ECO 206Y (Summer 2002)
Short Practice Exam

Reminder: your final is on Tuesday, August 13, 2002.

1. Explain, using a diagram why a risk-averse individual, choosing between two prospects with the same expected value, prefers the prospect with the smaller spread in outcomes.

2. You are fortunate enough to be a contestant on "Let's Make a Deal". Monty makes the following proposition to you. You can take $2000 and let that be that, or you can forgo the $2000 to play a game where you choose between prizes that are hidden behind curtains number 1 and 2. Behind one of the curtains is a luxury watch valued at $4000 and behind the other is a washing machine valued at $500. If your initial wealth is $1000 and you have a utility function of the form $U(w) = 1 - 1000/w$, then what must be the probability of winning the watch that makes you indifferent between walking off with the sure $2000 or taking the gamble between the two curtains?

3. A monopolist has a (total) revenue function given by $R(y) = 100y - y^2$. The (total) cost function is $C(y) = 10 + 6y$. The monopolist is currently producing an output $y = 50$. Is this level of output consistent with profit maximization? If no, what might the monopolist be pursuing?

4. "The professor" runs a factory that produces coconut-powered radios on Gilligan's Island. On the island his company ("Dura-coco-cell") is the sole supplier of this good. On the world market, however, his firm faces a perfectly elastic demand. (Suppose for now that the castaways have the option of trading with the rest of the world.) That is, the professor's company is a monopolist in his domestic market but a perfect competitor on the world market. If the marginal cost of production decreases what are the consequences for total production? Also, what will happen to the quantity sold on Gilligan's Island?

5. Suppose there are two restaurants competing in a market for roasted tarantulas. Now imagine that the city passes a bylaw that prohibits restaurants from advertising. Show, using a game-theoretic model, how this policy might actually result in higher equilibrium profits for the two restaurants.

6. Suppose that a firm operating in Kapuskasing, Ontario ("Moosehead Gliders") is a monopolist in the local market for toboggans and is a monopsonist in the local labour market. Show that the output level of toboggans is inefficiently low and that employment is also inefficiently low. Can you suggest a policy or combination of policies that might lead to a more efficient outcome?

7. Comment on the following statement: "If there is a sales tax on good 1 but not on other goods, then too few resources will be allocated to the production of good 1 from an efficiency point of view. "

8. Define an externality. Does the assignment of property rights provide a solution to the resource allocation problems posed by externalities? What theorem are you invoking?

9. Suppose that there are two firms competing in a market for cheesecake: "Mum's Best" and "Just Like Mum Use to Make" (firms 1 and 2, respectively). Each producer makes cheesecakes with their own "secret recipe handed down over the generations"; i.e. their products are differentiated. Suppose that the demand by firm 1 can be described by $p_1 = 100 - y_1 - y_2/4$, while firm 2's inverse demand is $p_2 = 75 - 2y_2 - y_1/3$. The marginal cost of production for firm 1 is 10, while that for firm 2 is 9. Suppose that the two firms engage in Cournot competition. Find the equilibrium quantities and prices.