

Whitman College
Econ 107
Exam 2
February 28, 2003

Write all of your answers on the exam. Show all of your work. The exam ends at 10:50.

1. (10pts) Fill in the following schedule so that it shows diminishing marginal returns to labor. On your chart, indicate the point at which diminishing marginal returns set in.

Capital	Labor	Total Product	Marginal Product of Labor

2. (a) (5pts) Define marginal revenue.

(b) (5pts) Explain why marginal revenue equals price in perfect competition.

(c) (5pts) Explain why marginal revenue equals marginal cost in perfect competition.

3. Assume that each of the 100 firms in a perfectly competitive industry has the following cost schedule. Use this information to answer questions (a)-(h).

Output	Total Cost
0	500
1	700
2	770
3	870
4	980
5	1100
6	1260
7	1470
8	1720
9	1980
10	2300

(a) (7 pts) Complete the market supply schedule in the table below.

Quantity Demanded	Price	Quantity Supplied
200	320	
300	260	
400	250	
500	210	
600	160	
700	120	
800	110	

(b) (4pts) What will be the price of the product in the short-run equilibrium?

(c) (4pts) What quantity will each firm produce in the short-run?

(d) (4pts) What will be each firm's profits in the short-run?

(e) (4pts) What will be the price of the product in the long-run equilibrium?

(f) (4pts) What quantity will each firm produce in the long-run?

(g) (4pts) How many firms will there be in the industry in the long-run?

(h) (4pts) What is the dead-weight loss in this industry?

4. Suppose that you are an attorney prosecuting a case in which the defendant is charged, under anti-monopoly laws, with illegally restricting competition.

(a) (30pts) In preparing your case, you review the three evils of monopoly from society's perspective. Explain these three evils. In your explanations, refer to a graph showing the monopolist's actions.

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(b) (10pts) You suspect that the defendant will counter your charges with the defense that she earns zero economic profits and therefore cannot be a monopolist. Before the trial begins you wish to determine whether it is possible for a monopolist to earn zero economic profits. Explain what you conclude. In your explanation, refer to a graph of the monopolist's actions.