

Midterm 2

Part I. Multiple Choice (75 points): For each of the following choose the letter that corresponds to the best answer.

1. Suppose prospect A has a higher expected value than prospect B.
 - a) A risk-neutral individual will be indifferent between the two prospects.
 - b) A risk-averse individual will always prefer prospect A.
 - c) A risk averse individual might prefer B ot A, if B is less risky.
 - d) A risk-averse individual will always be indifferent between the two prospects.

2. If a risk averse consumer purchases insurance biased in favor of the insurer then:
 - a) The premium exceeds the expected pay out of coverage.
 - b) The consumer demands more than full coverage.
 - c) The consumer shifts income from the loss state to the state where no loss occurs.
 - d) The consumer increases the risk compared to the case where no insurance is purchased.

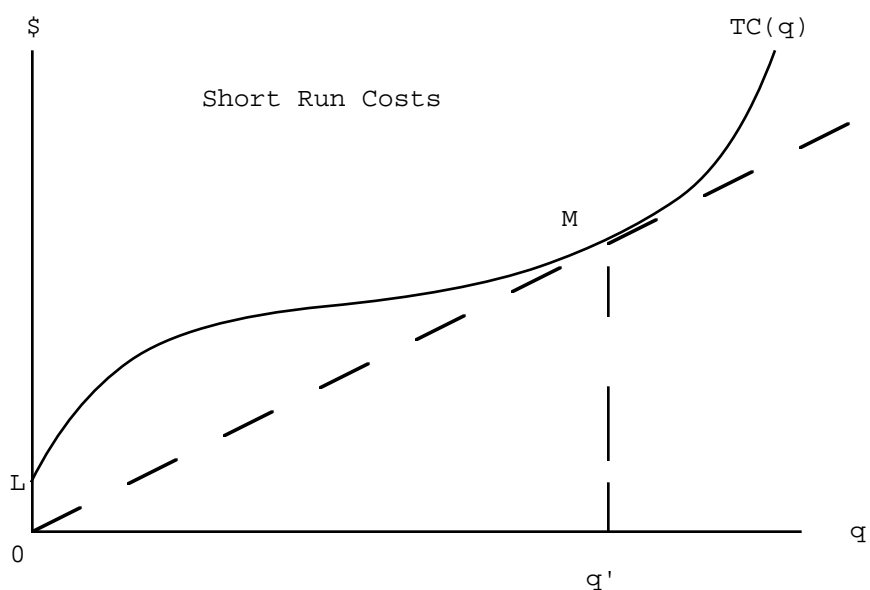
3. In any production process, the marginal product of labor equals:
 - a) the value of total output minus the cost of the fixed capital stock.
 - b) the change in output that occurs when a one unit change is made in the labor input.
 - c) total output divided by total labor input.
 - d) the average output of the least skilled workers employed by the firm.

4. A profit maximizing firm makes positive economic profit. It sells its product at a price of \$100. From these facts we deduce that:
 - a) average total cost is less than \$100.
 - b) average fixed cost is greater than \$100.
 - c) average variable cost is greater than \$100.
 - d) marginal cost is less than \$100.

5. If the production function exhibits increasing returns to scale then
 - a) Short run average cost is less than short run marginal cost.
 - b) Long run average cost is less than long run marginal cost.
 - c) Long run average cost is more than long run marginal cost.
 - d) Doubling the labor input, holding capital fixed, doubles output.

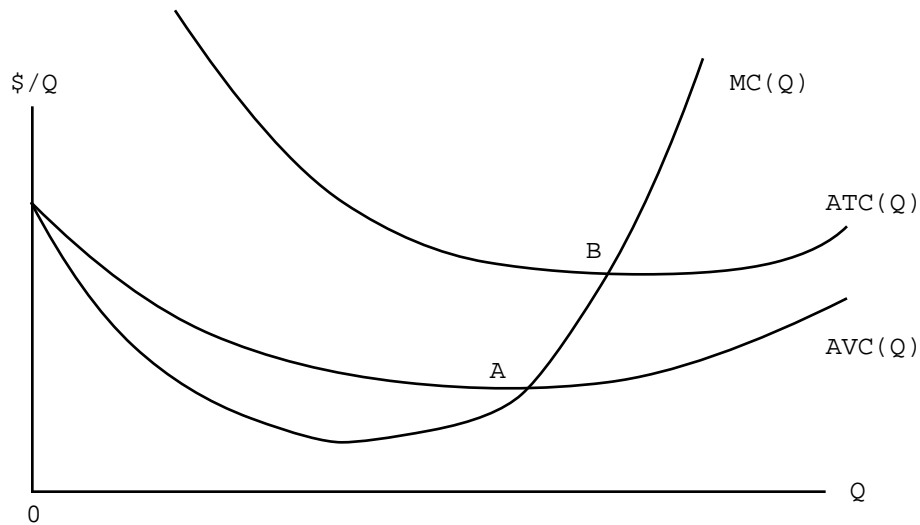
6. Suppose a producer minimizes the cost of producing a certain output level with 200 units of labor and 100 units of capital.
 - a) The user cost of capital must be twice the wage.
 - b) The user cost of capital must be half the wage.
 - c) The rate of technical substitution must equal 2.
 - d) There is not enough information to determine either the factor price ratio or the rate of technical substitution.

Questions 7 and 8 refer to the following diagram

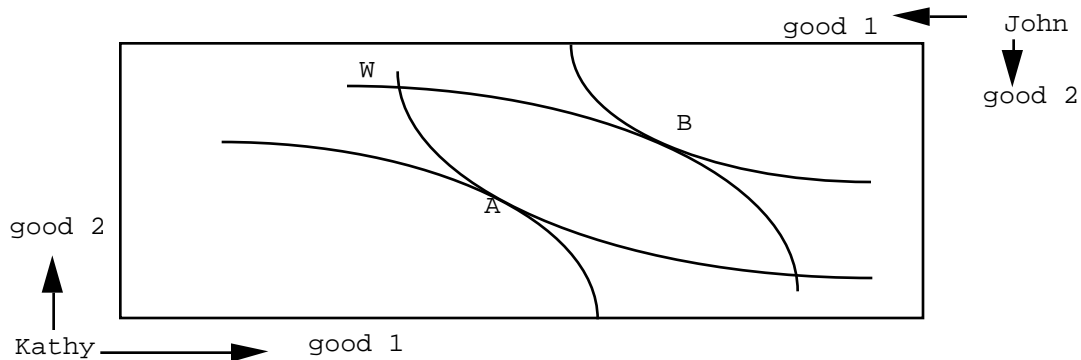


7. In the above diagram, a firm producing q' units of output:
- Is minimizing average variable costs of production.
 - Is minimizing average total costs of production.
 - Faces fixed costs equal to Mq' .
 - Faces a marginal cost smaller than average total cost of production.
8. In the above diagram:
- Total fixed costs decline for increases in output.
 - Average total cost at q' equals Mq' divided by $0q'$.
 - Marginal cost is increasing for all values of output.
 - A competitive firm would be making positive economic profits if it found it optimal to operate at output less than q' .
9. A competitive, increasing-cost industry has experienced an exogenous increase in the demand for its product.
- In the long run this increased demand will result in a lower product price.
 - In the long run this increased demand will result in a higher product price.
 - In the long run this increased demand will not affect entry.
 - In the short run this increased demand cannot be met.
10. The law of diminishing returns to a variable input:
- Assumes that at least one input is held fixed.
 - Refers to the behavior of the average product of the variable input.
 - Refers to the economies of scale exhibited by the production function.
 - Assumes that the firm is operating in the long run.
11. The difference between Producer Surplus and Economic Profit is:
- Average fixed cost.
 - Total fixed cost.
 - Government revenue.
 - Social Surplus.

Questions 12 and 13 refer to the following diagram, which is derived for a firm operating in the short run with a single variable input, labor.



12. In the diagram:
- The average product of labor is at a maximum at point A.
 - Average fixed cost is constant.
 - The slope of the AVC equals the slope of the ATC at every output.
 - The firm must be operating under increasing returns.
13. At point B in the diagram:
- The average product of labor is at a maximum.
 - The slope of the total cost curve is less than the slope of the total variable cost curve at the same output.
 - The average product of labor is rising.
 - The marginal product of labor is less than the average product of labor.
14. An Edgeworth Box diagram is given below for Kathy and John.



Suppose the initial allocation is A. Which of the indicated allocations yields the Competitive Allocation?

- Only W.
- Only A.
- Only B.
- Both A and B.

15. Let social allocation A denote the status quo and social allocation B denote a proposed alternative. Then, the movement from A to B is a Pareto improvement if

- a) The distribution of income is more equitable under B than under A.
- b) The winners win more than the losers lose in moving from A to B.
- c) Some people are made better off and nobody is made worse off in moving from A to B.
- d) The allocation B is on the contract curve while the allocation A is off the contract curve.

Part II. Long Problem (25 points).

Consider a competitive industry. Suppose that the industry is currently unregulated but that the government is considering imposing a registration fee of \$1000/year to be paid by each operating firm.

a) Analyze the effect of this type of regulation in the short run. Explain the consequences of product price, firm output, and the number of firms in the industry.

b) Analyze the effect of this type of regulation in the long run. Explain the consequences of product price, firm output, and the number of firms in the industry. Is your answer the same as in part (a)? Why or why not?