

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 12-point question should take 6 minutes. I cannot give extra time because some students have a class after your class.

1) (8 points) Answer EITHER Part A OR Part B.

A) What is the slope of the iso-cost line? Prove it.

B) Is electricity a fixed cost, variable cost, or both? Briefly explain your logic.

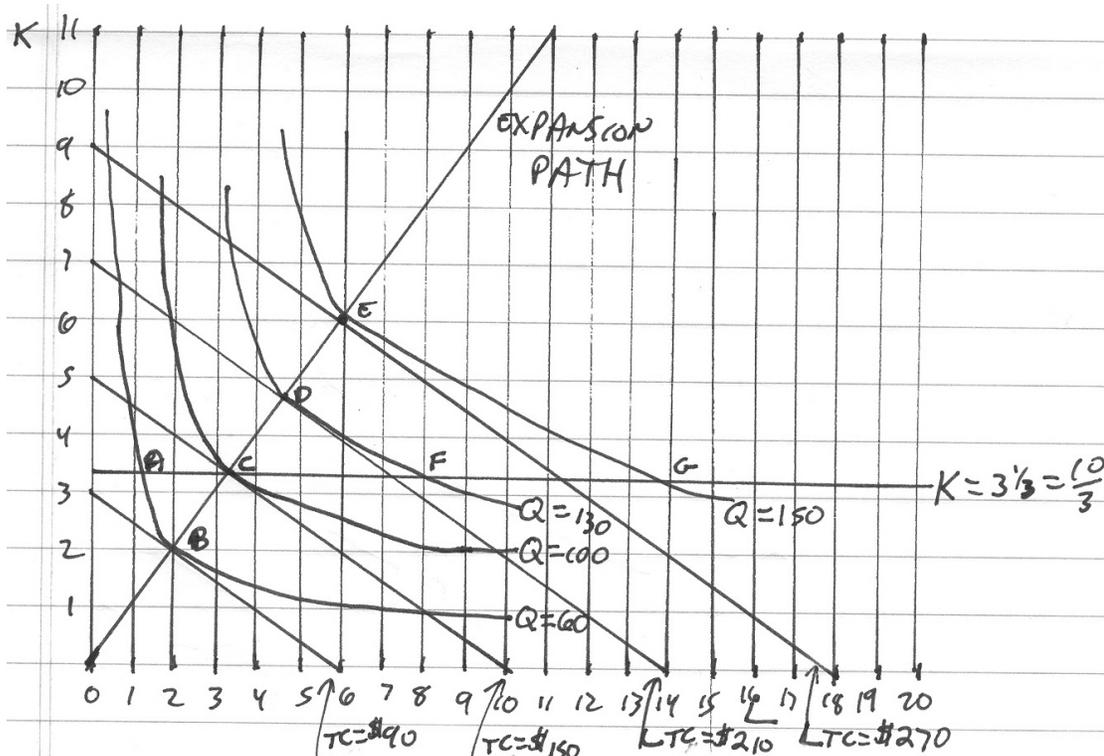
2) (10 points each) Answer THREE of the following questions using the graph to the right. **Explain what you did and show all calculations.**

A) What are the wage and rental rates?

B) Find the SRTC for TWO of the quantities. Which two lettered points are you referring to?

C) Find the LRATC for TWO of the quantities. Which two lettered points are you referring to?

D) Using points C and D, does this graph show increasing returns to scale, constant returns to scale, or decreasing returns to scale?



3) (18 points) Answer EITHER Part A OR Part B.

A) Draw the MRP_L/MRC_L diagram. Draw an increase in demand for the product. Explain why the curve(s) moved as drawn. What happens to the number of employees and the wage they are paid?

B) Draw the TP_L diagram and explain why it takes its shape.

4) (18 points) Answer EITHER Part A OR Part B.

A) Suppose the fixed costs are \$120, the marginal costs are $\$5/Q$, and the price is $\$9/Q$. Draw the straight-line TC/TR diagram. Find the break-even point. If the firm is producing 40 units, then calculate the DOL. How much would their profits drop if their sales dropped 20%? Show all work and briefly explain all calculations.

B) Draw the straight-line TC/TR diagram for two firms which are making the same profits, but have different degree of operating leverage. Explain how you know which one has a higher DOL and how you know they have the same profits. You do NOT need to use precise numbers.

5) (26 points) Draw EITHER the event in Part A OR the event in Part B on the AVC/ATC/AFC/MC diagram. Explain why the curve(s) moved as drawn.

A) The CEO gets a pay raise.

B) A wooden furniture manufacturer finds that the price of wood increases.