Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet.
Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 170
points) and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For
example, a 16-point question should take 8 minutes. Because of the class that follows your class, I cannot
give you extra time.

1) (10 points) Do EITHER Part A OR Part B.
A) What are the difference between economic costs and accounting costs?
B) What are the difference between explicit costs and implicit costs?

2) (16 points) Do EITHER Part A OR Part B.
A) Is the LRTC the envelope of the SRTC curves? Explain your logic and state what the letters in each
acronym stand for.
B) Is the LRMC the envelope of the SRMC curves? Explain your logic and state what the letters in each
acronym stand for.

3) (16 points) Do EITHER Part A OR Part B.
A) Suppose a firm is selling 1000 units at a price of $2.00/unit. It has an average variable cost of $1.50/unit
and a total fixed cost of $300. What is the DOL? Show all work.
B) Draw the LRATC curve that corresponds to the "Learning Curve." Explain why it takes its shape.

4) (18 points) Do EITHER Part A OR Part B.
A) Draw a LRATC curve and at least five SRATC curves. Explain why the graphs look as drawn.
B) Draw the straight-line short-run total cost and total revenue diagram. Illustrate an increase in the amount
of capital the firm has. Explain why the line moved as drawn.

5) (18 points) Suppose that a student was
asked to derive the SRTC curve from the
isoquant/isocost diagram. The student drew
the figure to the right. The student then
stated, "I will assume that isocost curve #1
(IC_1) has a total cost of $30, isocost curve #2
(IC_2) has a total cost of $60, isocost curve #3
(IC_3) has a total cost of $90, and isocost curve
#4 (IC_4) has a total cost of $120." The student
then went on to graph the quantity and total
cost combinations (3, 30), (5, 60), (7, 90) and
(19, 120). There are at least four different
errors. Some of which are repeated. What
are THREE of the errors? Explain how you
know they are errors. Do not count repetition
of an error as two errors. For example, if the
curved lines were supposed be labeled
"U=…," then do not list that as four errors.
That is one error.
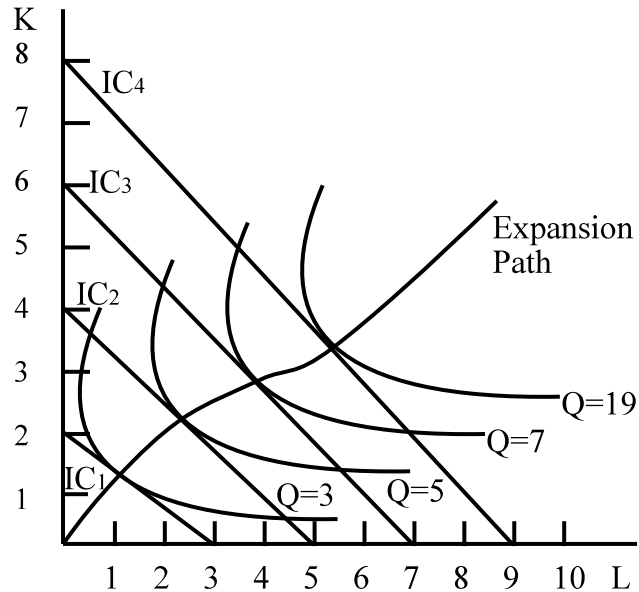
6) (22 points) Do EITHER Part A OR Part B.
A) Illustrate an increase in the wage rate on the isocost/isoquant diagram for an isocost line of $100.
Explain why the curve(s) move as drawn. For both before the wage increase and after it, how much labor
and capital would you actually use if you only had $100? Explain how you got your values.
B) When we used indifference curves/budget constraint, we chose the highest indifference curve for a given
budget constraint. When we are cost minimizing, are we finding taking the isoquant as given or the isocost
line? Explain your logic. Given your answer, give a mathematical proof of the equi-marginal principle as it
applies to firms decision to hire labor and/capital.