AP® Microeconomics
2015 Scoring Guidelines

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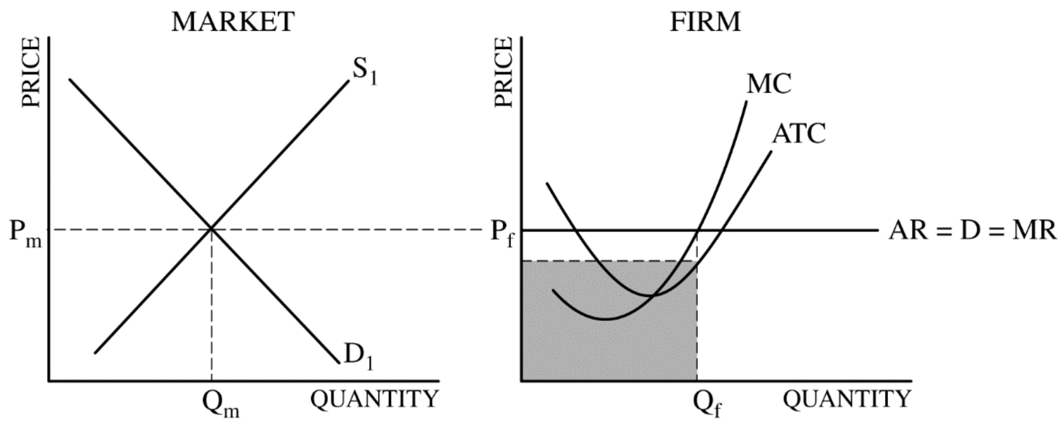
Question 1

10 points (1+5+1+3)

(a) 1 point:
- One point is earned for stating that the firm's price is equal to the market price because the firm is a price taker.



(b) 5 points:
- One point is earned for drawing a correctly labeled graph of the market with P_m, Q_m, a downward-sloping demand curve, and an upward-sloping supply curve.
- One point is earned for identifying the firm's profit-maximizing quantity, Q_f at marginal cost (MC) equal to price or demand, or marginal revenue, or average revenue.
- One point is earned for showing the firm's average revenue curve, labeled AR, which is horizontal at the price determined by the market.
- One point is earned for showing the firm's average total cost (ATC) curve, such that the MC curve is passing through the minimum of the ATC curve, and P > ATC.
- One point is earned for showing the area representing total cost shaded completely.

(c) 1 point:
- One point is earned for stating that the firm's total revenue will fall to zero, because quantity decreases to zero, or because the firm is a price taker, or because the firm is facing a perfectly elastic demand, or the firm loses all of its customers, or the firm has no market power.

(d) 3 points:
- One point is earned for stating that the firm's quantity will remain the same in the short run and for explaining that MR or MC will not change in the short run. (Or, because the lump sum subsidy has no effect on marginal revenue and/or marginal cost, or that only fixed costs will be affected.)
- One point is earned for stating that the market price will decrease and the quantity will increase.
- One point is earned for the explanation that positive profits lead to entry of new firms that will increase the industry supply.

Question 2

5 points (1+1+3)

(a) 1 point:
- One point is earned for stating that Breadbasket has a dominant strategy of setting a low price but Quicklunch does not have a dominant strategy.

(b) 1 point:
- One point is earned for correctly identifying the profit for Breadbasket is $120 and the profit for Quicklunch is $80.

(c) 3 points:
- One point is earned for redrawing the payoff matrix with the subsidy:

		Quicklunch	
		High Price	Low Price
Breadbasket	High Price	$105, $110	$40, $150
	Low Price	$140, $80	$95, $90

- One point is earned for stating that Quicklunch will choose a low price strategy and for explaining that with the subsidy Quicklunch will earn higher profits if it charges a lower price than if it charges a higher price. (The explanation has to include $90>$80 or profits increase by $10.)
- One point is earned for stating that Breadbasket's profits will decrease from $120 to $95.

Question 3

6 points (1+1+1+1+2)

(a) 1 point:

- One point is earned for calculating the total producer surplus as $(1/2 \times 20 \times 20) = \$200$.

(b) 1 point:

- One point is earned for stating that imposing a price floor at $16 is ineffective and will not create a surplus or a shortage in the market because it is set below the equilibrium price, or because it is not binding.

(c) 1 point:

- One point is earned for stating that imposing a price ceiling at $12 will create a shortage because quantity demanded is greater than quantity supplied, or because the price ceiling is binding.

(d) 1 point:

- One point is earned for calculating the deadweight loss as $150 and for showing:

$$(1/2 \times 30 \times 10)$$
or
$$(1/2 \times 10 \times 10) + (1/2 \times 20 \times 10)$$
or
$$\$50 + \$100$$

(e) 2 points:

- One point is earned for calculating the price elasticity of demand as $[(24-20)/20 \,/\, (12-20)/20] = -0.5$, or for correctly using the midpoint formula.
- One point is earned for stating that in this price range the demand is relatively inelastic.