

Question 2: Short**5 points**

A State that the profit-maximizing number of miners is 4. **1 point**

Point 1

B State that Quartz Excavations will pay a wage rate that is less than \$15 and explain **1 point**

Point 2 that the wage rate paid by a monopsonist is determined by the supply of labor at the quantity of labor hired. Thus, the wage rate associated with the hiring of 4 miners is \$10.

C Calculate the total wage bill as \$50 and show your work. **1 point**

Point 3 Total Wage Bill = $\$25 \times 2 = \50

D (i) State that the marginal revenue product of miners will increase and explain that the **1 point**
Point 4 increase in demand for quartz will increase the price and marginal revenue of quartz.

(ii) State that the marginal factor cost of the last miner hired will be greater than the **1 point**
Point 5 marginal factor cost of the last miner hired before the increase in the demand for quartz.

Question 2: Short**5 points**

(a) State that there is a positive consumption externality. **1 point**

(b) State that the marginal external benefit is \$3. **1 point**

(c) (i) State that the change in profit per hour for Bueno is \$10 and show your work. **1 point**

Change in Profit per Hour

$$= \text{Marginal Revenue Product (MRP)} - \text{Marginal Factor Cost (MFC)}$$

$$= (\$5 \times 6) - \$20 = \$30 - \$20 = \$10$$

(ii) State that Bueno's MRP curve would shift up (or to the right) and explain that the **1 point**
subsidy would increase the demand for guava and increase the price paid by buyers, which would increase MRP for each worker and shift the curve to the right.

Total for part (c) 2 points

(d) State that the number of workers hired will decrease as the quantity of labor hired will **1 point**
occur at a lower quantity of labor where $MFC = MRP$ and explain with **ONE** of the following:

- The MFC for a monopsony is greater than the MFC for a perfectly competitive labor market.
- The MFC increases as the monopsony pays higher wages for every worker as it hires more workers whereas the MFC (or wage) is constant for a firm in a perfectly competitive labor market.

Total for question 2 5 points