Econ 3324 Spring 2006

Managerial Economics R. Claycombe

Second Exam

Write all answers in your blue book and show all work there. Return your exam and printout(s) in your blue book.

15 pts.

1) Suppose that you have a model where the effects of variables that you control are already figured into the constant and QD = 1000 + 10Pop

and Pop = $10(1.02)^{time}$ for time = 1 and up.

What QD do you forecast when time = 3.

Suppose that a change in migration policy shows population growth to a one percent growth rate at year 2. Revise your forecast.

17 pts.

2) Consider the following input/output table.

Output as a function of Labor and Capital

	Labor	
Capital	100	200
3	40	90
4	60	120

Each unit of labor costs $50 and each unit of capital costs $100000.

Find AC at each Q for each plant and make a well-labeled diagram of the two cost curves.

If we know that the probability that Q = 50 is .4 and the probability that Q = 100 is .6, what is the expected value of AC for the larger plant.

17 pts.

3) Suppose that we have a fixed quantity of resources, A and B, for the production of goods, X and Y, and a fixed coefficient production function such that,

hours for A: 100 = 2X + 3Y

hours for B: 200 = 5X + 3Y

Moreover, prices are such that Profit = 10X + 5Y

a) Draw a well-labeled production possibilities curve and the profit maximizing combination of X and Y.

b) Calculate the values of X, Y, Profit and the use of A and B.

17 pts.

4) Suppose that last month we produced 2 goods, A and B, such that

	A	B
Q	100000	200000
Materials Cost	40000	160000
Direct Labor Cost	60000	120000
Allocated Overhead	60000	120000
Total Revenue	200000	400000

This month an offer has arrived, where you get $20000 for 10000 units of A, but your capacity is such that you will have to reduce production of B by 5000 to fill all orders on time.

a) Should you reduce B to fill the order for A? Why?

b) Should you add the order for A without reducing B, by delivering late on some of your business? Why?

17 pts.

5) Suppose that you have the following data for your firm. There were no changes in factor prices.

Month	J	F	M	A	M	J
VC	5	8	13	10	14	19
FC	10	10	10	13	13	13
Q	2	3	4	5	6	7

Calculate marginal and average cost as is appropriate and draw and a well-labeled diagram of these curves.

17 pts.

6) You want to enter industry X, but to do so you have to sell 100000 units reach minimum efficient scale. AC is $10 there. The current industry price is $12 and Q is 500000.

a) How elastic must the industry demand be for you to enter profitably, if the established firms maintain their current production levels?

b) If the industry demand elasticity is –2, is the 12 price an effective limit price? Why?

c) Is there any cause to think that the established firms won't maintain their current production levels? Explain.

I have neither given nor received unfair aid on this test.

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