. 5  
c. 16  
d. 20  
e. none of the above  

8. And what price will buyers pay?  
a. 4  
b. 5  
c. 16  
d. 20  
e. none of the above  

9. And what price will the sellers keep (net of paying the tax)?  
a. 4  
b. 5  
c. 16  
d. 20  
e. none of the above  

10. How is the tax burden distributed across buyers and sellers?  
a. buyers pay it all  
b. buyers pay more of the tax than sellers but not all of it  
c. buyers and sellers each pay half the tax  
d. sellers pay more of the tax than buyers but not all of it  
e. sellers pay it all
Chapter Three

11. An increase in the price of candy will cause the budget constraint to
   a. rotate outward along the axis for candy
   b. rotate inward along the axis for candy
   c. shift inward in a parallel fashion
   d. shift outward in a parallel fashion
   e. none of the above

12. An increase in income will cause the budget constraint to
   a. rotate outward along the axis for only one good
   b. rotate inward along the axis for only one good
   c. shift inward in a parallel fashion
   d. shift outward in a parallel fashion
   e. none of the above

13. A preference for 10 apples and 4 oranges over 9 apples and 3
    oranges indicates
   a. completeness
   b. transitivity
   c. diminishing marginal rate of substitution
   d. more is better
   e. c and d

14. Any bundle that lies on a specified indifference curve is _______ compared to any bundle that lies above the curve.
   a. more preferred
   b. equally preferred
   c. less preferred
   d. some more, some equally preferred
   e. some less, some equally preferred

15. When a consumer optimally chooses a consumption bundle, the
    MRS equals
   a. the ratio of the prices of the goods
   b. the (absolute value of the) slope of the indifference curve
   c. the opportunity cost of one good in terms of the other
   d. all of the above
   e. none of the above
16. Monster’s budget constraint for milk L and cookies C, when spends $18 and faces prices $3/cup for milk and $6/dozen for cookies is:
   a. \( L = 6 - 2C \)
   b. \( 3C + 6L = 18 \)
   c. \( 3L + 6C = 18 \)
   d. both a. and c.
   e. none of the above

17. The maximum milk Monster can consume is _____ cups (with no cookies). The maximum cookies is _____ dozen (with no milk).
   a. 9, 6
   b. 6, 9
   c. 3, 6
   d. 6, 3
   e. none of the above

18. Every dozen cookies that Monster consumes requires forgoing the consumption of how many cups of milk?
   a. 1/2
   b. 3/4
   c. 1
   d. 2
   e. none of the above

19. If milk and cookies are perfect complements, with Monster requiring one dozen cookies per cup of milk, his best affordable bundle is:
   a. 3 cups of milk and 3 dozen cookies
   b. 2 cups of milk and 2 dozen cookies
   c. 6 cups of milk and no cookies
   d. 3 dozen cookies and no milk
   e. none of the above

20. If the price of cookies rises to $9/dozen, how much additional income would be needed to afford the original consumption bundle?
   a. $0
   b. $2
   c. $4
   d. $6
   e. none of the above
Chapter Four

21. What is used to construct an individual's Engel curve?
   a. an income consumption curve
   b. a price consumption curve
   c. the substitution effect of a price change
   d. the income effect of a price change
   e. the individual's demand curve

22. When moving along a linear demand curve toward lower price and higher quantity demanded, demand
   a. becomes less elastic
   b. becomes more elastic
   c. maintains a constant elasticity
   d. initially becomes more elastic and eventually less elastic
   e. initially becomes less elastic and eventually more elastic

23. For perfect complements, the substitution effect is
   a. infinite
   b. one
   c. zero
   d. negative
   e. cannot tell

24. For a linear demand curve, revenue is maximized where the price elasticity of demand is
   a. the lowest
   b. one
   c. zero
   d. the highest
   e. cannot tell

25. The total effect of a price increase is always the same as the
   a. substitution effect
   b. income effect
   c. income effect minus the substitution effect
   d. income effect plus the substitution effect
   e. substitution effect minus the income effect
26. The market demand curve for pumpkins is \( P = 30 - Q \). At \( P = $10 \), total revenue is:
   a. $100
   b. $200
   c. $225
   d. $250
   e. none of the above

27. And at \( P = $10 \), the price elasticity of demand for pumpkins is
   a. \(-1/2 = -0.5\)
   b. \(-2/3 = -0.67\)
   c. \(-3/4 = -0.75\)
   d. \(-1\)
   e. none of the above

28. And at \( P = $10 \), pumpkin demand is price
   a. elastic
   b. unitary elastic
   c. inelastic
   d. spastic
   e. none of the above

29. And if currently charging \( P = $10 \), to increase revenues, pumpkin sellers should:
   a. decrease price
   b. increase price
   c. leave price unchanged
   d. cannot tell from the information provided
   e. none of the above

30. At \( P = $20 \), pumpkin demand given by \( P = 30 - Q \) is price
   a. elastic
   b. unitary elastic
   c. inelastic
   d. spastic
   e. none of the above

Chapter Five
31. For demand given by \( P = 10 - 2Q \), how much would consumer surplus decline if the price increased from $2 to $4?
   a. 6  
   b. 7  
   c. 8  
   d. 9  
   e. none of the above

32. A consumer’s preferences over future and current consumption are represented by
   a. a budget constraint  
   b. the present value of lifetime income  
   c. the production possibilities frontier  
   d. an intertemporal indifference map  
   e. none of the above

33. According to the Life-cycle hypothesis, if someone received an extra payment equal to current income, current consumption would likely:
   a. increase by more than the increase in income  
   b. roughly double  
   c. increase, but not by as much as the increase in income.  
   d. stay the same  
   e. decrease

34. If receive income \( M \) in each of two periods and can borrow or loan at interest rate \( r \), what is the most can consume in the current period?
   a. \( (1 + r)M \)  
   b. \( (2 + r)M \)  
   c. \( M/(2 + r) \)  
   d. \( (2 + r)M/(1 + r) \)  
   e. none of the above

35. And what is the most you can consume in the future period?
   a. \( (1 + r)M \)  
   b. \( (2 + r)M \)  
   c. \( M/(2 + r) \)  
   d. \( (2 + r)M/(1 + r) \)  
   e. none of the above
36. George has income of \( M_1 = M_2 = \$100 \) in each period and faces an interest rate of \( r = 10\% \). The maximum George can consume in the current period, if he consumes nothing in the future period, is
   a. \( \$190.9 \)
   b. \( \$200 \)
   c. \( \$210 \)
   d. \( \$220 \)
   e. none of the above

37. The maximum George can consume in the future period, if he consumes nothing in the current period, is
   a. \( \$190.9 \)
   b. \( \$200 \)
   c. \( \$210 \)
   d. \( \$220 \)
   e. none of the above

38. George's intertemporal budget constraint is
   a. \( C_1 + C_2/(1.1) = \$190.9 \)
   b. \( C_2 = \$210 - 1.1C_1 \)
   c. \( C_1 + C_2 = \$200 \)
   d. both a. and b.
   e. none of the above

39. If George views current and future consumption as perfect substitutes (at a one-to-one ratio), his optimal consumption bundle is
   a. \( \$190.9 \) in current period, nothing in future period
   b. \( \$210 \) in current period, nothing in future period
   c. \( \$100 \) in current period, \( \$100 \) in future period
   d. nothing in current period, \( \$210 \) in future period
   e. none of the above

40. And if the interest rate rose to \( r = 20\% \), his new optimal consumption bundle would be
   a. \( \$181.8 \) in current period, nothing in future period
   b. \( \$220 \) in current period, nothing in future period
   c. \( \$100 \) in current period, \( \$100 \) in future period
   d. nothing in current period, \( \$220 \) in future period
   e. none of the above
Chapter Two

1d The equilibrium price in a market is the price where supply equals demand, no surpluses or shortages result, and no pressures cause price or quantity to change (all of the above).

2a When price supports are binding, the quantity exchanged is determined by the quantity demanded.

3b When population grows, the demand curve for a good will shift out.

4d Hardware and software for computers are complements. If the price of computer hardware falls, the market for computer software will see equilibrium price and quantity rise.

5b If there is an increase in the price of cocoa (an input), the market for premium chocolate will see equilibrium price rise but quantity fall.

6b The supply curve is \( P = 4Q_s \) and demand is perfectly elastic at \( P = 20 \). Before any tax is imposed, the equilibrium quantity is 5.

7a If sellers must pay a tax of $4 per unit, what quantity is exchanged? 4

8d And what price will buyers pay? 20

9c And what price will the sellers keep (net of paying the tax)? 16

10e How is the tax burden distributed across buyers and sellers? Sellers pay it all.

Chapter Three

11b An increase in the price of candy will cause the budget constraint to rotate inward along the axis for candy.

12d An increase in income will cause the budget constraint to shift outward in a parallel fashion.

13c A preference for 10 apples and 4 oranges over 9 apples and 3 oranges indicates more is better.

14c Any bundle that lies on a specified indifference curve is less preferred compared to any bundle that lies above the curve.

15d When a consumer optimally chooses a consumption bundle, the
MRS equals the ratio of the prices of the goods, the (absolute value of the) slope of the indifference curve, and the opportunity cost of one good in terms of the other (all of the above).

16d Monster’s budget constraint for milk L and cookies C, when spends $18 and faces prices $3/cup for milk and $6/dozen for cookies is both \( L = 6 - 2C \) and \( 3L + 6C = 18 \).

17d The maximum milk Monster can consume is 6 cups (with no cookies). The maximum cookies is 3 dozen (with no milk).

18d Every dozen cookies that Monster consumes requires forgoing the consumption of how many cups of milk? 2

19b If milk and cookies are perfect complements, with Monster requiring one dozen cookies per cup of milk, his best affordable bundle is 2 cups of milk and 2 dozen cookies.

20d If the price of cookies rises to $9/dozen, how much additional income would be needed to afford the original consumption bundle? $6

Chapter Four

21a What is used to construct an individual's Engel curve? An income consumption curve

22a When moving along a linear demand curve toward lower price and higher quantity demanded, demand becomes less elastic.

23c For perfect complements, the substitution effect is zero.

24b For a linear demand curve, revenue is maximized where the price elasticity of demand is one.

25d The total effect of a price increase is always the same as the income effect plus the substitution effect.

26b The market demand curve for pumpkins is \( P = 30 - Q_D \). At \( P = 10 \), total revenue is $200.

27a And at \( P = 10 \), the price elasticity of demand for pumpkins is \( -1/2 = -0.5 \).

28c And at \( P = 10 \), pumpkin demand is price inelastic.

29b And if currently charging \( P = 10 \), to increase revenues, pumpkin sellers should increase price.

30a At \( P = 20 \), pumpkin demand given by \( P = 30 - Q_D \) is price elastic.
Chapter Five

31b For demand given by \( P = 10 - 2Q \), how much would consumer surplus decline if the price increased from $2 to $4? 7

32d A consumer’s preferences over future and current consumption are represented by an intertemporal indifference map.

33c According to the Life-cycle hypothesis, if someone received an extra payment equal to current income, current consumption would likely increase, but not by as much as the increase in income.

34d If receive income \( M \) in each of two periods and can borrow or loan at interest rate \( r \), what is the most can consume in the current period? \( \frac{(2 + r)M}{1 + r} \)

35b And what is the most you can consume in the future period? \( (2 + r)M \)

36a George has income of \( M_1 = M_2 = $100 \) in each period and faces an interest rate of \( r = 10\% \). The maximum George can consume in the current period, if he consumes nothing in the future period, is $190.9.

37c The maximum George can consume in the future period, if he consumes nothing in the current period, is $210.

38d George's intertemporal budget constraint is both \( C_2 = 210 - 1.1C_1 \) and \( C_1 + \frac{C_2}{1.1} = 190.9 \).

39d If George views current and future consumption as perfect substitutes (at a one-to-one ratio), his optimal consumption bundle is nothing in current period, $210 in future period.

40d And if the interest rate rose to \( r = 20\% \), his new optimal consumption bundle would be nothing in current period, $220 in future period.