

Quiz #3  
(50 Points)

Please use your time wisely. Label your graphs correctly.

- (10) 1. Given your knowledge of managerial economics, please respond to the following questions.
- (3) a. Define average fixed costs and graphically illustrate this relationship. Why is this relationship important to the manager?
- (2) b. Define marginal product (marginal physical product) using words and an equation.
- (2) c. Define marginal cost using words and an equation.
- (3) d. Define the marginal rate of technical substitution using words and an equation.

- (15) 2. Two market specialists for a major seed company are in a heated debate. Specialist A believes the higher price for the new lettuce variety will reduce the amount of lettuce seed sold to lettuce farmers. Specialist B believes that the increase in seed productivity will more than compensate for a higher price. In fact, Specialist B argues that the company will sell more seed than it did in the past. Use the appropriate economic model to illustrate the profit-maximizing level of input use under both scenarios.

- (15) 3. Gateway Computer Company is currently struggling to maintain market share in the highly competitive microcomputer industry. Gateway management's goal is to reach a level of profitability where the firm can pay higher dividends to its stockholders. Currently Gateway is only covering its average variable costs and a portion of its fixed costs. Using the appropriate economic model, please illustrate (a) Gateway's current situation, (b) Gateway's breakeven level of output, and (c) Gateway's goal of "excess" profits. Assume Gateway sells microcomputers in a perfectly competitive market. Use a single graph to illustrate all three scenarios.

(10) 4. A key distinguishing characteristic of economics is the analysis of tradeoffs. Managers often struggle with decisions that involve two or more valuable resources or attractive projects. Briefly discuss the tradeoffs associated with these economic concepts or decision rules.

(4) a. Opportunity Cost

(2) b.  $MVP = MIC$

(2) c.  $MR = MC$

(2) d. Time