

經濟 = 乙 A10726008 黃喬永  
設空白光碟製造產業為完全競爭市場，現為短期一

① 廠商短期供給曲線

$$MC = 2q_i + 50$$

$$AVC = q_i + 50 \Rightarrow AVC < MC = q_i + 50 < 2q_i + 50$$

$$P = MC = 2q_i + 50$$

$$\Rightarrow q_i = \frac{P}{2} - 25$$

$$A \Rightarrow q_i = \frac{P}{2} - 25 \quad q_i > 0$$

② 市場供給曲線

$$Q^S = 40 \left( \frac{P}{2} - 25 \right) = 20P - 1000$$

③ 市場均衡  $P^*, Q^*$ ?

$$20P - 1000 = 2000 - 10P$$

$$30P = 3000$$

$$P = 100$$

$$Q = 1000$$

$$A = P^* = 100 \quad Q^* = 1000$$

$$④ \quad q_i = \frac{100}{2} - 25 = 25$$

$$AC = q_i + 50 + \frac{100}{q_i} = 79$$

$$\pi = 100 \times 25 - 79 \times 25 = 525$$

$$\textcircled{1} MC > AVC$$

$$2q_i + 80 > q_i + 80$$

$$q_i > 0$$

$$P = MC = 2q_i + 80$$

$$q_i = \frac{P}{2} - 40$$

$$A: q_i = \frac{P}{2} - 40 \quad q_i > 0$$

$$\textcircled{2} Q^S = 40 \left( \frac{P}{2} - 40 \right)$$

$$= 20P - 1600$$

$$A: 20P - 1600$$

③ 市場均衡

$$20P - 1600 = 2000 - 10P$$

$$30P = 3600$$

$$P^* = 120 \quad Q^* = 800$$

$$\textcircled{4} q_i = \frac{P}{2} - 40 = \frac{120}{2} - 40 = 20$$

$$AC = q_i + 80 + \frac{200}{q_i} = 115$$

$$= 2400 - 2300$$

$$= 100$$

A 最高產量 = 20

$$TV = 100$$



40家廠商  $Q^d = 3500 - 10P$ ,  $STC = q_i^2 + 50q_i + 100$

① 廠商短期供給曲線

$$MC > AVC$$

$$2q_i + 50 > q_i + 50$$

$$\Rightarrow q_i = \frac{P}{2} - 25$$

$$A = q_i = \frac{P}{2} - 25, q_i > 0$$

② 市場供給線

$$Q^S = 40\left(\frac{P}{2} - 25\right) = 20P - 1000$$

$$A = 20P - 1000$$

③ 市場均衡  $P^* - Q^*$

$$20P - 1000 = 3500 - 10P$$

$$30P = 4500$$

$$P^* = 150, Q^* = 2000$$

④  $q_i = \frac{P}{2} - 25 = \frac{150}{2} - 25 = 50$

$$AC = q_i + 50 + \frac{100}{q_i} = 102$$

$$\pi = TR - TC$$

$$= 150 \times 50 - 102 \times 50$$

$$= 7500 - 5100$$

$$= 2400$$