The College Board: Connecting Students to College Success

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Question 1

11 points \((4 + 2 + 2 + 3)\)

(a) 4 points:
- One point is earned for indicating \(P_6, Q_2\).
- One point is earned for indicating \(P_5, Q_4\).
- One point is earned for indicating \(P_4, Q_3\).
- One point is earned for indicating \(P_2, Q_5\).

(b) 2 points:
- One point is earned for stating that demand is elastic at \(Q_1\).
- One point is earned for explaining that \(MR > 0\), or \(Q_1\) is to the left of the midpoint, or \(Q_1\) is in the upper half of the demand curve.

(c) 2 points:
- One point is earned for stating that accounting profits are positive.
- One point is earned for explaining that economic profits are zero, opportunity costs exist, and economic profits = accounting profits - opportunity cost.

(d) 3 points:
- One point is earned for indicating \(Q_7\).
- One point is earned for concluding that the outcome is not allocatively efficient.
- One point is earned for explaining that \(MC > P\) or \(MSC > MSB\).
Question 2

**7 points** (1 + 1 + 2 + 2 + 1)

(a) 1 point:
   • One point is earned for indicating that TFC is $20.

(b) 1 point:
   • One point is earned for indicating that MC of the first unit is $7.

(c) 2 points:
   • One point is earned for indicating that the profit-maximizing output=4 units (or between 4 and 5 units).
   • One point is earned for explaining that MR>MC for all units until Q=5 (or direct calculation of TR-TC).

(d) 2 points:
   • One point is earned for concluding that the number of firms will increase.
   • One point is earned for explaining that profits will attract new firms to enter.

(e) 1 point:
   • One point is earned for stating that there is no change in the profit-maximizing output.
6 points (2 + 2 + 2)

(a) 2 points:
- One point is earned for showing a rightward shift of the demand curve.
- One point is earned for showing that equilibrium price increases and quantity increases.

(b) 2 points:
- One point is earned for showing a rightward shift of the supply curve.
- One point is earned for showing that equilibrium price decreases and quantity increases.

(c) 2 points:
- One point is earned for indicating that MSC is greater than MPC.
- One point is earned for stating that the conversion of land to residential development is not socially optimum because MSC>MSB (P).