



**AP<sup>®</sup> Microeconomics  
2009 Free-Response Questions  
Form B**

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**2009 AP<sup>®</sup> MICROECONOMICS FREE-RESPONSE QUESTIONS (Form B)**

**MICROECONOMICS**

**Section II**

**Planning time—10 minutes**

**Writing time—50 minutes**

**Directions:** You have 50 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. Use a pen with black or dark blue ink.

1. Mary & Company, operating in a monopolistically competitive industry, produces a cleaning product called BriteKlean. The company currently produces the profit-maximizing quantity of BriteKlean but is operating at a loss.
  - (a) Draw a correctly labeled graph for Mary & Company and show each of the following.
    - (i) The profit-maximizing output and price, labeled as  $Q_M$  and  $P_M$ , respectively
    - (ii) The area of loss, shaded completely
  - (b) What must be true in the short run for the company to continue to produce at a loss?
  - (c) Assume now that the demand for cleaning products increases and that the company is now earning short-run economic profits. Relative to this short-run situation, how does each of the following change in the long run?
    - (i) The number of firms
    - (ii) The company's profit
  - (d) In the long run, if the company continues to produce, will it produce the allocatively efficient level of output? Explain.
  - (e) In the long run, will the company be operating in a region where economies of scale exist? Explain.

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2. Sasha is a utility-maximizing consumer who spends all of her income on peanuts and bananas, both of which are normal goods.
- (a) Assume that the last unit of peanuts consumed increased Sasha's total utility from 40 utils to 48 utils and that the last unit of bananas consumed increased her total utility from 52 utils to 56 utils.
- (i) If the price of a unit of peanuts is \$1 and Sasha is maximizing utility, calculate the price of a unit of bananas.
- (ii) If the price of a unit of peanuts increases and the price of a unit of bananas remains unchanged from the price you determined in part (a)(i), how will Sasha's purchase of peanuts change?
- (b) Assume that the cross-price elasticity of demand between peanuts and bananas is positive. A widespread disease has destroyed the banana crop. What will happen to the equilibrium price and quantity of peanuts in the short run? Explain.
- (c) Assume that the price of bananas increases.
- (i) Will the substitution effect increase, decrease, or have no effect on the quantity of bananas demanded?
- (ii) What happens to Sasha's real income?

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3. Two interdependent bus companies—City Wheels and Easy Ride—provide transportation services in the same city. Following a change in costs that affects both companies, each company must decide whether to lower its fare or maintain its current fare. In the payoff matrix below, the first entry in each cell indicates the daily profit to Easy Ride and the second entry indicates the daily profit to City Wheels. Both companies know all of the information in the matrix.

		City Wheels	
		Maintain Fare	Lower Fare
Easy Ride	Maintain Fare	\$150, \$180	\$130, \$120
	Lower Fare	\$120, \$130	\$140, \$110

- (a) If Easy Ride chooses to maintain its current fare, which strategy is better for City Wheels? Explain.
- (b) Is there a dominant strategy for Easy Ride? Explain.
- (c) Assume that the companies must make their decisions simultaneously and do not cooperate. What will be the daily profit for each firm?
- (d) If these two firms could cooperate, which strategy would each firm choose?
- (e) Suppose that the local government decides to provide a subsidy of \$40 per day to the bus companies. However, only a company that agrees to lower its fare is eligible to receive the subsidy. Draw a new payoff matrix to reflect the change in government policy.

**STOP**

**END OF EXAM**