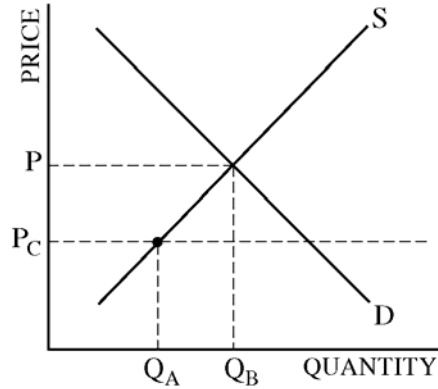


**AP[®] MICROECONOMICS
2008 SCORING GUIDELINES**

Question 3

7 points (3 + 4)



(a) 3 points:

- One point is earned for a correctly labeled supply and demand graph with a price ceiling indicated below the market equilibrium.
- One point is earned for correctly labeling Q_A.
- One point is earned for correctly labeling Q_B.

(b) 4 points:

(i) 2 points:

- One point is earned for identifying Q₁ as the profit-maximizing output.
- One point is earned for identifying Q₃ as the socially efficient output.

(ii) 2 points:

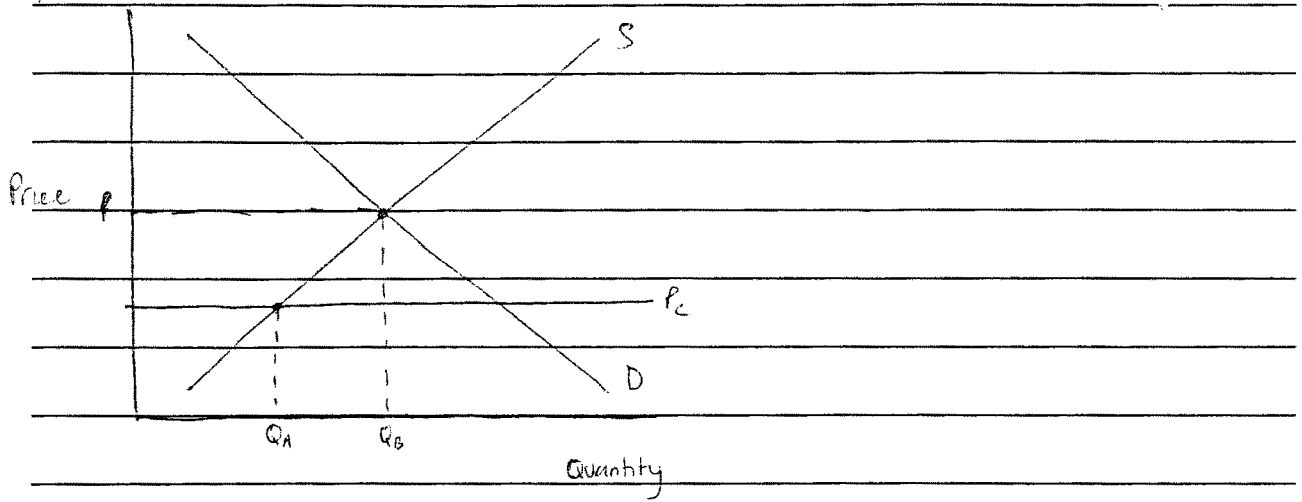
- One point is earned for recognizing that at Q₃, the monopolist incurs a loss.
- One point is earned for identifying the area of loss, P₁P₃DF.

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

3

3A

a)



b) i) Q_1

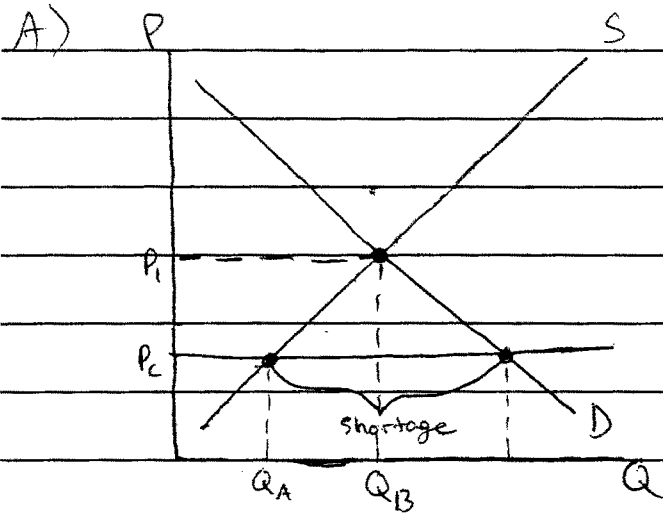
2) Q_3

ii) The monopoly is incurring a loss. The area of loss is the rectangle: $P_1 P_3 DF$.

#3

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

3B



B) i. The profit-maximizing output for the natural monopoly is at Q_1 . This is where $MA=MC$.

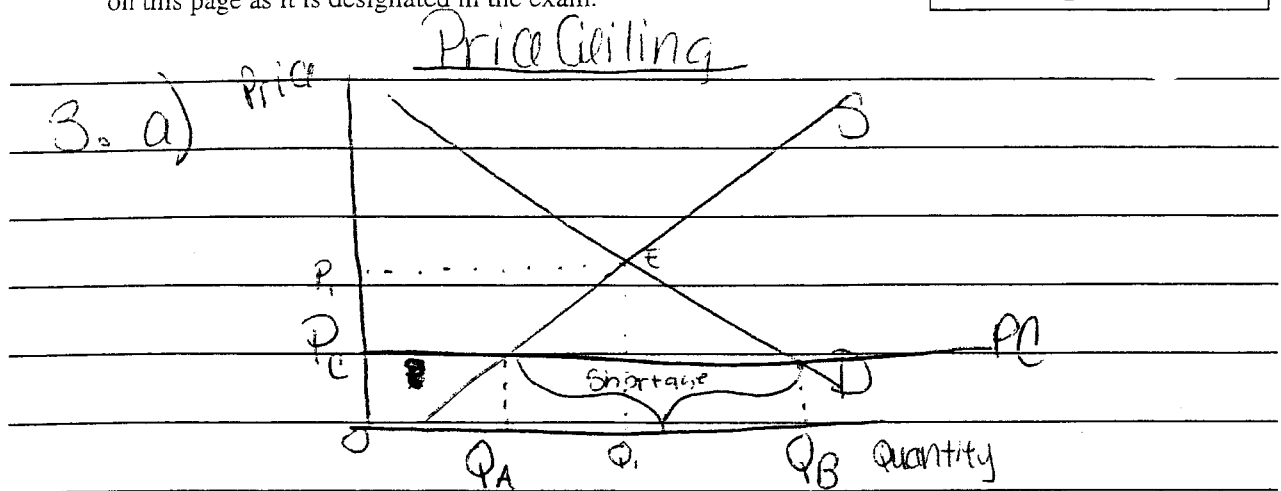
~~The~~ The socially efficient output for the natural monopoly is at Q_2 . This is where $P=ATC$.

ii. At the socially efficient output, the monopoly is making a profit at area $P_2AC P_4$.

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

3.

3C



b) (i) 1. Q_3 is the profit-maximizing output which is at pt. F.

2. The socially efficient output is at Q_2

(ii) making a profit.

**AP[®] MICROECONOMICS
2008 SCORING COMMENTARY**

Question 3

Overview

The question assessed the ability of students to understand pricing and output decisions under various conditions for a perfectly competitive market and for a natural monopoly. Part (a) asked students to draw a binding price ceiling in a competitive market and identify the quantity sold and the socially efficient output. Part (b) asked students to identify from a provided graph of a natural monopoly the profit-maximizing output and the socially efficient output and to identify profit or loss at the latter.

Sample: 3A

Score: 7

All parts are correctly answered.

Sample: 3B

Score: 4

The student lost 1 point in part (b)(i) for identifying the socially efficient output as Q_2 instead of Q_3 . The student lost 2 points in part (b)(ii) for incorrectly identifying a profit at Q_2 and for identifying an area of profit/loss that is inconsistent with the choice of Q_2 .

Sample: 3C

Score: 2

In part (a) the student earned 1 point for correctly drawing the price ceiling below market equilibrium and 1 point for correctly identifying and labeling Q_A where the price ceiling intersects the supply curve.