Micro Unit 2 Study Guide

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I. Multiple Choice

1. The law of demand states that, ceteris paribus:
   A. As price increases, quantity demanded increases
   B. As price decreases, quantity demanded decreases
   C. As price increases, quantity demanded decreases
   D. Price and quantity demanded are unrelated

2. Which of the following would cause a movement along the demand curve rather than a shift of the curve?
   A. A change in consumer income
   B. A change in the price of the good itself
   C. A change in consumer preferences
   D. A change in the price of a substitute good

3. If the price of coffee increases, what would likely happen to the demand for tea (a substitute)?
   A. Demand for tea would decrease
   B. Demand for tea would increase
   C. Quantity demanded of tea would decrease
   D. No effect on the tea market

4. Which of the following is most likely an inferior good?
   A. Luxury cars
   B. Organic vegetables
   C. Generic brand cereal
   D. Restaurant meals

5. An increase in consumer income will:
   A. Shift demand right for normal goods
   B. Shift demand left for normal goods
   C. Shift supply right for all goods
   D. Cause movement along the demand curve

6. The law of supply states that, ceteris paribus:
   A. As price increases, quantity supplied decreases
   B. As price decreases, quantity supplied increases
   C. As price increases, quantity supplied increases
   D. Supply and price are inversely related

7. Which of the following would shift the supply curve for smartphones to the right?
   A. An increase in wages for factory workers

B. A technological improvement in production
C. An increase in the price of smartphones
D. A decrease in the number of smartphone manufacturers

8. If the price of steel (an input) increases, what happens to the supply of automobiles?
   A. Supply increases (shifts right)
   B. Supply decreases (shifts left)
   C. Quantity supplied increases
   D. No change in supply

9. At market equilibrium:
   A. Quantity demanded exceeds quantity supplied
   B. Quantity supplied exceeds quantity demanded
   C. Quantity demanded equals quantity supplied
   D. Price is at its maximum level

10. A price set below equilibrium will result in:
    A. A surplus
    B. A shortage
    C. Equilibrium
    D. Decreased demand

11. When there is a shortage in the market:
    A. Price will fall to eliminate the shortage
    B. Price will rise to eliminate the shortage
    C. Quantity supplied exceeds quantity demanded
    D. The market is in equilibrium

12. If both demand and supply increase simultaneously:
    A. Price definitely increases
    B. Quantity definitely increases
    C. Price definitely decreases
    D. Quantity definitely decreases

13. If demand increases while supply decreases:
    A. Price definitely increases
    B. Quantity definitely increases
    C. Price definitely decreases
    D. Quantity definitely decreases

14. Price elasticity of demand measures:
    A. The slope of the demand curve
    B. How responsive quantity demanded is to a price change
    C. How responsive price is to a quantity change

D. The absolute change in quantity

15. If the price elasticity of demand is 2.5, demand is:
    A. Inelastic
    B. Elastic
    C. Unit elastic
    D. Perfectly inelastic

16. When demand is inelastic and price increases, total revenue will:
    A. Increase
    B. Decrease
    C. Remain constant
    D. Become zero

17. Which product is most likely to have elastic demand?
    A. Insulin for diabetics
    B. Table salt
    C. Luxury vacation packages
    D. Gasoline in the short run

18. Demand becomes more elastic over time because:
    A. Consumers find more substitutes
    B. Goods become necessities
    C. Income decreases
    D. Supply becomes fixed

19. If cross-price elasticity between goods A and B is positive, the goods are:
    A. Complements
    B. Substitutes
    C. Inferior goods
    D. Unrelated

20. If income elasticity of demand is -0.5, the good is:
    A. A normal necessity
    B. A normal luxury
    C. An inferior good
    D. Perfectly elastic

21. When supply is perfectly inelastic, the supply curve is:
    A. Horizontal
    B. Vertical
    C. Upward sloping
    D. Downward sloping

22. Supply is more elastic in the long run because:
    A. Prices are fixed
    B. Firms can adjust capacity and resources
    C. Demand becomes more inelastic
    D. Government regulations increase

23. Consumer surplus is:
    A. The difference between price paid and marginal cost
    B. The difference between willingness to pay and price paid
    C. The difference between supply and demand
    D. The total benefit from consumption

24. Producer surplus is represented graphically as the area:
    A. Below the demand curve and above price
    B. Above the supply curve and below price
    C. Between supply and demand curves
    D. Below the supply curve

25. Total surplus is maximized when:
    A. Consumer surplus is zero
    B. Producer surplus is zero
    C. The market is in equilibrium
    D. Price is at its maximum

26. Allocative efficiency occurs when:
    A. Production occurs at lowest cost
    B. Marginal benefit equals marginal cost
    C. All resources are employed
    D. Income is distributed equally

27. Deadweight loss represents:
    A. Government tax revenue
    B. Lost gains from trade
    C. Producer surplus
    D. Consumer surplus

28. A binding price ceiling will:
    A. Create a surplus
    B. Create a shortage
    C. Increase total surplus
    D. Have no effect on the market

29. A binding price floor will:
    A. Be set below equilibrium

B. Create a shortage
C. Create a surplus
D. Maximize total surplus

30. When the government imposes a tax on a good:
    A. Supply shifts left (or demand shifts left)
    B. Equilibrium quantity increases
    C. No deadweight loss occurs
    D. Total surplus increases

31. The incidence of a tax falls more heavily on:
    A. The party with more elastic demand or supply
    B. The party with more inelastic demand or supply
    C. Always the consumer
    D. Always the producer

32. If demand is perfectly inelastic and a tax is imposed:
    A. Consumers bear the entire burden
    B. Producers bear the entire burden
    C. The burden is shared equally
    D. No one pays the tax

33. A subsidy will cause:
    A. Quantity to fall below equilibrium
    B. Quantity to rise above equilibrium
    C. A shortage
    D. Increased deadweight loss from underproduction

34. Which scenario creates the largest deadweight loss from a tax?
    A. Both supply and demand are elastic
    B. Both supply and demand are inelastic
    C. Supply is elastic, demand is inelastic
    D. Supply is inelastic, demand is elastic

35. Rent control is an example of:
    A. A price floor
    B. A price ceiling
    C. A subsidy
    D. Allocative efficiency

36. The minimum wage is an example of:
    A. A price floor
    B. A price ceiling
    C. A tax

D. Allocative efficiency

37. When calculating elasticity using the midpoint method:
    A. Use the initial price as the base
    B. Use the final price as the base
    C. Use the average of initial and final values as the base
    D. Ignore price changes

38. If quantity demanded falls from 100 to 80 when price rises from $10 to $12, demand is:
    A. Elastic
    B. Inelastic
    C. Unit elastic
    D. Perfectly inelastic

39. Goods with many close substitutes tend to have:
    A. Inelastic demand
    B. Elastic demand
    C. Perfectly inelastic demand
    D. No elasticity

40. Which statement about efficiency is correct?
    A. Price ceilings increase total surplus
    B. Taxes always improve efficiency
    C. Free markets maximize total surplus at equilibrium
    D. Deadweight loss increases total surplus

II. True / False

41. A change in price causes a shift of the demand curve.

42. An increase in demand means consumers want to buy more at every price.

43. Normal goods have a negative income elasticity of demand.

44. Complements have a positive cross-price elasticity of demand.

45. The law of supply states that price and quantity supplied move in the same direction.

46. A decrease in input prices shifts the supply curve to the left.

47. Market equilibrium occurs where the demand and supply curves intersect.

48. A shortage exists when quantity supplied exceeds quantity demanded.

49. If both supply and demand increase, quantity definitely increases.

50. Elastic demand means a small price change causes a large change in quantity demanded.

51. Demand is more elastic in the long run than in the short run.

52. If total revenue increases when price increases, demand is elastic.

53. Perfectly inelastic demand is represented by a vertical demand curve.

54. Necessities tend to have more elastic demand than luxuries.

55. Supply is more elastic when firms have spare capacity.

56. Income elasticity is positive for inferior goods.

57. Consumer surplus measures the benefit buyers receive from participating in a market.

58. Producer surplus is the area below the supply curve and above the price.

59. Total surplus equals consumer surplus plus producer surplus.

60. Deadweight loss occurs when markets are at equilibrium.

61. Price ceilings create surpluses when binding.

62. Price floors set above equilibrium create shortages.

63. Taxes create a wedge between the price buyers pay and sellers receive.

64. The more inelastic demand is, the more consumers bear the tax burden.

65. Subsidies lead to overproduction and deadweight loss.

66. Allocative efficiency occurs when MB = MC.

67. At equilibrium, total surplus is maximized.

68. Black markets may emerge when price ceilings are imposed.

69. Minimum wage laws can create unemployment if set above equilibrium.

70. The statutory incidence of a tax determines who actually bears the burden.

III. Fill in the Blanks

71. The law of demand states that price and quantity demanded are _____ related.

72. A change in the price of the good causes a movement _____ the demand curve.

73. When consumer income increases, demand for _____ goods shifts right.

74. Two goods consumed together, like coffee and cream, are called _____.

75. Two goods that satisfy similar needs, like Coke and Pepsi, are called _____.

76. The law of supply states that price and quantity supplied are _____ related.

77. A technological improvement shifts the supply curve to the _____.

78. Market equilibrium occurs where quantity _____ equals quantity _____.

79. When price is above equilibrium, a _____ exists.

80. When price is below equilibrium, a _____ exists.

81. Price elasticity of demand is calculated as the percentage change in _____ divided by the percentage change in _____.

82. When |PED| > 1, demand is _____.

83. When |PED| < 1, demand is _____.

84. If demand is elastic and price increases, total revenue will _____.

85. Demand becomes more _____ over longer time periods.

86. Goods with many substitutes tend to have _____ demand.

87. Cross-price elasticity is positive for _____.

88. Income elasticity is negative for _____ goods.

89. Consumer surplus is the area _____ the price and _____ the demand curve.

90. Producer surplus is the area _____ the price and _____ the supply curve.

91. Total surplus is _____ when the market is in equilibrium.

92. _____ efficiency occurs when MB = MC.

93. _____ loss represents the reduction in total surplus due to inefficiency.

94. A price _____ is a legal maximum price set below equilibrium.

95. A price _____ is a legal minimum price set above equilibrium.

96. When a tax is imposed, the _____ quantity falls and deadweight loss occurs.

97. The party with more _____ demand or supply bears a larger tax burden.

98. A _____ is a government payment that shifts supply right or demand right.

99. Subsidies cause quantity to _____ beyond the efficient level.

100. The _____ incidence of a tax tells us who legally pays, while _____ incidence tells us who actually bears the burden.

IV. Matching

101. Match the concept with its correct description:

Concept	Description
A. Law of Demand B. Law of Supply C. Equilibrium D. Shortage E. Surplus F. Elastic Demand	1. Quantity demanded exceeds quantity supplied 2. Price and quantity demanded are inversely related 3. Quantity supplied exceeds quantity demanded 4. |PED| > 1; quantity is very responsive to price 5. Where quantity demanded = quantity supplied 6. Lost gains from trade due to inefficiency

G. Inelastic Demand	7. Price and quantity supplied are directly related
H. Consumer Surplus	8. Benefit to buyers; willingness to pay - price paid
I. Producer Surplus	9. |PED| < 1; quantity is not very responsive to price
J. Deadweight Loss	10. Benefit to sellers; price received - price accepted

102. Match the determinant with the curve it shifts:

Determinant	Shift
A. Consumer income increases	1. Demand shifts right
B. Price of inputs decreases	2. Demand shifts left
C. Consumer preferences change favorably	3. Supply shifts right
D. Technology improves	4. Supply shifts left
E. Price of substitute increases	
F. Number of sellers increases	
G. Consumers expect higher future prices	
H. Price of complement increases	

103. Match the elasticity type with its interpretation:

Elasticity Value	Interpretation
A. PED = -2.5	1. Elastic demand
B. PED = -0.4	2. Inelastic demand
C. XED = 1.3	3. Substitutes
D. XED = -0.8	4. Complements
E. YED = 2.0	5. Normal luxury good
F. YED = -0.3	6. Inferior good
G. PES = 0	7. Perfectly inelastic supply
H. PES = ∞	8. Perfectly elastic supply

V. Short Answer

104. Explain the difference between a "change in quantity demanded" and a "change in demand."

105. Why do demand curves slope downward? Explain using the substitution and income effects.

106. Provide a real-world example of substitute goods and explain what happens to the demand for one when the price of the other increases.

107. Provide a real-world example of complementary goods and explain their relationship.

108. Explain why inferior goods have negative income elasticity.

109. Why do supply curves slope upward?

110. What happens to the supply of goods when the price of an input increases?

111. Explain how a market automatically moves toward equilibrium when there is a shortage.

112. Explain how a market automatically moves toward equilibrium when there is a surplus.

113. If demand and supply increase, what can we say with certainty about the new equilibrium?

114. Define price elasticity of demand and explain what it measures.

115. Explain why necessities tend to have inelastic demand.

116. Why does demand become more elastic over longer time periods?

117. Use the total revenue test to determine whether demand is elastic or inelastic if price increases and total revenue decreases.

118. Explain why goods with many substitutes have elastic demand.

119. What is the difference between elastic and inelastic supply?

120. Why is supply more elastic in the long run than in the short run?

121. Define consumer surplus and explain how it is measured graphically.

122. Define producer surplus and explain how it is measured graphically.

123. What does it mean for a market to achieve allocative efficiency?

124. Explain why deadweight loss occurs and what it represents.

125. How does a binding price ceiling create a shortage and deadweight loss?

126. How does a binding price floor create a surplus and deadweight loss?

127. Explain why taxes create deadweight loss.

128. What determines who bears the greater burden of a tax—consumers or producers?

129. Explain how subsidies create deadweight loss even though they increase quantity.

130. Why do price controls (ceilings and floors) reduce total surplus?

131. Give an example of a price ceiling and explain its effects.

132. Give an example of a price floor and explain its effects.

133. Explain the difference between statutory incidence and economic incidence of a tax.

134. Why might a government impose a price ceiling despite the deadweight loss?

135. How does elasticity affect the size of deadweight loss from a tax?

VI. Calculations

136. If the price of pizza increases from $8 to $12, and quantity demanded falls from 100 to 60:
    a. Calculate the price elasticity of demand using the midpoint method.
    b. Is demand elastic or inelastic?
    c. What happens to total revenue?

137. The price of concert tickets decreases from $50 to $40, and quantity demanded increases from 200 to 300 tickets:
    a. Calculate price elasticity of demand.
    b. Is demand elastic, inelastic, or unit elastic?
    c. Did total revenue increase or decrease?

138. When income increases by 20%, quantity demanded of Good X increases by 30%. When income increases by 20%, quantity demanded of Good Y decreases by 10%:
    a. Calculate income elasticity for both goods.
    b. Classify each good as normal or inferior.
    c. Is Good X a necessity or luxury?

139. When price of Good A increases by 15%, quantity demanded of Good B increases by 30%:
    a. Calculate cross-price elasticity.
    b. Are the goods substitutes or complements?

140. When price of Good C increases by 10%, quantity demanded of Good D decreases by 5%:
    a. Calculate cross-price elasticity.
    b. Are the goods substitutes or complements?

141. The demand and supply schedules for widgets are as follows:

Price	Quantity Demanded	Quantity Supplied
$10	100	20
$20	80	40
$30	60	60
$40	40	80
$50	20	100

    a. Identify the equilibrium price and quantity.
    b. At a price of $20, is there a shortage or surplus? How large?
    c. At a price of $40, is there a shortage or surplus? How large?

142. At equilibrium, price is $25 and quantity is 200 units. The maximum price consumers are willing to pay for the first unit is $50, and the minimum price producers are willing to accept for the first unit is $10:
    a. Calculate consumer surplus (assume a linear demand curve).
    b. Calculate producer surplus (assume a linear supply curve).
    c. Calculate total surplus.

143. A $5 tax is imposed on a good. Before the tax, equilibrium price is $20 and quantity is 100. After the tax, buyers pay $23, sellers receive $18, and quantity falls to 80:
    a. Who pays more of the tax—buyers or sellers?
    b. Calculate tax revenue.
    c. Identify the deadweight loss triangle (describe its boundaries).

144. Elasticity of demand for Good X is -1.5, and elasticity of supply is 0.5. A $2 tax is imposed:
    a. Who will bear more of the tax burden—consumers or producers?
    b. Explain your reasoning.

145. The demand equation is $Qd = 100 - 2P$, and the supply equation is $Qs = 20 + 3P$:
    a. Find equilibrium price and quantity.
    b. Calculate consumer surplus.
    c. Calculate producer surplus.
    d. If a price ceiling of $12 is imposed, calculate the shortage.

146. A subsidy of $4 per unit is given to producers. Before the subsidy, equilibrium is at P = $15 and Q = 50. After the subsidy, buyers pay $13, sellers receive $17, and quantity increases to 60:
    a. Calculate government expenditure on the subsidy.
    b. Does deadweight loss occur? Explain.

147. Calculate price elasticity of supply if price increases from $30 to $40 and quantity supplied increases from 150 to 200 units. Is supply elastic or inelastic?

148. A good has perfectly inelastic demand. A $3 tax is imposed:
    a. How much of the tax burden falls on consumers?
    b. How much deadweight loss occurs?
    c. Draw a graph illustrating this scenario.

149. The following table shows marginal benefit (MB) and marginal cost (MC) for different quantities:

Quantity	MB	MC
10	$50	$20
20	$40	$25
30	$30	$30
40	$20	$35
50	$10	$40

    a. What is the allocatively efficient quantity?
    b. What happens if the quantity is 40? Explain the inefficiency.

150. Price increases from $100 to $120. Quantity demanded falls from 500 to 400. Calculate elasticity and determine if total revenue increases or decreases.

VII. Graphing Practice

151. Draw a supply and demand graph:
    a. Label axes: Price (Y-axis) and Quantity (X-axis).
    b. Draw and label supply (S) and demand (D) curves.
    c. Identify and label equilibrium (E), equilibrium price (P*), and equilibrium quantity (Q*).
    d. Show a shortage at a price below equilibrium.

e. Show a surplus at a price above equilibrium.

152. Draw a supply and demand graph showing the effect of:
   a. An increase in demand (shift right).
   b. A decrease in supply (shift left).
   c. Label the new equilibrium after each shift.

153. Draw a demand curve and illustrate consumer surplus:
   a. Show equilibrium price as a horizontal line.
   b. Shade the triangular area representing consumer surplus.
   c. Label the maximum willingness to pay.

154. Draw a supply curve and illustrate producer surplus:
   a. Show equilibrium price as a horizontal line.
   b. Shade the triangular area representing producer surplus.
   c. Label the minimum acceptable price.

155. Draw a supply and demand graph with a binding price ceiling:
   a. Draw equilibrium.
   b. Draw a price ceiling below equilibrium.
   c. Show the shortage.
   d. Shade the deadweight loss triangle.

156. Draw a supply and demand graph with a binding price floor:
   a. Draw equilibrium.
   b. Draw a price floor above equilibrium.
   c. Show the surplus.
   d. Shade the deadweight loss triangle.

157. Draw a supply and demand graph showing the effect of a tax:
   a. Show the original equilibrium.
   b. Shift the appropriate curve to show the tax.
   c. Label Pb (price buyers pay) and Ps (price sellers receive).
   d. Shade the tax revenue rectangle.
   e. Shade the deadweight loss triangle.

158. Draw two demand curves on the same graph:
   a. One relatively flat (elastic).
   b. One relatively steep (inelastic).
   c. Label each curve.

159. Draw two supply curves on the same graph:
   a. A vertical line (perfectly inelastic).
   b. A horizontal line (perfectly elastic).

c. Label each curve.

160. Draw a supply and demand graph showing a subsidy:
   a. Show original equilibrium.
   b. Shift supply right by the amount of the subsidy.
   c. Label Pb (price buyers pay) and Ps (price sellers receive).
   d. Shade the government expenditure rectangle.
   e. Shade the deadweight loss triangle.

161. Draw a graph illustrating the total revenue test:
   a. Draw a demand curve.
   b. Show a price increase from P1 to P2.
   c. Shade the original total revenue rectangle at P1.
   d. Shade the new total revenue rectangle at P2.
   e. Identify whether TR increased or decreased.

162. Draw a graph showing both consumer and producer surplus at equilibrium:
   a. Label total surplus as the sum of both areas.
   b. Show how total surplus is maximized at equilibrium.

163. On a supply and demand graph, show what happens when both curves shift:
   a. Demand increases and supply decreases.
   b. Show the new equilibrium.
   c. Explain the effect on price and quantity.

164. Draw a demand curve and show how elasticity varies along the curve:
   a. Label the elastic portion (upper left).
   b. Label the unit elastic midpoint.
   c. Label the inelastic portion (lower right).

165. Draw a graph showing tax incidence with:
   a. Relatively inelastic demand and relatively elastic supply.
   b. Show how consumers bear more of the tax burden.
   c. Label Pb, Ps, and the tax wedge.

VIII. Long Answer (IB Students Only)

166. Evaluate the following statement: "Price ceilings help consumers by keeping prices low." Discuss both benefits and costs, including effects on consumer surplus, producer surplus, and deadweight loss. (15)

167. Analyze how the concept of elasticity explains why governments may tax cigarettes more heavily than other goods. Consider both tax revenue and tax incidence. (12)

168. Discuss the conditions under which a tax creates a large deadweight loss versus a small deadweight loss. Use diagrams to support your answer. (15)

169. Explain why free markets tend to achieve allocative efficiency, and evaluate the extent to which government intervention through price controls improves or worsens efficiency. (15)

170. Using supply and demand analysis, explain how a minimum wage set above equilibrium affects employment, consumer surplus, producer surplus, and total surplus. Evaluate arguments for and against minimum wage laws. (15)

Answer Key

I. Multiple Choice

1. C
2. B
3. B
4. C
5. A
6. C
7. B
8. B
9. C
10. B
11. B
12. B
13. A
14. B
15. B
16. A
17. C
18. A
19. B
20. C
21. B
22. B
23. B
24. B
25. C
26. B
27. B
28. B
29. C
30. A
31. B
32. A
33. B
34. A
35. B
36. A
37. C
38. B
39. B
40. C

II. True / False

41. False
42. True
43. False
44. False
45. True
46. False
47. True
48. False
49. True
50. True
51. True
52. False
53. True
54. False
55. True
56. False
57. True
58. True
59. True
60. False
61. False
62. False
63. True
64. True
65. True
66. True
67. True
68. True
69. True
70. False

III. Fill in the Blanks

71. inversely (or negatively)
72. along
73. normal
74. complements

75. substitutes
76. directly (or positively)
77. right
78. demanded, supplied
79. surplus
80. shortage
81. quantity demanded, price
82. elastic
83. inelastic
84. decrease (or fall)
85. elastic
86. elastic
87. substitutes
88. inferior
89. above, below
90. above, below
91. maximized
92. Allocative
93. Deadweight
94. ceiling
95. floor
96. equilibrium
97. inelastic
98. subsidy
99. increase (or rise)
100. statutory, economic

IV. Matching

101. A-2, B-7, C-5, D-1, E-3, F-4, G-9, H-8, I-10, J-6

102. A-1, B-3, C-1, D-3, E-1, F-3, G-1, H-2

103. A-1, B-2, C-3, D-4, E-5, F-6, G-7, H-8

V. Short Answer

104. Change in quantity demanded: movement along curve (price change). Change in demand: shift of entire curve (determinant change).

105. Substitution effect and income effect both cause an inverse relationship between price and quantity demanded.

106. Butter and margarine. When butter price increases, margarine demand increases (shifts right).

107. Coffee and cream. When coffee prices increase, demand for cream decreases (shifts left).

108. Rising income causes consumers to switch to higher-quality alternatives, decreasing demand for inferior goods.

109. Higher prices increase profitability, attract new firms, and justify higher marginal costs of additional production.

110. Supply decreases (shifts left) because production costs increase.

111. Buyers bid prices up → quantity demanded falls, quantity supplied rises → shortage eliminated at equilibrium.

112. Sellers lower prices → quantity demanded rises, quantity supplied falls → surplus eliminated at equilibrium.

113. Quantity definitely increases. Price effect is ambiguous (depends on relative shift sizes).

114. Measures how responsive quantity demanded is to price changes. PED = (% change in Qd) / (% change in P).

115. Consumers must purchase them regardless of price; limited ability to reduce consumption.

116. Time allows finding substitutes, adjusting habits, and making changes.

117. Demand is elastic (quantity decrease is proportionally larger than price increase).

118. Consumers easily switch to alternatives when price rises, making demand highly responsive.

119. Elastic supply: quantity very reactive to price. Inelastic supply: quantity barely reacts to price.

120. Time allows firms to build capacity, hire workers, and fully adjust production.

121. Difference between willingness to pay and price paid. Graphically: area above price, below demand curve.

122. Difference between price received and minimum acceptable price. Graphically: area below price, above supply curve.

123. Resources allocated to produce goods most valued by society; occurs where MB = MC.

124. Reduction in total surplus from inefficiency; represents lost gains from trade when quantity deviates from equilibrium.

125. Creates shortage (Qd > Qs), reduces quantity to Qs. For foregone units, MB > MC, creating deadweight loss.

126. Creates surplus (Qs > Qd), reduces quantity to Qd. For foregone units, MB > MC, creating deadweight loss.

127. Tax wedge prevents mutually beneficial trades. For foregone units between new quantity and equilibrium, MB > MC.

128. Relative elasticity. The party with more inelastic demand or supply bears more of the burden.

129. Causes overproduction beyond MB = MC. Beyond equilibrium, MC > MB, wasting resources.

130. Prevent equilibrium where MB = MC and total surplus is maximized, creating deadweight loss from foregone trades.

131. Rent control. Creates housing shortage, reduces quality, may create black markets.

132. Minimum wage. Creates unemployment, particularly affects low-skilled workers.

133. Statutory: who legally pays. Economic: who actually bears the burden based on elasticity.

134. Distributional goals, political popularity, equity concerns outweighing efficiency.

135. More elastic curves create larger deadweight loss because quantity changes more rapidly.

VI. Calculations

136.

a. PED = -1.25 b. Elastic c. Total revenue decreases from $800 to $720

137.

a. PED = -1.8 b. Elastic c. Total revenue increased from $10,000 to $12,000

138.

a. YED(X) = 1.5, YED(Y) = -0.5 b. Good X: normal, Good Y: inferior c. Luxury

139.

a. XED = 2.0 b. Substitutes

140.

a. XED = -0.5 b. Complements

141.

a. P = $30, Q = 60 b. Shortage of 40 units c. Surplus of 40 units

142.

a. CS = $2,500 b. PS = $1,500 c. Total Surplus = $4,000

143.

a. Buyers ($3 per unit vs. sellers $2 per unit) b. Tax revenue = $400 c. DWL = ½ × $5 × 20 = $50

144.

a. Producers b. Supply is more inelastic than demand is elastic

145.

a. P = $16, Q = 68 b. CS = $1,156 c. PS = $771 d. Shortage = 20 units

146.

a. Government expenditure = $240 b. Yes, DWL = $20

147.

PES = 1.0, Unit elastic

148.

a. 100% ($3 per unit) b. Zero c. Vertical demand curve, entire tax burden on consumers, no quantity change

149.

a. Q = 30 (where MB = MC) b. MC > MB, overproduction, resources wasted

150.

a. PED = -1.22 b. Elastic c. Total revenue decreases from $50,000 to $48,000

VII. Graphing Practice

151. Basic supply and demand graph with equilibrium, shortage, and surplus

152. Shifts: demand increase (right), supply decrease (left)

153. Consumer surplus shaded above price, below demand

154. Producer surplus shaded below price, above supply

155. Price ceiling below equilibrium, shortage, deadweight loss triangle

156. Price floor above equilibrium, surplus, deadweight loss triangle

157. Tax wedge, Pb and Ps labeled, tax revenue rectangle, deadweight loss triangle

158. Flat (elastic) and steep (inelastic) demand curves

159. Vertical (perfectly inelastic) and horizontal (perfectly elastic) supply curves

160. Subsidy shift, Pb and Ps labeled, government expenditure rectangle, deadweight loss triangle

161. Total revenue rectangles at two prices showing revenue change

162. Consumer and producer surplus both shaded, total surplus labeled

163. Simultaneous shifts: demand right, supply left, new equilibrium

164. Linear demand curve with elastic, unit elastic, and inelastic portions labeled

165. Tax incidence with inelastic demand, consumers bear more burden

VIII. Long Answer

166. Benefits: lower prices for some consumers, increased CS for those who obtain goods. Costs: shortages, reduced PS, deadweight loss, non-price rationing, quality deterioration, black markets. Net effect: helps some consumers but creates inefficiency.

167. Inelastic demand → high revenue, consumers bear most burden, small deadweight loss, addresses negative externalities, public health benefits.

168. Large DWL: elastic supply/demand. Small DWL: inelastic supply/demand. Zero DWL: perfectly inelastic curves.

169. Free markets achieve allocative efficiency (MB = MC) at equilibrium. Price controls reduce efficiency and create DWL. Intervention may be justified for equity goals despite efficiency costs.

170. Creates unemployment (surplus labor), reduces total surplus, DWL from foregone employment. Benefits employed workers, harms job seekers. Arguments for: living wage, reduces inequality. Arguments against: unemployment, efficiency loss.