Sample Midterm Exam
EE 474

1. Choose the **2 out of 3** of the following pairs of concepts. In this question, you must: (1) **explain** the concepts with the aid of appropriate diagrams and (2) tell the **context** in which the concepts were discussed in the course.

a. *allocative efficiency vs. productive efficiency*

b. *economies of scale vs. economies of scope*

c. *coinsurance vs. deductibles*

2. Do you agree or disagree with the following statements? Discuss. (To get full credits, you must refer to the context or journal articles in which related concepts were discussed in the course, and/or use appropriate diagrams where applicable.)

a. *"When the wage rate increases, the optimal level of investment in health stock would increase."*

b. *"Technological advancement always leads to high health care costs."*

3. Suppose that Alex and Toey have identical demand for health care service. If the price of a health care service is $35 per visit, each of them chooses to make 5 visits per year. If the price of this service decreases to $30 per visit, each chooses to make 6 visits per year.

a. Calculate the *money price elasticity* of this health care service. (Note: You can use the arc elasticity formula in calculating the price elasticity.)

b. Suppose further that, for each health care visit, both Alex and Toey spend 2 hours in travelling and waiting for the doctors, and each of them pays $5 for transportation costs. If Alex earns $10 per hour and Toey earns $15 per hour, compute the *full price elasticities* of this service for both of them. Discuss your results.

4. Suppose Luksorn's utility function is given by $U = 0.5W^{1/2}$. When she is healthy, her wealth is \$57,600. However, if she gets sick (with the probability of illness = 0.2), her wealth will decline to \$19,600.

a. Calculate Luksorn's expected wealth and her expected utility when she is not insured. Is Luksorn likely to buy health insurance? Why or why not? (Hint: You can explain with the aid of a correctly labeled utility diagram.)

b. Suppose that Luksorn purchases an insurance policy with *c%* coinsurance rate. Use the individual's demand curves to illustrate the difference between (i) the welfare loss from moral hazard in the conventional theory of the demand for health insurance and (ii) the welfare loss from moral hazard in Nyman's theory.