B.E. International Program

Faculty of Economics, Thammasat University

EE 474 Health Economics

Semester 1/2014

Problem Set 3

Due 2 December 2014 (In Class)

There are four questions in total. Each of them is worth 10 points.

1. In a pure exchange economy with two persons and two commodities, use the Edgeworth box diagram to illustrate the followings: [Note: You may use separate diagrams.]
    a. (5 points) Contract curve
    b. (5 points) Competitive equilibrium

2. Public goods
    a. (5 points) Explain the two features of public goods and provide examples of *pure* public goods.
    b. (5 points) Draw a diagram to illustrate the optimal quantity of a public good, and discuss why the existence of public goods leads to inefficiency.

3. Monopsony

   a. (5 points) Draw a diagram to illustrate the optimal price and quantity in the monopolist market, and identify the corresponding welfare loss in the society. Explain why the optimal quantity for the monopolist is not efficient. Assume that the marginal cost of the monopolist is constant.

   b. (5 points) Suppose a price control is imposed by the government. Show the changes in the quantity and the corresponding change in welfare loss.

4. Use the information below to answer the following questions.

Treatment	**Cost**	**Outcomes (Life-years gained)**	**Quality of Life**
A	\$50,000	4 years	0.8
B	\$122,000	8 years	0.5

   a. (5 points) Suppose that treatment A is currently adopted. Based on cost-effectiveness analysis (CEA), calculate the ICER for replacing treatment A with treatment B. Should the new treatment be adopted, and why?

   b. (5 points) Recalculate ICER by using cost-utility analysis (CUA). Is your decision on adopting treatment B still the same as the answer in part (a)? Why or why not?