



2000 Advanced Placement Program® Free-Response Questions

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2000 AP[®] MICROECONOMICS FREE-RESPONSE QUESTIONS

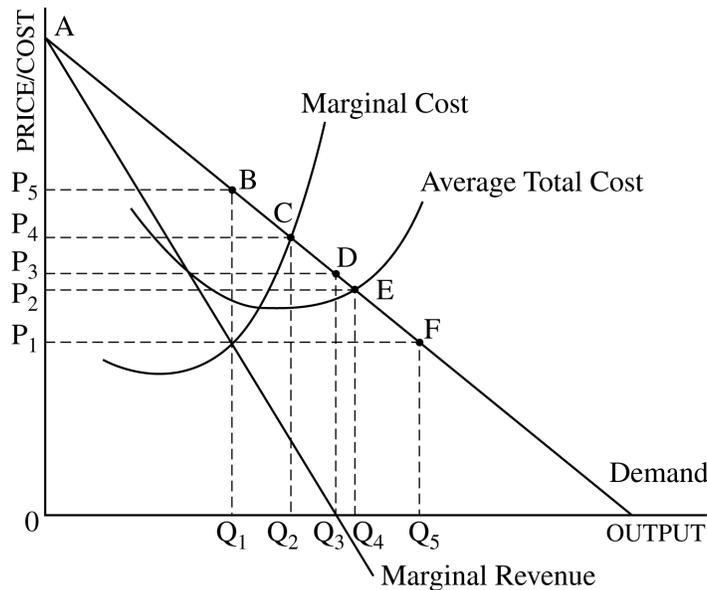
MICROECONOMICS

Section II

Planning time—10 minutes

Writing time—50 minutes

Directions: You have fifty minutes to answer all three of the following questions. It is suggested that you spend approximately half your time on the first question and divide the remaining time equally between the next two questions. In answering the questions, you should emphasize the line of reasoning that generated your results; it is not enough to list the results of your analysis. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes.



1. The diagram above shows the cost and revenue curves for a monopoly.
 - (a) How does a monopolist determine its profit-maximizing level of output and price?
 - (b) Using the information in the graph, identify each of the following for the monopolist.
 - (i) The profit-maximizing level of output and price
 - (ii) The line segment of the demand curve that is elastic
 - (c) Suppose that the industry depicted in the graph became perfectly competitive without changing the demand or cost curves. Identify the equilibrium price and output that would prevail in the perfectly competitive market.
 - (d) Using the information in the graph, identify the area of consumer surplus for each of the following.
 - (i) The profit-maximizing monopoly
 - (ii) The perfectly competitive industry
 - (e) Define allocative efficiency.
 - (f) To be allocatively efficient, what level of output should the monopolist produce?
 - (g) Should the government use a per-unit tax or a per-unit subsidy to lead the monopolist to produce the allocatively efficient level of output? Explain how this tax or subsidy would achieve the allocatively efficient level of output.

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2. Assume that a firm produces output using one fixed input, capital, and one variable input, labor. The firm can sell all of the output it produces at a market price of \$3 each, can hire all of the workers it wants at a market wage rate of \$11 each, and has fixed costs of \$10. It faces the following production schedule.

<u>Number of Employees</u>	<u>Total Output</u>
0	0
1	14
2	26
3	35
4	42
5	46
6	48

- (a) In what kind of market structure does this firm sell its output? How can you tell?
- (b) In what kind of market structure does this firm hire its employees? How can you tell?
- (c) Using marginal revenue product analysis, how many employees should this firm hire to maximize short-run profits? How can you determine that?
- (d) Based on your answer in part (c), how many units of output will this firm produce?
- (e) At the level of output you identified in part (d), is the firm earning an economic profit, a normal profit, or suffering a loss? How can you tell?
3. Assume all of the following about imported and domestically produced shoes.
- They are sold in two separate and perfectly competitive markets.
 - They are close substitutes.
 - The demand for both is price elastic.

Now assume that a tariff is imposed on imported shoes.

- (a) Using a correctly labeled graph, show the impact of the tariff on each of the following in the market for imported shoes.
- Price
 - Output
- (b) Using a new correctly labeled graph, show the impact of the tariff on each of the following in the market for domestically produced shoes.
- Price
 - Output
- (c) Given that the demand for imported shoes is price elastic, will expenditures on imported shoes by consumers increase, decrease, or remain the same? How do you know?

END OF EXAMINATION