Answers to How Well Do You Understand the Chapter

1. oligopoly
2. number
3. identical
4. many
5. opposite
6. differentiated
7. many
8. price taker
9. sole
10. market power
11. increase
12. long run
13. barriers to entry
14. prevent
15. resource
16. economies of scale
17. natural monopoly
18. barrier to entry
19. technical
20. network externalities
21. sole right
22. optimal output rule
23. all
24. is not equal
25. market
26. wedge
27. less than
28. increases
29. quantity effect
30. decreasing
31. less than
32. below
33. greater than
34. positive
35. price effect
36. lower
37. low
38. less
39. equals
40. equals
41. is greater than
42. break even
43. lower
44. higher
45. earn
46. deadweight loss
47. is smaller than
48. deadweight loss
49. antitrust policy
50. natural monopoly
51. regulation
52. deadweight loss
53. down
54. price regulation
55. breaks even
56. more
57. price ceiling
58. single-price
59. increase
60. price discrimination
61. price elasticities
62. illegal
63. low
64. high
65. perfect
66. equals
67. two-part
68. increase

Answers to the Multiple-Choice Questions

1. A monopolistically competitive market is one where there are many sellers of a differentiated product. A perfectly competitive market also has many sellers, but they produce a standardized product. An oligopoly has few sellers of either a standardized or differentiated product; a monopoly is a market with one seller of a standardized product. **Answer: D.**
2. Unlike a perfect competitor, a monopolistic competitor is not a price taker; it can raise its price above the perfectly competitive level because it can exert market power. **Answer: B.**
3. Barriers to entry, such as control of a necessary resource or input, government regulations, economies of scale in production, and technological superiority, prevent firms from entering oligopolies or monopolies. **Answer: D.**

4. Electric utilities have large fixed costs of production. They are so large that their average total cost curve slopes downward for the range of output relevant for market demand. Since the firm can gain economies of scale by producing larger amounts of output, ultimately one firm will produce for the whole market. When economies of scale are such that only one firm can exist in the market, that market is a natural monopoly. **Answer: C.**

5. A monopolist will produce the level of output where marginal revenue equals marginal cost; from the figure provided, the monopolist will produce Q_1 units of output. The monopolist will charge P_1 because it is the highest price at which it can sell Q_1 units of output. **Answer: A.**

6. If the market were perfectly competitive, the equilibrium output would be where marginal cost equals demand, or Q_2 units of output. The price would equal P_2. **Answer: B.**

7. Marginal revenue is the change in total revenue due to a change in output. To increase output by one unit, the monopolist must lower the price of the good. The quantity effect increases total revenue by the additional unit sold times the price of the good. However, the price effect decreases total revenue because the monopolist had to lower the price on all units of the good that it had sold previously. Therefore, the marginal revenue associated with the last unit sold is less than the price. The marginal revenue curve lies below the demand curve. **Answer: C.**

8. The price elasticity of demand is the percent change in quantity demanded divided by the percent change in price:

$$\text{Price elasticity of demand} = \frac{\text{\% change in quantity demanded}}{\text{\% change in price}}$$

$$= \frac{\text{Change in Quantity/Quantity}_{\text{average}}}{\text{Change in Price/Price}_{\text{average}}}$$

$$= \frac{20{,}000/(100{,}000 + 80{,}000)/2}{10/(50 + 40)/2} = \frac{20{,}000/90{,}000}{10/45}$$

$$= \frac{22.2\%}{22.2\%} = 1.0$$

Answer: C.

9. When the price is \$40 per month, AlwaysTV had 100,000 subscribers and total revenue of \$4,000,000. After the price increased to \$50 per month, the number of subscribers fell to 80,000, but total revenue remained constant at \$4,000,000. Marginal revenue is zero. **Answer: A.**

10. As the price of basic service rises, AlwaysTV will have fewer customers. The price effect is tending to increase total revenue (they sell basic service at a higher price), but they have fewer customers because of the quantity effect. **Answer: C.**

11. Whether the price effect dominates the quantity effect or vice versa tells us whether marginal revenue is negative or positive, not that marginal revenue is less than price. The wedge between price and marginal revenue exists because as the price of a good falls, the monopolist sells more, but the addition to total revenue is something less than the price at which the additional output is sold. **Answer: D.**

12. In equilibrium in a perfectly competitive market, price equals marginal cost because perfect competitors produce where marginal revenue equals marginal cost, and marginal revenue equals price in that market. A monopolist also produces where marginal revenue equals marginal cost, but price is always greater than marginal revenue for a monopolist. **Answer: A.**

13. Two ways to reduce the inefficiency associated with a monopolist are to regulate it so that it will only break even or establish a public agency to provide the good. When the government issues a patent or license to a firm, it is erecting a barrier to entry that leads to inefficiency. **Answer: C.**

14. An unregulated monopolist will produce the level of output where marginal revenue equals marginal cost. This occurs at Q_1 units of output; the monopolist will charge P_3 for that level of output. **Answer: B.**

15. At P_1, the monopolist would produce Q_3 units of output; this is also the price and output that would exist if this market were perfectly competitive. There is no deadweight loss, but since average total cost is greater than P_1 at Q_3, the firm will earn an economic loss. **Answer: B.**

16. At a price ceiling of P_2, the monopolist would produce Q_2 units of output. There would be a smaller deadweight loss in comparison to the unregulated monopoly market, and since P_2 equals average total cost at Q_2 units of output, the monopolist will break even. **Answer: C.**

17. When barriers to entry exist for reasons other than economies of scale, the government should prevent the monopoly from organizing or should break the monopolist up using antitrust policies. **Answer: D.**

18. If AlwaysTV charges different prices to different consumers, it should charge a higher price to those customers with a lower price elasticity of demand (the permanent residents) and a lower price to those with a higher price elasticity of demand (the college students). When AlwaysTV practices price discrimination, the deadweight loss will be smaller than it would be under a one-price policy. **Answer: A.**

19. Price discrimination encourages monopolists to produce more, thereby increasing the efficiency of the market by reducing the deadweight loss. **Answer: B.**

20. If a monopolist practices perfect price discrimination, it will make each customer pay the highest price that they are willing to pay, eliminating any consumer surplus. Since price will equal marginal cost for the last unit produced, there will be no deadweight loss. **Answer: A.**

21. The only example that is not price discrimination is when different movie theaters charge different ticket prices to see the same movie. Different movie theaters offer different experiences to moviegoers. For example, some theaters have more comfortable chairs, better sound systems, and convenient parking, while others do not. The difference in ticket prices may reflect the difference in the services provided, not price discrimination. **Answer: D.**