

Economics 335
Final Exam
(25 points)

Name: _____

1. (3 points) Economists often collect data to measure the difference between price and marginal cost in a market to determine whether market power exists. Explain how this technique can detect a non-competitive market outcome.

2. (3 points) It is often assumed that farmers are *price-takers* and that the supply of primary agricultural products is competitive. Explain what the term price-taking behavior means for the supply decisions of a firm and how this behavior leads to the competitive market outcome.

3. (2 points) A profit maximizing firm purchases the input quantity at which the value marginal product of the input is equal to the marginal outlay. Intuitively explain (i) the concept of value marginal product, (ii) marginal outlay, and (iii) the condition that determines the profit maximizing input quantity.

4. (2 points) The Cournot duopoly model predicts a market quantity that is less than the socially preferred market quantity. (i) Draw a diagram that shows, and (ii) carefully explain why the Cournot outcome is not the socially preferred outcome.

5. (2 points) Explain why the limit pricing model is flawed.

6. (2 points) Competitive markets do not allocate societies resources efficiently when negative externalities such as pollution exist.

(i) Draw a diagram to illustrate this phenomenon and (ii) carefully explain how the inefficiency comes about.

7. (3 points) The market output that is predicted by the Bertrand Duopoly model is the same as the one predicted by a model of perfect competition. Explain the basic features of the Bertrand model that lead to this result.

8. (3 points) Suppose that the Ames City Council places a price ceiling on the rental rates of student housing in Ames. The price ceiling prohibits the monthly rental rates from rising above \$150 per month. Use a diagram to show the effect that this policy will have on the rental market for housing in Ames. Explain how the policy will affect the social welfare of the owners of Ames rental apartments and ISU students?

9. Suppose that there are two firms operating in a market with no further threat of entry. The firms must compete non-cooperatively to choose their profit maximizing output quantity. One of the firms chooses its output first. The second firm observes the first mover's choice and then makes its own output choice. The ordinary market demand is $Q = 1000 - 1000P$, where Q is quantity demanded and P is price. Both firms have an identical cost function $C(q_i) = .28q_i$.

a. (2 points) How much output should each firm produce?

b. (3 points) What are firm profits, consumer surplus and dead weight loss in this market?