Questions

1. Monopoly is a market structure with
   a. few firms
   b. one firm
   c. price-taking firms
   d. numerous firms whose products are imperfect substitutes
   e. none of the above

2. In the long run, a monopolist earns ____ economic profit.
   a. positive
   b. zero
   c. negative
   d. positive or zero
   e. positive, zero or negative

3. A monopolist maximizes profits by selecting output where
   a. \( P = MC \)
   b. \( MR = MC \)
   c. \( P = TC \)
   d. \( P = VC \)
   e. \( P = FC \)

4. A firm with a total revenue \( TR = 4Q \) ____ a single-price monopolist.
   a. must be
   b. would be if \( P = 2 \)
   c. would be if \( P = 4 \)
   d. would be if \( P = 8 \)
   e. could never be

5. A monopolist faces a demand curve ____ the demand curve for ____.
   a. more elastic than, the market
   b. less elastic than, the market
   c. more elastic than, a perfectly competitive firm
   d. less elastic than, a perfectly competitive firm
   e. as elastic as, a perfectly competitive firm
6. A monopolist has a demand curve given by \( P = 56 - 2Q \) and a total cost curve given by \( TC = 20Q \). The associated marginal cost curve is \( MC = 20 \). What is the monopolist's marginal revenue curve?
   a. \( MR = 56 - Q \)
   b. \( MR = 56 - 2Q \)
   c. \( MR = 56 - 3Q \)
   d. \( MR = 56 - 4Q \)
   e. none of the above

7. And what is the monopolist's profit maximizing quantity?
   a. 3
   b. 6
   c. 9
   d. 18
   e. none of the above

8. And what price will the monopolist charge?
   a. 3
   b. 6
   c. 9
   d. 18
   e. none of the above

9. And how much economic profit will the monopolist earn?
   a. 36
   b. 44
   c. 90
   d. 162
   e. none of the above

10. And what quantity would the monopolist pick if instead of charging a single price, it could perfectly discriminate?
    a. 3
    b. 6
    c. 9
    d. 18
    e. none of the above
Solutions

1b Monopoly is a market structure with one firm.
2d In the long run, a monopolist earns positive or zero economic profit.
3b A monopolist maximizes profits by selecting output where \( MR = MC \).
4e A firm with a total revenue \( TR = 4Q \) could never be a single-price monopolist.
5d A monopolist faces a demand curve less elastic than the demand curve for a perfectly competitive firm.

6d A monopolist has a demand curve given by \( P = 56 - 2Q \) and a total cost curve given by \( TC = 20Q \). The associated marginal cost curve is \( MC = 20 \). What is the monopolist's marginal revenue curve? \( MR = 56 - 4Q \) (same price intercept as demand but twice the slope).
7c And what is the monopolist's profit maximizing quantity? \( Q = 9 \)
Set \( MC = MR \) so \( 20 = 56 - 4Q \), \( 4Q = 36 \), \( Q = 9 \)
8e And what price will the monopolist charge? \( P = 38 \) none of the above
Read price off of demand \( P = 56 - 2Q = 56 - 2(9) = 56 - 18 = 38 \)
9d And how much economic profit will the monopolist earn? 162
\( TR - TC = PQ - 20Q = 38(9) - 20(9) = 18(9) = 162 \)
10d And what quantity would the monopolist pick if instead of charging a single price, it could perfectly discriminate? \( Q = 18 \)
Sell all units with price above \( MC \) so \( 20 = 56 - 2Q \), \( 2Q = 36 \), \( Q = 18 \)