



AP[®] Microeconomics 2011 Free-Response Questions Form B

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2011 AP[®] MICROECONOMICS FREE-RESPONSE QUESTIONS (Form B)

MICROECONOMICS

Section II

Planning time—10 minutes

Writing time—50 minutes

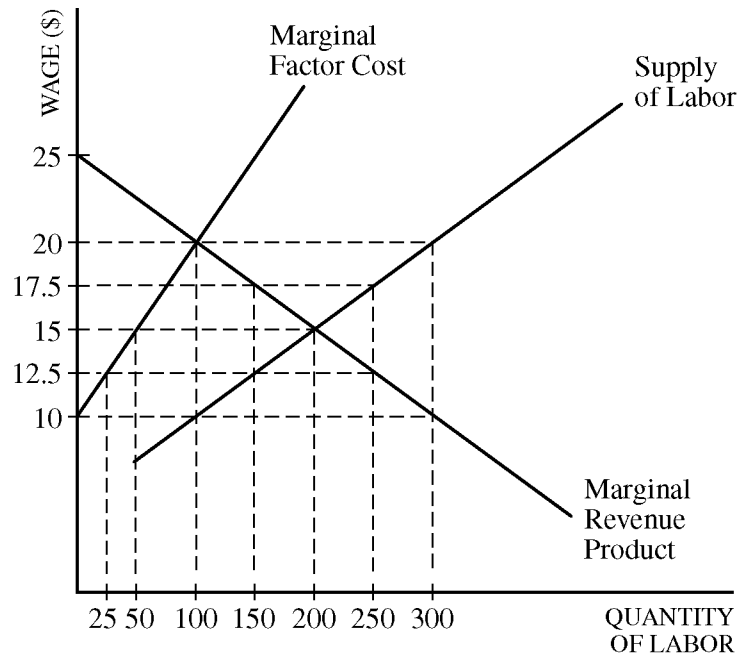
Directions: You have 50 minutes to answer all three of the following questions. It is suggested that you spend approximately half your time on the first question and divide the remaining time equally between the next two questions. In answering the questions, you should emphasize the line of reasoning 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. Suppose that roses are produced in a perfectly competitive, increasing-cost industry in long-run equilibrium with identical firms.
 - (a) Draw correctly labeled side-by-side graphs for the rose industry and a typical firm and show each of the following.
 - (i) Industry equilibrium price and quantity, labeled P_m and Q_m , respectively
 - (ii) The firm's equilibrium price and quantity, labeled P_f and Q_f , respectively
 - (b) Is P_m larger than, smaller than, or equal to P_f ?
 - (c) Assume that there is an increase in the demand for roses. On your graphs in part (a), show each of the following.
 - (i) The new short-run industry equilibrium price and quantity, labeled P_{m2} and Q_{m2} , respectively
 - (ii) The new short-run profit-maximizing price and quantity for the typical firm, labeled P_{f2} and Q_{f2} , respectively
 - (d) As the industry adjusts to a new long-run equilibrium,
 - (i) what will happen to the number of firms in the industry? Explain.
 - (ii) will the firm's average total cost curve shift upward, shift downward, or remain unchanged?
 - (e) In the long run, compare the firm's profit-maximizing price to each of the following.
 - (i) P_f in part (a)(ii)
 - (ii) P_{f2} in part (c)(ii)

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2. Suppose research shows that the more college education individuals receive, the more responsible citizens they become and the less likely they are to commit crimes.
- (a) Draw a correctly labeled graph for the college education market and show each of the following.
- (i) Private market equilibrium quantity and price of college education, labeled Q_m and P_m , respectively
 - (ii) Socially optimal quantity of education, labeled Q_s
 - (iii) Deadweight loss at the market equilibrium, completely shaded
- (b) Assume that the government imposes an effective (binding) price ceiling on the price of college education.
- (i) Show the price ceiling on your graph in part (a), labeling the price ceiling P_c .
 - (ii) Does this price ceiling increase, decrease, or have no impact on the deadweight loss in this industry? Explain.
- (c) Assume that instead of the price ceiling, the government grants each student a subsidy for each unit of college education purchased. Will the new equilibrium quantity of college education purchased be greater than, less than, or equal to Q_m from part (a) ?

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3. Woodland is a small town in which everyone works for TreeMart, the local lumber company. TreeMart is a monopsonist in the labor market and a perfect competitor in the lumber market. In the short run, labor is the only variable input. The labor market for TreeMart is given in the graph above.
- Identify the profit-maximizing quantity of labor for TreeMart.
 - Identify the wage rate TreeMart pays to hire the profit-maximizing quantity of labor.
 - Identify the quantity of labor hired in each of the following situations.
 - TreeMart operates in a competitive labor market.
 - The government imposes a minimum wage of \$12.5. Explain.

STOP

END OF EXAM