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 150 points (to be scaled up to 220 points) and is scheduled to take 75 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. I will not grade what is written on this sheet.

1) (12 points) Answer EITHER Part A OR Part B.
A) What is the profit maximization equation for all firms? Explain why that equation maximizes profits.
B) What is an increasing cost industry? Why might that occur.

2) (12 points) For EITHER economies of scale OR licences, explain how that is a barrier to entry which could result in a monopoly.

3) (12 points) Answer EITHER Part A OR Part B.
A) Why should firms set MPL/w = MPK/r in the long run? Explain your logic.
B) Why do we say firms set MRPL = MFC? Explain your logic.

4) (12 points) Answer EITHER Part A OR Part B.
A) Is a cartel more likely to fall apart if there are a large number of firms or a small number of firms? Explain your logic.
B) What is the formula for the Herfindahl-Hirschman Index? What is the range it can take?

5) (12 points) For EITHER the LRATC Curve and the SRATC Curves OR the LRMC Curve and the SRMC Curves, determine if the long-run curve the envelope of the short-run curves. Explain your logic.

6) (16 points) Answer EITHER Part A OR Part B.
A) Find the Nash equilibrium and the cooperative equilibrium for the payoff matrix on the back. Explain how you found them.
B) When we calculated HHI and CR4, we first had to figure out which firms were in the market. Why is that a problem? Give an example where it is debatable whether two firms are in the same market.

7) (18 points) Answer EITHER Part A OR Part B.
A) Draw the MRPL/MFC diagram for a monopoly which is in a perfectly competitive labor market. Use it to find out how many workers are hired and to prove that they will hire fewer workers than a perfectly competitive firm. Explain your logic.
B) Draw the MRPL/MFC diagram for a monopoly which is in a perfectly competitive labor market. Illustrate the effects of an increase in the demand for the product. Explain why the curve(s) moved as drawn. What happens to the wage rate and number of workers hired?

8) (28 points each) Answer TWO of the following.
A) Draw the industry supply and demand for a perfectly competitive industry. Beside it, draw the ATC/AVC/MC/D diagram for one firm in the industry. Draw the diagram such that it is in the long-run equilibrium. State how you know it is in the long-run equilibrium. Illustrate the short-run effects of a decrease in the wage rate in that industry on both graphs. Explain why the curves moved as drawn.

What has happened to the quantity sold, price charged, and the profitability of the firms?
B) Draw the supply and demand for a perfectly competitive industry and the ATC/AVC/MC/D diagram for one firm in that industry which is making negative economic profits. Show the area on the graph which is the losses and explain how you found it. Illustrate the effects of the industry going back to the long-run equilibrium. Assume it is a constant cost industry. Explain why the curves moved as drawn.
C) Draw the ATC/AVC/MC/D diagram for a monopolistically competitive firm which is making zero economic profit. Find the price and quantity. Explain how you found them and how you know they are making zero economic profits. Illustrate the short-run effects of an increase in the rent on the building. Explain why the curve(s) moved as drawn. What happens to the price, quantity, profits in the short-run?

		Less Than Jake	
		High Price	Low Price
Dropkick Murphys	High Price	8 17	12 9
	Low Price	12 16	13 10