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# **AP<sup>®</sup> Microeconomics 2014 Scoring Guidelines**

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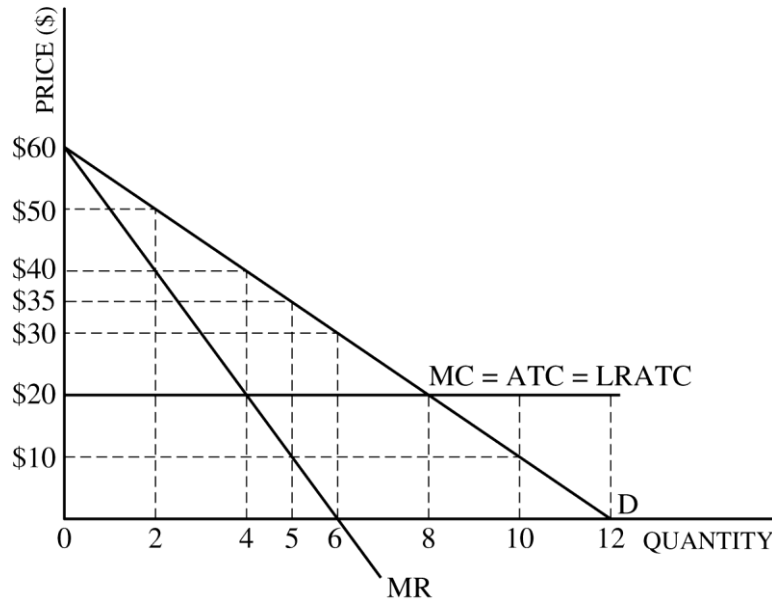
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**Question 1**

**10 points** (3 + 1 + 3 + 1 + 2)



(a) 3 points:

- One point is earned for identifying the profit-maximizing quantity,  $Q = 4$ .
- One point is earned for identifying the profit-maximizing price,  $P = \$40$ .
- One point is earned for identifying the allocatively efficient output,  $Q = 8$ .

(b) 1 point:

- One point is earned for stating that the firm is not experiencing economies of scale and for explaining that the LRATC is not downward sloping as output increases or LRATC remains constant as output increases.

(c) 3 points:

- One point is earned for correctly showing the calculation for the monopolist's economic profit.

$$\pi = (P - ATC) \times Q = (\$10 - \$20) \times 10 = -\$100$$

Or loss of \$100

Other correct calculations are acceptable.

- One point is earned for correctly showing the calculation of consumer surplus.

$$CS = 1/2 (\$60 - \$10) \times 10 = \$250$$

Other correct calculations are acceptable.

- One point is earned for correctly showing the calculation of the deadweight loss.

$$DWL = 1/2 (\$20 - \$10) \times (10 - 8) = \$10$$

Other correct calculations are acceptable.

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**Question 1 continued**

(d) 1 point:

- One point is earned for identifying the quantity at which demand is unit elastic, 6.

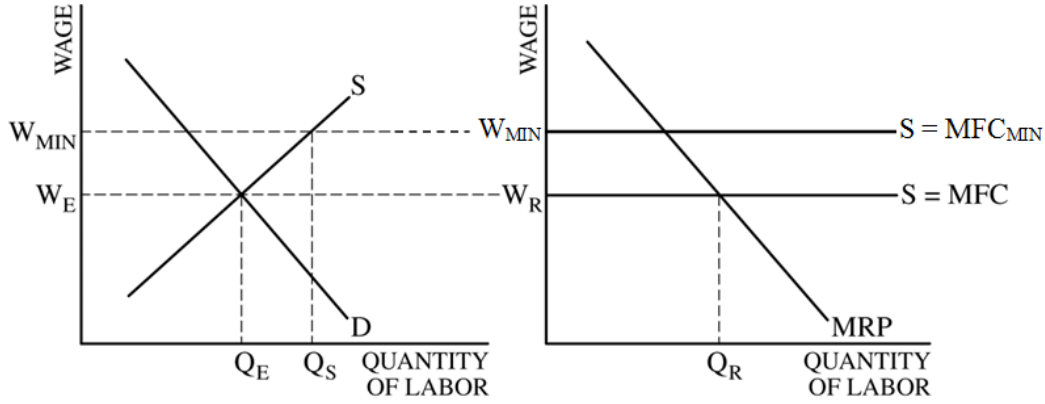
(e) 2 points:

- One point is earned for correctly determining the monopolist's profit.  
$$1/2[(\$60 - \$20) \times 8] = \$160$$
- One point is earned for correctly determining the consumer surplus as zero.

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**Question 2**

**6 points** (2 + 1 + 3)



(a) 2 points:

- One point is earned for drawing a correctly labeled graph of the labor market with an upward-sloping labor supply curve and a downward-sloping labor demand curve and for correctly identifying the equilibrium wage,  $W_E$ , and quantity,  $Q_E$ .
- One point is earned for drawing a correctly labeled graph showing Ray's Stable demand curve for labor and a horizontal labor supply curve and showing the equilibrium wage,  $W_R$ , and quantity,  $Q_R$ .

(b) 1 point:

- One point is earned for stating that Ray's Stable's marginal factor cost is equal to  $W_E$ , and for explaining that the firm is a wage taker in the labor market and/or the market sets the wage.

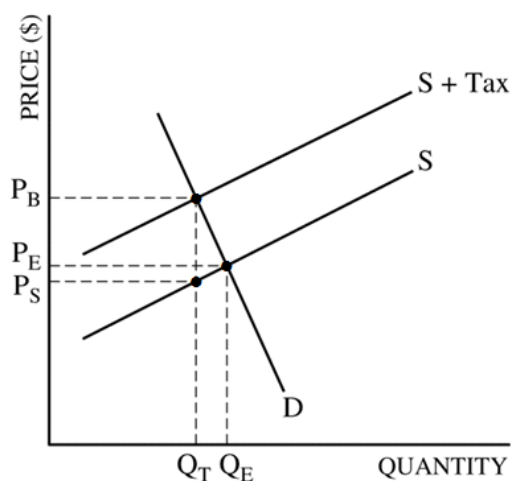
(c) 3 points:

- One point is earned for showing the minimum wage,  $W_{MIN}$ , on the graph in part (a) above the equilibrium wage  $W_E$ .
- One point is earned for showing the quantity supplied of unskilled labor,  $Q_S$ , derived from the supply curve at  $W_{MIN}$ .
- One point is earned for stating that the marginal revenue product of the last worker hired will increase.

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## Question 3

6 points (1 + 3 + 1 + 1)



(a) 1 point:

- One point is earned for drawing a correctly labeled graph of the gasoline market showing the equilibrium price,  $P_E$ , and quantity,  $Q_E$ .

(b) 3 points:

- One point is earned for showing  $P_B$  above  $P_E$ , derived from the  $D$  curve at  $Q_T$ .
- One point is earned for showing  $P_S$  below  $P_E$ , derived from the  $S$  curve at  $Q_T$ .
- One point is earned for showing  $Q_T$  less than  $Q_E$ .

**Note:** It is not necessary to draw the  $S + \text{Tax}$  curve; a “tax wedge” approach is acceptable.

(c) 1 point:

- One point is earned for correctly calculating the total tax revenue based on the labeling of the graph.

All of the following are acceptable when  $P_B$  and  $P_S$  are correct:

- $(P_B \times Q_T) - (P_S \times Q_T)$
- $(P_B - P_S) \times Q_T$
- $2 \times Q_T$
- $\text{Tax} \times Q_T$

(d) 1 point:

- One point is earned for explaining that the tax burden will fall more on buyers and less on sellers because the demand curve is more inelastic than the supply curve.