Chapter 13. Monopoly - Multiple Choice Questions

Note: You should review the text end-of-chapter problems as well.

_D_ 1. Monopolies arise for all the following reasons EXCEPT:
   D. decreasing returns to scale

Note: INCREASING or CONSTANT returns lead to natural monopolies; decreasing returns would limit the size of firms.

_B_ 2. If the demand curve is given by P = 500 - 2 P, then MR will be:
   B. P = 500 - 4 P

Note: The slope of the MR curve is twice the slope of the demand curve: MR declines faster then price because the monopolist would have to cut price on ALL units of output.

_C_ 3. If a monopoly has zero marginal cost and wishes to maximize profits:
   C. It will produce at the point at which the coefficient of elasticity is one.

Note: at zero marginal cost, the monopolist would want to maximize revenue in order to maximize profit. Maximum revenue comes at the midpoint of the demand curve, or at the point at which the MR curve cuts the X-axis.

A monopolist faces the following price / quantity table, to be used in the next 3 questions:
(Note: the demand curve will be: \( P = 40 - 2Q \))

<table>
<thead>
<tr>
<th>Price</th>
<th>Quantity</th>
<th>Revenue</th>
<th>MR</th>
<th>VC</th>
<th>Op. Profit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>8</td>
<td>192</td>
<td>--</td>
<td>16</td>
<td>176</td>
</tr>
<tr>
<td>22</td>
<td>9</td>
<td>198</td>
<td>6</td>
<td>18</td>
<td>180</td>
</tr>
<tr>
<td>20</td>
<td>10</td>
<td>200</td>
<td>2</td>
<td>20</td>
<td>180 *</td>
</tr>
<tr>
<td>18</td>
<td>11</td>
<td>198</td>
<td>-2</td>
<td>22</td>
<td>176</td>
</tr>
<tr>
<td>16</td>
<td>12</td>
<td>192</td>
<td>-6</td>
<td>24</td>
<td>168</td>
</tr>
</tbody>
</table>

_C_ 4. At a price of 20, total revenue will be:
   A. 192  
   B. 198  
   C. 200  
   D. 220  
   E. 250

_E_ 5. As it moves from producing 10 units to producing 11 units, its marginal revenue will be:
   A. $ 200  
   B. $ 198  
   C. $ 4  
   D. $ 2  
   E. negative

_A_ 6. If it has a marginal cost curve \( MC = 2 \) (constant marginal costs), then it should produce:
   A. 10 units of output

   Note that profit would be revenue - variable costs = 180 at 10 units

   But solving the problem algebraically would mean:
   \[ MR = 40 - 4Q \]
   \[ \text{so} \quad 40 - 4Q = P \]
   or
   \[ 4Q = 38 \]
   hence \( Q^* = 9.5, \ P^* = 21 \), so revenue = 199.5 (not the maximum revenue)
   and since \( VC = 2 \times 9.5 = 19 \), profit would be 180.5

_C_ 7. A monopolist with a marginal cost greater than zero will always:
   A. make a profit after subtracting total costs from revenue [NOT if fixed costs were high]
   B. produce more than a competitive industry [monopolist will restrict output to raise price]
   C. have a price higher than the midpoint of the demand curve [that is, in the inelastic portion of the demand curve]
   D. be more efficient than a competitive industry [possible but not necessary]
8. In the above graph, marginal cost is:
   A. Increasing
   B. Constant [the flat red line]
   C. Decreasing
   D. Not shown

9. In the above graph, the marginal revenue is shown by:
   A. The solid, downward sloping line.
   B. The dashed, downward sloping blue line
   C. The solid, flat line.

10. In the above graph, the area C + D represents:
    A. Variable costs of a monopoly
    B. Total consumer surplus with a monopoly.
    C. Monopoly profit
    D. Deadweight loss
    E. Profit of a competitive industry

11. In the above graph, the area A + B represents: [same options as the last question]

12. In the above graph, the area E represents: [same options as the last question]

13. In the above graph, the area F represents: [same options as the last question]