



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  $MRP = \text{Wage rate}$ .

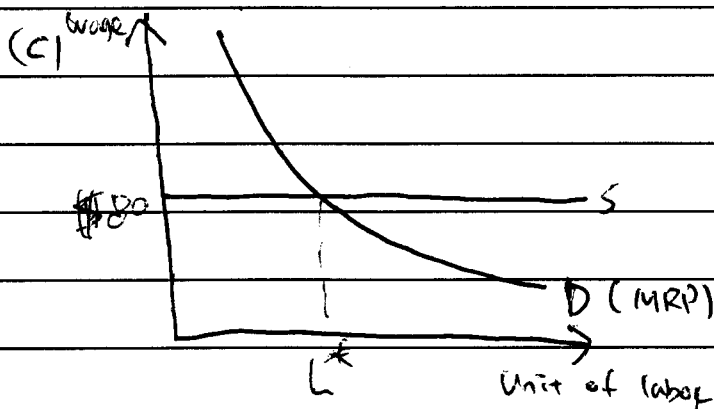
That means, the profit-maximizing amount occurs when the marginal ~~revenue~~ revenue product (Marginal Physical Product  $\times$  Price) equals the wage rate of one additional worker.

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

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

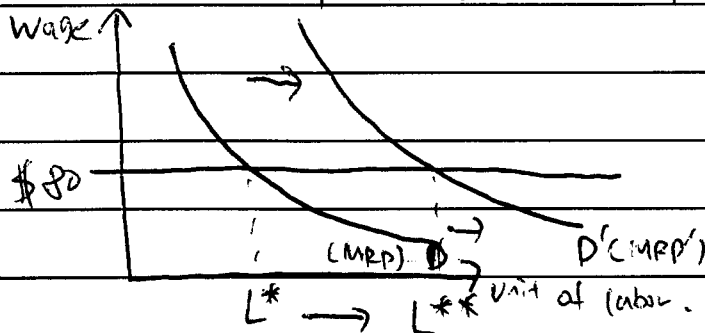
$$\therefore P = 4$$

$\hookrightarrow$  a towel costs \$4 each.



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

If  $P$  increases,  $MRP$  also increases, ceteris paribus.



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

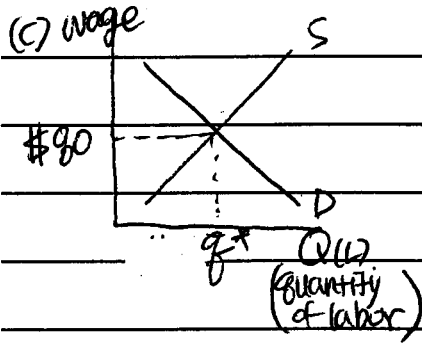
Write in the box the number of the question you are answering on this page as it is designated in the examination.

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.

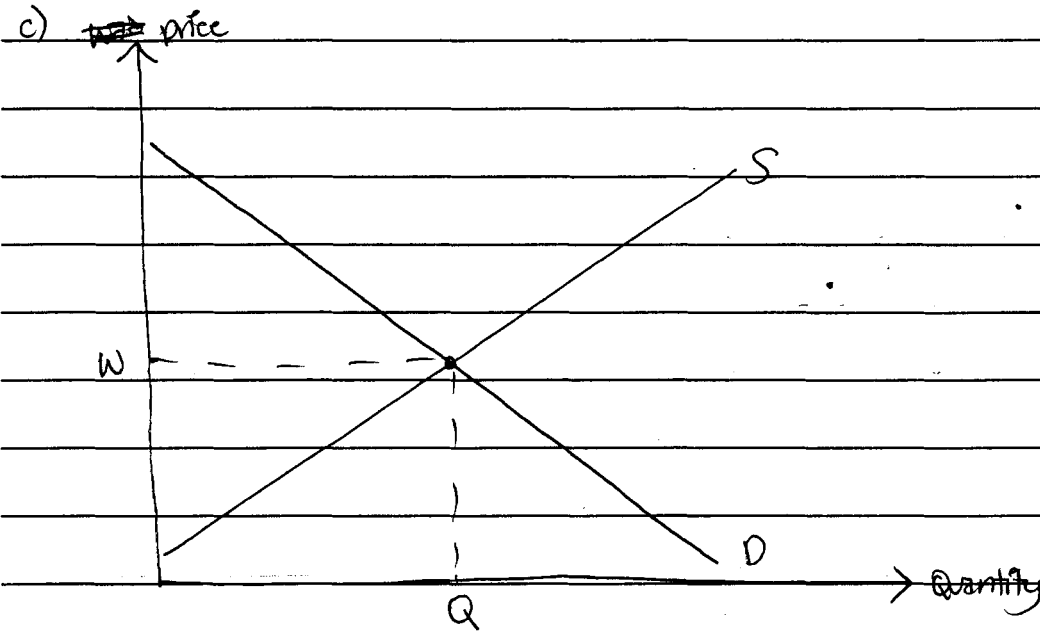
Q. # 3

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

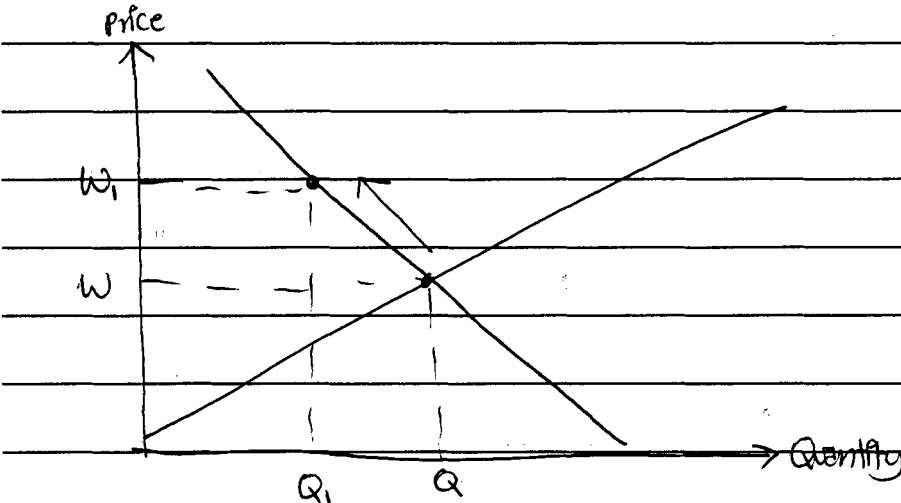
30

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<sup>®</sup> 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.