

AP[®] MICROECONOMICS
2006 SCORING GUIDELINES (Form B)

Question 3

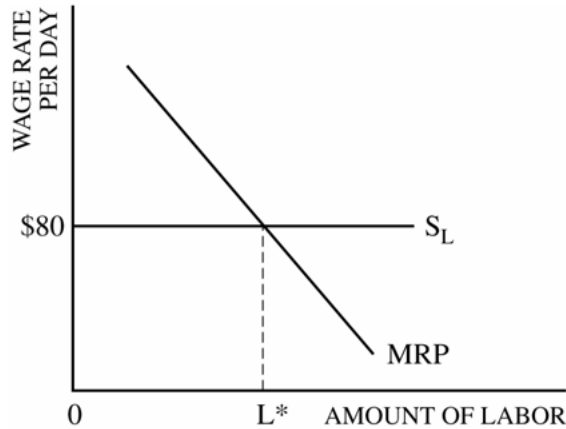
7 points (1 + 1 + 3 + 2)

(a) 1 point:

- One point is earned for stating that $MRP=MFC$.

(b) 1 point:

- One point is earned for calculating the price: $\$80/20 = \4



(c) 3 points:

- One point is earned for a correctly labeled graph with downward-sloping demand curve.
- One point is earned for drawing a horizontal supply curve.
- One point is earned for showing equilibrium amount of labor.

(d) 2 points:

- One point is earned for stating that the amount of labor will increase.
- One point is earned for explaining that $MRP > W$.

Write in the box the number of the question you are answering on this page as it is designated in the examination.

3

3A

3. (a) When $MRP = \text{Wage rate}$.

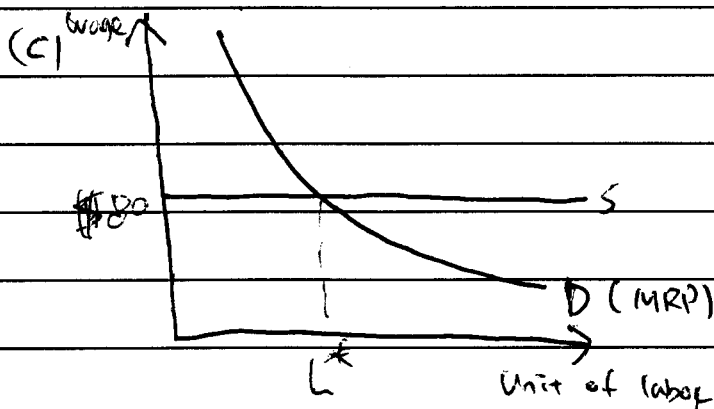
That means, the profit-maximizing amount occurs when the marginal ~~revenue~~ revenue product (Marginal Physical Product \times Price) equals the wage rate of one additional worker.

$$(b) \quad MRP = MPP_L \times P = \text{Wage}$$

$$\hookrightarrow 20 \times P = 80$$

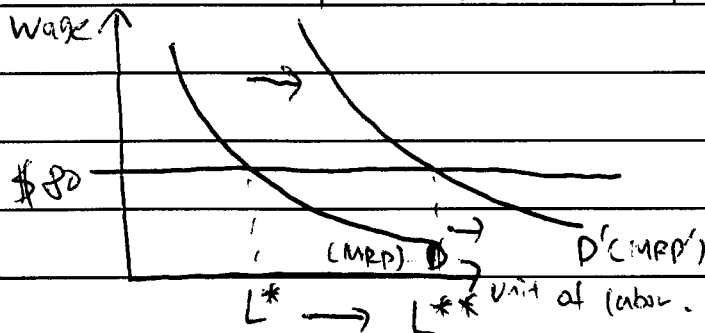
$$\therefore P = 4$$

\hookrightarrow a towel costs \$4 each.



$$(d) \quad MRP = MPP_L \times P$$

If P increases, MRP also increases, ceteris paribus.



~~The quantity~~ The profit-maximizing quantity of labor increases, from L^* to L^{**} .

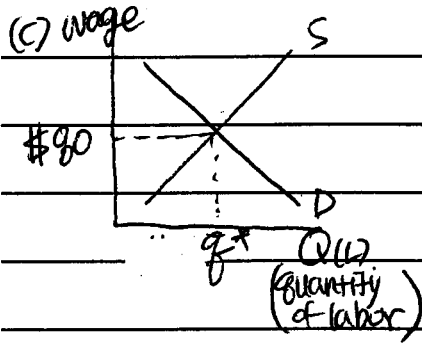
Write in the box the number of the question you are answering on this page as it is designated in the examination.

7.

3B

(a) profit-maximizing amount of labor should be set where supply curve meets \$80.

(b) $MP \times P = \text{wage}$ $\$20 \times P = \80 $P = \$4$.



(d) If price of a factor increases,

$MP \times P = \text{wage}$. wage would increase. If wage increases labor supply would increase. Consequently quantity of labor increases.

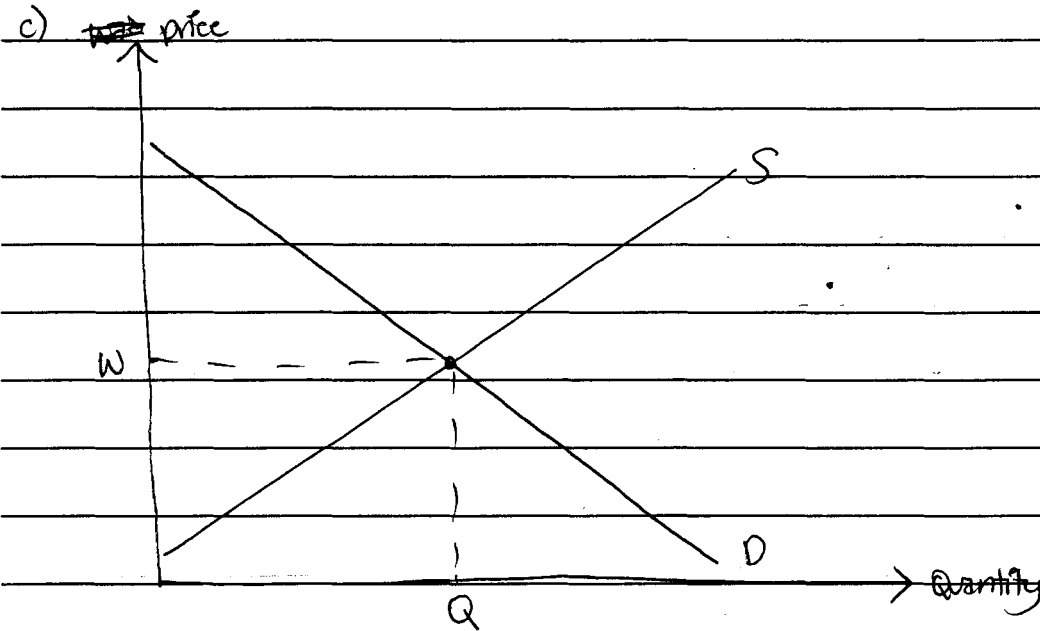
Q. # 3

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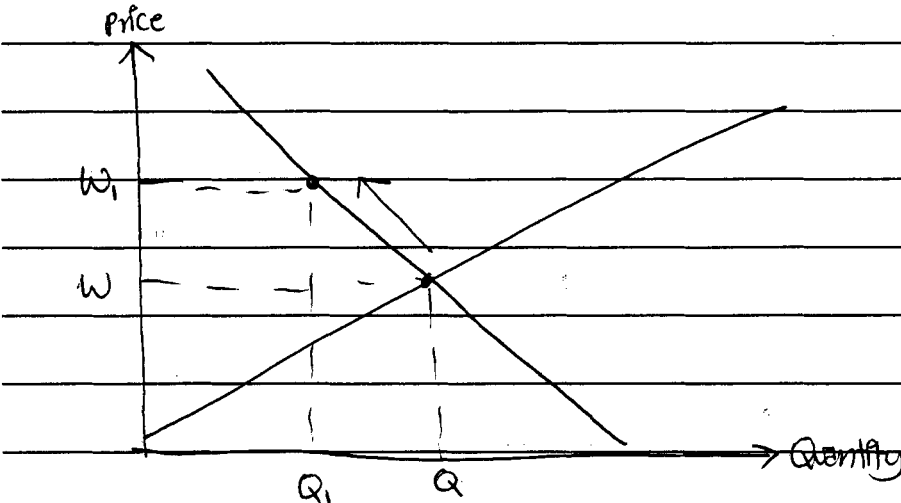
30

a) The conditions necessary for hiring the profit-maximizing amount of labor is that the marginal product of the last worker equals the output

b) profit maximizing level of output = price of towel
20



d) If the price of the towel increases, Price Textile's profit-maximizing quantity of labor will be affected. It will decrease the quantity of labor and increase the price of their wages, as shown from Q to Q_1 and W to W_1 in the graph below.



AP[®] MICROECONOMICS
2006 SCORING COMMENTARY (Form B)

Question 3

Sample: 3A

Score: 7

The student received full credit.

Sample: 3B

Score: 4

The student earned the point for part (b) for indicating the price of a towel. Two points were awarded in part (c), but the point for drawing a horizontal supply curve was not awarded. The first point in part (d) was earned for stating that the quantity of labor will increase.

Sample: 3C

Score: 2

The student earned 1 point in part (c) for a labor market graph with a downward-sloping demand curve, and a second point for showing the equilibrium quantity of labor.