Week 3: Assignment 3

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

1) Consider the market of the good is perfectly competitive in nature. The market price of that good is $10 per unit. The cost function of each firm's profit is $\text{profit} = 100 - 2q + q^2$, where $q$ is the output of each firm, $c$ and $f$ are positive real numbers. What is the optimal output of each firm?

- 100
- 10
- 3

No. The answer is incorrect. Score: 0

Accepted Answers: 10, 3

2) Consider the market of the good is perfectly competitive market. The firms are similar in terms of cost function. The cost function is $c(q) = \frac{1}{2}q^2 + 4q + 4q + f$, where $q$ is the output of each firm. What is the supply function of each firm in this case?

- $s(q) = q + 2$ for $q \geq 2$
- $s(q) = q + 4$ for $q \geq 2$
- $s(q) = q + 6$ for $q \geq 2$

No. The answer is incorrect. Score: 0

Accepted Answers: $s(q) = q + 2$ for $q \geq 2$

3) Suppose the market of the good is perfectly competitive in nature. The market demand function is $10 - p = Q$ where $p$ is the price and $Q$ is the market demand. Suppose there are 100 firms. Output of each firm is in terms of cost function. The cost function is $c(q) = q^2 + f$. Find the market equilibrium price. What value of $f$ allows the firms to earn normal profit?

- Price=$0.05$, Exit $30$
- Price=$0.05$, Exit $20$
- Price=$0.07$, Exit $20$

No. The answer is incorrect. Score: 0

Accepted Answers: Price=$0.05$, Exit $30$

4) Consider the market of the good is perfectly competitive. Suppose there are 3 firms. The cost function of each firm is $c(Q) = 3q^2 + 2q + 4q + f$ where $q$ is the output of each firm and $f$ is the fixed cost. Suppose the market demand function is $10 - p = Q$, where $p$ is the price and $Q$ is the market demand. What is the market supply function? How many firms are going to produce in the long run?

- $s(Q) = \frac{1}{3}Q + \frac{1}{2}$
- $s(Q) = \frac{1}{3}Q + \frac{1}{2}$
- $s(Q) = \frac{1}{3}Q + \frac{1}{2}$

No. The answer is incorrect. Score: 0

Accepted Answers: $s(Q) = \frac{1}{3}Q + \frac{1}{2}$

5) Suppose the price of a good is $p=20$ in a perfectly competitive market. The cost function of a firm is $c(q) = 15q^2 + 8q + f$. What is the producer's surplus?

- $77$
- $39$
- $54.5$

No. The answer is incorrect. Score: 0

Accepted Answers: $77$

6) Suppose the demand curve is $10 - p = Q$ where $p$ is the price and $Q$ is the market demand. The market price is $50$. What is the $5$ points concerns' surplus?

- $24$
- $30$
- $22$

No. The answer is incorrect. Score: 0

Accepted Answers: $22$

7) Suppose the market of the good is perfectly competitive in nature. The market demand function is $10 - 2p = Q$, where $p$ is the price and $Q$ is the quantity. Suppose there are 10 firms. The cost function of each firm is $s(q) = 3q^2 + 2q + 4q + f$. What is the total surplus ($\text{consumers'} + \text{producers'}$) generated in this market in the short run?

- $-100$
- $-110$
- $-100$

No. The answer is incorrect. Score: 0

Accepted Answers: $-100$

8) Suppose the market of the good is perfectly competitive in nature. The market demand function is $24 - 2p = Q$, where $p$ is the price and $Q$ is the quantity. The cost function of each firm is $c(q) = 3q^2 + 2q + 4q + f$. What is the long run equilibrium price?

- $1$
- $2$
- $3$

No. The answer is incorrect. Score: 0

Accepted Answers: $1$