1.- (70 points) We discuss this exercise in class last week. Use the figure below to answer items a) to g) below by naming the appropriate points or areas. Feel free to add letters to refer to points in the graph as you need them to write your answers:

a) If the industry is perfectly competitive, what will be the total quantity produced? At what price?

b) Which area reflects the consumer surplus under perfect competition?

c) If the industry is a single-price monopoly, what quantity will the monopolist produce? Which price will it charge?

d) Which area reflects the single-price monopolist’s profit?

e) Which area reflects consumer surplus under single-price monopoly?

f) Which area reflects the deadweight loss to society from a single price monopoly?

g) If the monopolist can price-discriminate perfectly, what quantity will the perfectly price-discriminating monopolist produce?

2. – (15 points) The demand curve faced by a perfectly competitive producer is different than the demand faced by a monopolist. Draw two figures that show the difference between the two demands.

3.- (15 points) In terms of the price and quantity effects, when does the marginal revenue of a single-price monopolist becomes negative?

4.- (Bonus question, 10 points) What is the distinguishing characteristic of a natural monopoly? Answer referring to the average total cost.