AP® Microeconomics
2010 Scoring Guidelines

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Question 1

10 points (4+1+4+1)

(a) 4 points:
- One point is earned for a correctly labeled graph of the corn market (S, D, P_{M1}, Q_{M1}).
- One point is earned for the graph of the firm with a horizontal demand curve at P_{M1}.
- One point is earned for showing the profit-maximizing quantity, Q_{F1}, at MC = MR.
- One point is earned for showing minimum ATC on the horizontal demand curve at Q_{F1}.

(b) 1 point:
- One point is earned for stating that the demand curve for Farmer Roy’s corn is perfectly elastic because Farmer Roy is a price taker or because he can sell all that he wants at the market price.

(c) 4 points:
- One point is earned for shifting the market demand curve to the right and showing P_{M2} and Q_{M2}.
- One point is earned for shifting the firm’s demand curve upward to the level of P_{M2}.
- One point is earned for showing the profit-maximizing quantity, Q_{F2}, at MC = new MR.
- One point is earned for stating that ATC at Q_{F2} is lower than P_{M2}.

(d) 1 point:
- One point is earned for stating that the equilibrium quantity will decrease and the equilibrium price will increase, because the increase in the price of corn causes a decrease in the supply of cereal.
Question 2

5 points (2+2+1)

(a) 2 points:
- One point is earned for the correct side-by-side graphs with a horizontal machine supply curve for John Lamb (S, D, P_R, S_M).
- One point is earned for showing the equilibrium rental quantity of machines, Q_L, at the intersection of MRP and the horizontal supply curve.

(b) 2 points:
- One point is earned for stating that there will be no change to the marginal product curve for machine-hours.
- One point is earned for explaining that the MRP curve for machine-hours will decrease (shift to the left) because the decrease in demand decreases the price of widgets.

(c) 1 point:
- One point is earned for correctly calculating the rental price of a machine: \( \frac{MP_L}{w} = \frac{MP_K}{r} = \frac{28}{14} = \frac{60}{r} \). Therefore, \( r = 30 \).
Question 3

5 points (2+1+2)

(a) 2 points:
   • One point is earned for identifying the consumer surplus as \( P_3JM \).
   • One point is earned for identifying the producer surplus as \( P_1P_3M \).

(b) 1 point:
   • One point is earned for identifying the socially optimal quantity as \( q_1 \).

(c) 2 points:
   • One point is earned for identifying the consumer surplus as \( P_6JK \).
   • One point is earned for indicating that there is no deadweight loss.