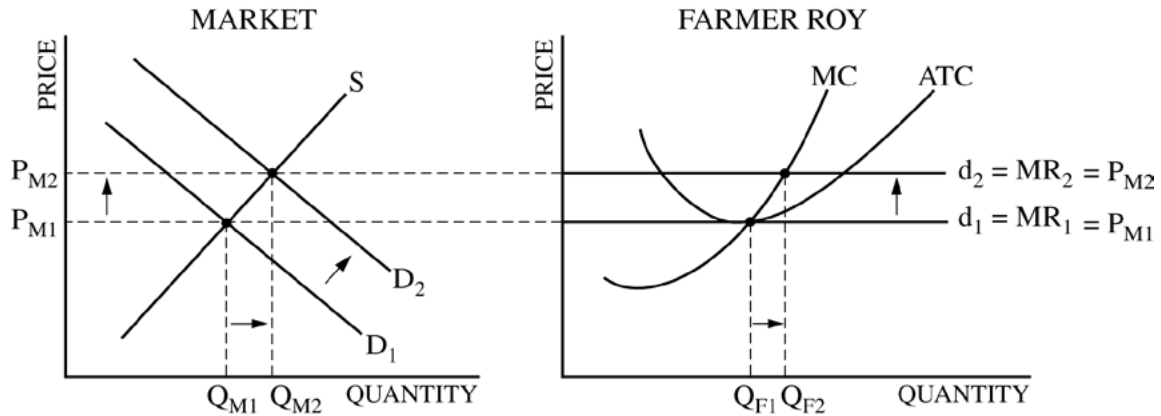


**AP<sup>®</sup> MICROECONOMICS  
2010 SCORING GUIDELINES**

**Question 1**

**10 points** (4+1+4+1)

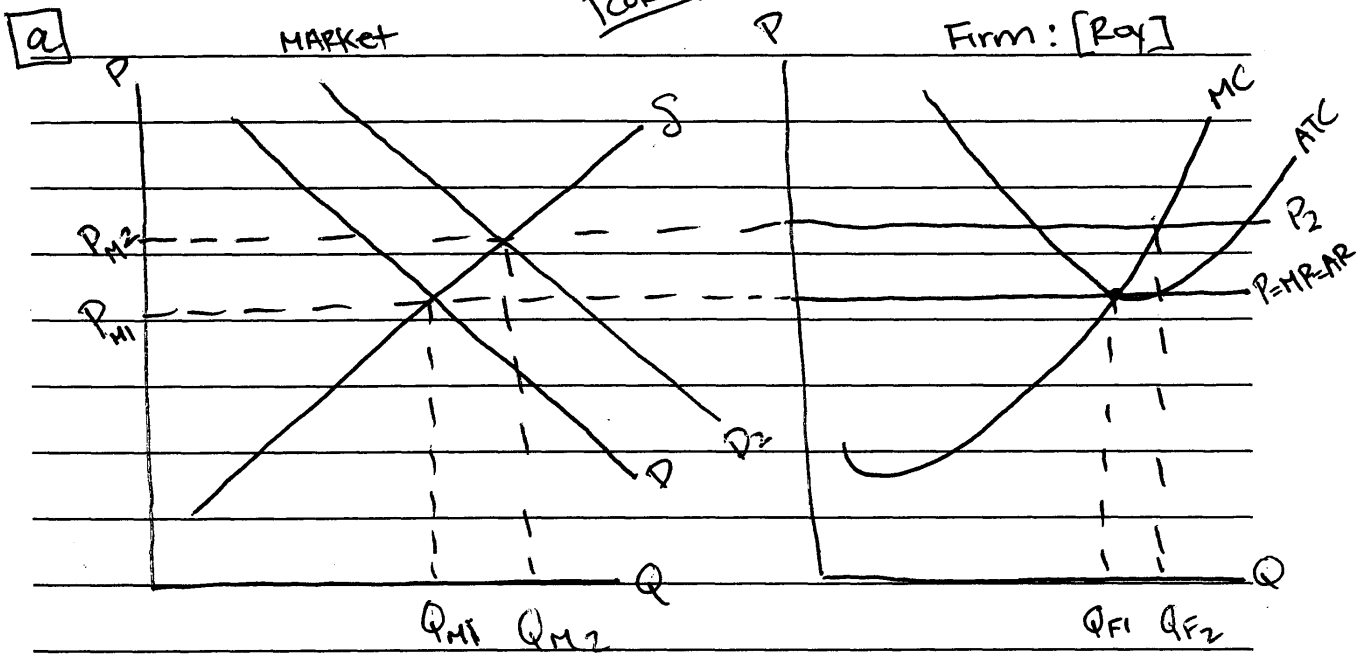


- (a) 4 points:
- One point is earned for a correctly labeled graph of the corn market ( $S$ ,  $D$ ,  $P_{M1}$ ,  $Q_{M1}$ ).
  - One point is earned for the graph of the firm with a horizontal demand curve at  $P_{M1}$ .
  - One point is earned for showing the profit-maximizing quantity,  $Q_{F1}$ , at  $MC = MR$ .
  - One point is earned for showing minimum ATC on the horizontal demand curve at  $Q_{F1}$ .
- (b) 1 point:
- One point is earned for stating that the demand curve for Farmer Roy's corn is perfectly elastic because Farmer Roy is a price taker or because he can sell all that he wants at the market price.
- (c) 4 points:
- One point is earned for shifting the market demand curve to the right and showing  $P_{M2}$  and  $Q_{M2}$ .
  - One point is earned for shifting the firm's demand curve upward to the level of  $P_{M2}$ .
  - One point is earned for showing the profit-maximizing quantity,  $Q_{F2}$ , at  $MC = \text{new } MR$ .
  - One point is earned for stating that ATC at  $Q_{F2}$  is lower than  $P_{M2}$ .
- (d) 1 point:
- One point is earned for stating that the equilibrium quantity will decrease and the equilibrium price will increase, because the increase in the price of corn causes a decrease in the supply of cereal.

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

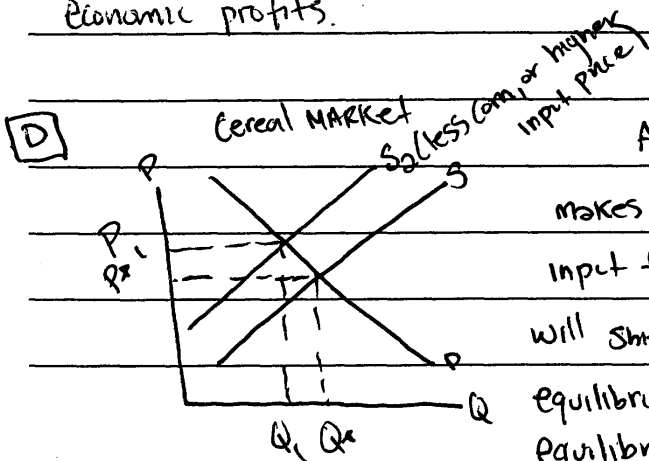
1

1A



**b** For Farmer Roy's Corn, the Demand is perfectly elastic because the demand curve is represented by the  $P=MR=AC$  line. Since Roy is a price taker, and the price is set by the market the demand for Roy's Corn is a horizontal line at the price, which denotes a perfectly elastic demand.

**c** i = on graph; ii = on graph; iii = The ATC curve at  $Q_{F2}$  is below the new price at  $P_2$ , so Roy will now be making Short Run Economic profits.

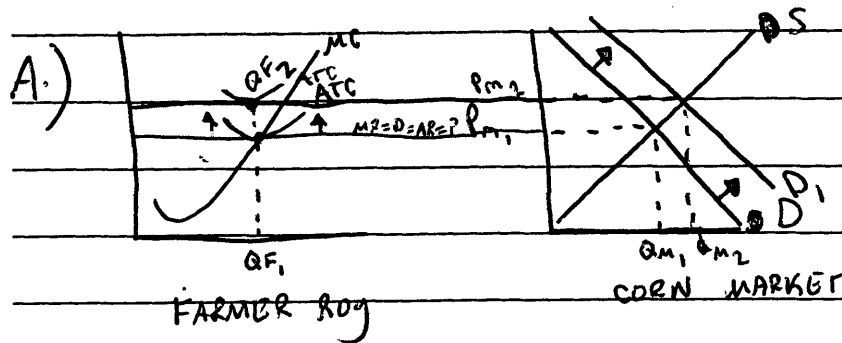


An increased demand for ethanol makes Corn prices go up. Since Corn is an input for cereal, input prices that are increased will shift the Supply Curve inward and cause the equilibrium price of cereal to rise and the equilibrium quantity of Cereal to fall.

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

One

1 B



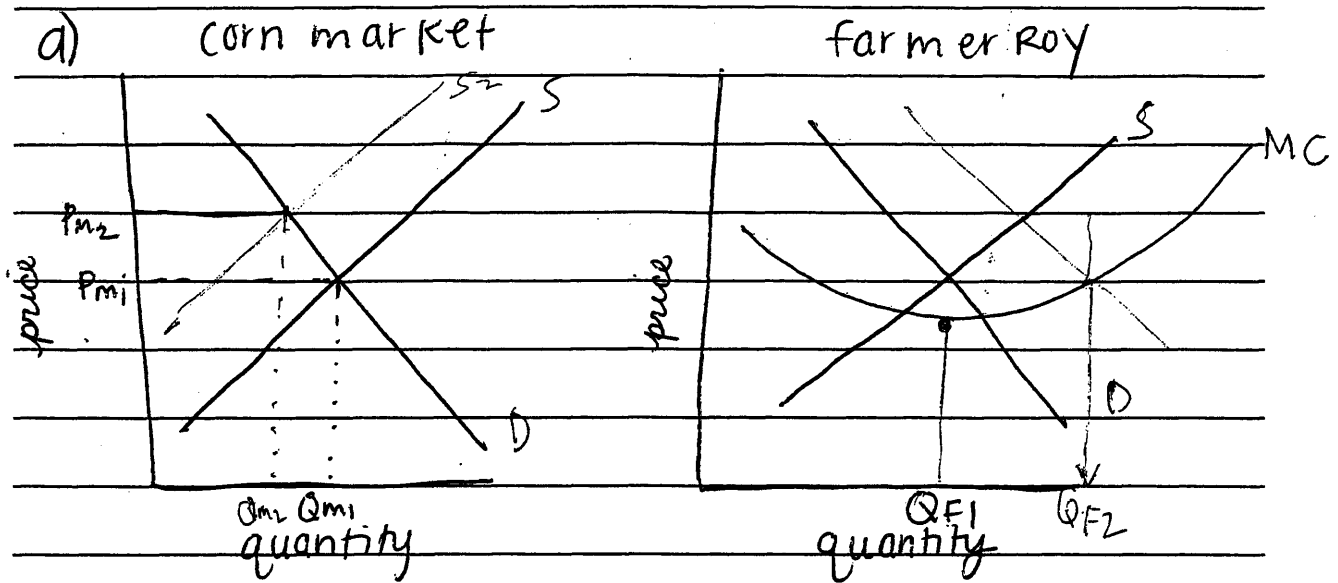
B.) Corn from Farmer Roy is relatively elastic because as price goes up demand decreases. It is also not a ~~key~~ necessity or vital to one's life.

C.) i) graph

ii) graph

iii) The ATC of Farmer Roy at  $Q_{F2}$  and  $P_{m2}$  are both equal because he makes no profit in a long-term production.

D.) Because of the increased demand of corn used for ethanol, there will be less corn for cereal due to the lack of physical availability. This will cause both the quantity and price to decrease.



b) Farmer Roy's corn is perfectly elastic. Since he is making NO profit, there must be some type of substitute good that consumers can turn to, in order to cause him to not make a profit.

d) With an increased demand for ethanol, the quantity of corn allotted to the cereal firm is decreased. But this would increase the price. Cereal firms now have to pay more in order to make their good since all of the corn is going to the ethanol firms.

**AP<sup>®</sup> MICROECONOMICS**  
**2010 SCORING COMMENTARY**

**Question 1**

**Overview**

This question tested students' ability to draw and work with a model of perfect competition. Part (a) asked students to draw the graphs for a competitive market and a representative firm. Part (b) assessed students' understanding of the elasticity of demand for a competitive firm. Part (c) asked students to follow the repercussions of an increase in demand. Part (d) tested for an understanding of how product markets with common inputs affect each other.

**Sample: 1A**

**Score: 10**

The student answered all parts correctly and so earned all 10 points.

**Sample: 1B**

**Score: 6**

The student lost 1 point in part (b) for stating that the firm's demand curve "is relatively elastic." The student lost 2 points in part (c) for showing  $Q_{F2}$  incorrectly and for stating that the average total cost and price are equal when the firm's output is  $Q_{F2}$ . In part (d) the student incorrectly states that equilibrium price decreases and so lost 1 point.

**Sample: 1C**

**Score: 1**

The student earned 1 point in part (a)(i) for correctly drawing and labeling the market diagram for corn.