

## Unit 5 Quiz B

Randomly select 3 questions to ask members of the group requesting the next set of assignments. If they get all questions correct, give them the entire stack of quizzes and assignments so that they can quiz the next group. If they get any question wrong, send them back to their seats to review and then try again in 10 minutes or more.

1. What is meant by “diminishing marginal product” in the context of production, and how does it relate to the concept of diminishing marginal utility for consumers?

*Answer: Diminishing marginal product means that as you add more units of an input while holding other inputs constant, the additional output gained from each new unit decreases. This is similar to diminishing marginal utility for consumers, where additional units of consumption provide decreasing additional satisfaction.*

2. Given a function for total cost, how do you calculate marginal cost?

*Answer: the derivative of total cost is the marginal cost.*

3. What is an isoquant?

*Answer: An isoquant is a curve that shows all combinations of inputs that produce the same level of output.*

4. What does the Marginal Rate of Technical Substitution (MRTS) measure?

*Answer: The MRTS measures how much of one input must be substituted for another to maintain the same level of output. It's the slope of line tangent to the isoquant.*

5. If the marginal cost of fertilizer decreases, how should a profit-maximizing producer adjust their use of fertilizer?

*Answer: The producer should increase their use of fertilizer. When the marginal cost of an input decreases, the profit-maximizing quantity increases until the new, lower marginal cost equals the marginal benefit.*

6. What is an equation for a firm's profit?

*Answer:  $TR - TC$*