AAU - Microeconomics (ECO 120/2) - Spring 2010

The first (left-hand side) picture is correct.

Negative profit, positive profit, zero profit.

Problem 1 - Long Run Equilibrium

Long run price in the market is 26, individual output is 4, market output is 40, and there are 10 firms in the market.

Problem 2 - Monopoly and Fixed Cost

(a) Q=24, P=76 for both cost functions

(b) Q=76, P=24 for TC_1 and Q=88, P=12 for TC_2.

Problem 3 - Perfect Competition:

(a) $P = 32$

(b) $P = 16 + 2Q$ if $P \geq 32$, zero otherwise

(c) $\pi = 225$

Problem 4 - Perfect Competition:

(a) P=4, there are 100 firms in the market, market is not in the long run equilibrium, because firms produce different than optimal level of output.

(b) P=7, there are still 100 firms and the total level of output is 11500 so individual output is 1150.

(c) Firms are making profit, because ATC is below price and hence the market is not in the long run equilibrium.

Problem 5 - Perfect Competition:

(a) P=25

(b) P=45

(c) Short run supply is MC, P=25+2Q.

(d) P=38, Q=132

(e) 132/20 = 6.6

(f) ATC=47, more than price, so firms make positive profit.

Problem 6 - Perfect Competition in Short Run:

(a) $P = 5 + 2q$, $q = \frac{5-P}{2}$

(b) $Q = 1000\frac{5-P}{2}$ = 500P-2500

(c) P=7, q=1, Q=1000

(d) Q = 1682, q=1.682

Problem 7 - Monopoly:

(a) P=700, Q=30

(b) P=550, Q=45