Problem Set #7A – Monopoly, Monopolistic Competition

1. Suppose that a monopolist has a total cost (LTC) of 16 + 4Q. Suppose the demand curve is P = 20 – Q. If the monopolist can charge only one price calculate:

(a) The profit maximizing price and quantity, and the economic profits.

(b) Suppose the monopolist can PERFECTLY PRICE DISCRIMINATE. What are his profits now?

(c) Suppose the government regulates the monopolist by insisting that economic profits be 0, so that P = LAC. What prices could the monopolist choose to satisfy the regulator? What would the social gain from the regulation be in the first period it was applied?

(d) Why in practice would the gains be smaller over time?

(e) If the monopolist can charge only one price, and a tax of $2 per unit is collected from him by the government what is the new profit maximizing output, the amount of tax revenue collected, and the new profits? Does the tax make the outcome more or less efficient? What is the excess burden of the tax per $ collected?

(f) Suppose instead the government imposes a flat excess profits tax of $14 on the monopolist. What is the output now? What is the excess burden of the tax per $ collected?

(g) Would an excess profits tax work in practice? Discuss.

2. (a) Suppose a firm is a monopolistic competitor in an industry in long run equilibrium where there is no price discrimination. What two conditions will firms satisfy?

(b) Draw its demand curve (D), marginal revenue curve (MR), marginal cost curve (LMC) and average cost curve (LAC). Label each curve clearly with D, MR etc, and show where they intersect.