经济学原理 I（2011 年秋季学期）
期中考试 2（A 卷）
（2011/11/30）

注意：请将所有题目的答案写在答题册上，写在本试题纸上一律无效。

1、 判断题（判断并简要说明理由，必要时可以用图形。每题4分，共24分）

1. 春节期间倒卖火车票导致火车票短缺，损害了效率和公平。
2. 在美国销售的耐克鞋很多是在中国生产的，制造商向中国工人支付的工资比美国工人低得多。这一做法同时损害了中国和美国的整体利益，因此不论从哪个国家的利益着想，都应该禁止耐克公司在中国开厂。
3. Consider a country that imports a good from abroad. If demand is perfectly inelastic, consumers do not benefit from trade and there are no gains from trade for this country. (Hint: Use graph.)
4. A proper corrective tax (or Pigovian tax) on a market with negative externality reduces the social welfare (or cause deadweight loss) since the reduction in consumer and producer surplus exceeds the revenue raised by the government. (Use a graph).
5. 《环境保护法》规定：“排放污染物超过国家或者地方规定的污染物排放标准的企业事业单位，依照国家规定缴纳超标准排污费，并负责治理。……征收的超标准排污费必须用于污染的防治，不得挪作他用。”如果超标准排污费正确反映了污染的社会成本，则这一规定必定导致污染数量少于社会有效率数量。
6. A regressive tax (a tax for which high-income taxpayers pay a smaller fraction of their income than do low-income taxpayers) must result in a vertical-inequality, because the higher income a person has, the less amount of tax he or she will pay.

二、选择题（每题3分，共27分。每题只有一个正确答案。）

1. Melissa buys an iPod for $120 and gets consumer surplus of $80. If the price of an iPod were $90, her consumer surplus would be___. If the price were $250, her consumer surplus would be___.

A. $110; $-50
B. $110; $0
C. $0; $0
D. $0; $-50

2. Suppose an early freeze sours the apple crops. Then the producer surplus in the market for apples will ___. The producer surplus in the market for pears will ___. The consumer surplus in the market for fruits as a whole will ____. The social surplus in the market for fruits as a whole will___. (Hint: Fruits include apples and pears. Apples and pears are substitutes.)

A. decrease, increase, decrease, decrease
B. decrease, increase, decrease, increase or decrease (cannot judge)
C. decrease, decrease, decrease, decrease
D. decrease, increase, increase, decrease

3. 离岸外包（Offshore Outsourcing）是某些企业将部分的中间生产交由劳动力成本更为低廉的国外工人完成。则这一做法将导致这些企业的工人 __，企业的经营者 __，企业整体上__。同时，由于产品的生产成本__，购买这些企业产品的消费者将__。（提示：考虑存在进口的劳动力市场。）

A. 受益，受损，受损；上升，受损
B. 受益，受损，受益；降低，受益
C. 受损，受益，受损；降低，受益
D. 受损，受益，受益；降低，受益

4. 学生宿舍中有两人，吸烟者和非吸烟者。学校考虑制定相关规定。第 1 种规定是吸烟者无需经过非吸烟者同意就可以吸烟。第 2 种规定是吸烟者需要经过非吸烟者同意后才能吸烟。第 3 种规定是对吸烟者罚款 100 元。假定非吸烟者对不吸烟的评价为 110 元（相对于被吸烟而言）。前两种规定下允许科斯谈判，第三种规定不允许科斯谈判。则对于吸烟者而言，第__种规定最有利，第__种规定最不利。

A. 3，2
B. 1，2
C. 1，3
D. 无法判断

5. 远古时代，人类社会从从事采集和狩猎业纷纷转向种植和畜牧业，由此获得了生产率的极大提高，很好地解决了人口增长带来的生存问题。这被历史学家称为“第一次经济革命”。对于生产率提高的原因，你认为合乎经济学原理的解释是：

A. 种植作物和蓄养家畜比野生动植物具有更高的繁殖能力
B. 人类和其他动物相比，天生更善于从事种植和畜牧业而非采集和狩猎业
C. 种植和畜牧业很好地解决了采集和狩猎业固有的“共有地悲剧”（Tragedy of Commons）问题
D. 人类对于种植作物和蓄养家畜的供给增加满足了对其需求的增加

6. Some states in the U.S. exclude necessities, such as food and clothing, from their sales tax. They also impose a higher tax on other goods to keep their total revenue unchanged. Such exclusion is most likely to be:

A. good for efficiency but bad for equity
B. bad for efficiency but good for equity
C. good for both efficiency and equity
D. bad for both efficiency and equity

7. Tim earns income of $60,000 per year and pays $21,000 per year in taxes. Tim paid 20 percent in taxes on the first $30,000 he earned. What was the marginal tax rate on the second $30,000 he earned?

A. 20 percent
B. 30 percent
C. 50 percent
D. 70 percent

8. A lump-sum tax is a tax that is the same amount for every person. According to the two objectives of efficiency and equity of tax system, this tax is:

A. very efficient but very inequitable
B. very inefficient and inequitable
C. very efficient and equitable
D. very inefficient but very equitable

9. If a poor family with an annual income of $10,000 has three children in public school and a rich family with an annual income of $100,000 has only one child in public school and two children in private school, the benefits principle would suggest that the ____ family should pay more in taxes to pay for public education, and the ability-to-pay principle would suggest that the ___ family should pay more in taxes to pay for public education.

A. poor, rich
B. poor, poor
C. rich, poor
D. rich, rich

三、问答题（共 3 题，49 分）

1. Tradable Pollution Permits (10 points)

There are three industrial firms in Happy Valley.

Firm	Initial Pollution Level	Cost of Reducing Pollution by 1 Unit
A	70 units	$20
B	80 units	$25
C	50 units	$10

The government wants to reducing pollution to 120 units, so it gives each firm 40 tradable pollution permits.

a. Who sells permits and how many do they sell? Who buys permits and how many do they buy? What is the total cost of pollution reduction in this situation? Use a graph to explain all your answers. What theory are your answers based on? (4 points)
b. How much higher would the cost of pollution reduction be if the permits could not be traded? (1 point)
c. Suppose the government gives 120 permits all to firm A. How do your answers in part (a) and (b) change? Explain. (2 points)
d. Suppose government gives each firm 40 tradable pollution permits, but firm B is prohibited from trading permits with any other firm. Who sells permits and how many do they sell? Who buys permits and how many do they buy? What is the total cost of pollution reduction in this situation? Use a graph to explain all your answers. How much higher is the cost of pollution reduction than if the permits could be traded freely between all three firms? (2 points)
e. If the government instead wants to use a corrective tax on pollution to reduce it to *no more than* 120 units. What is the smallest tax size the government should set? (1 point)

2. 住房限购政策的影响（16 分）

考虑一个买卖住房市场。

（1） 画出一个典型的市场供求图形表示该住房市场。（1 分）

政府出台政策限制该市场买者可以购买的数量。假定该限制政策使得在任何价格下的需求量都减少一半（例如，原来所有人最多买两套房，现在都只能买一套房）。

（2） 当住房供给弹性较大时，限购政策如何影响市场均衡？这一政策倾向于使得买者总体上受益还是受损？生产者总体上受益还是受损？社会总福利增加还是减少？画图仔细说明。（提示：考虑完全供给弹性。）（2 分）

（3） 当住房供给弹性较小时，这一政策倾向于使得买者总体上受益还是受损？生产者总体上受益还是受损？社会总福利增加还是减少？画图仔细说明。（提示：考虑供给完全无弹性。）（3 分）

下面考虑这项政策对于不同住房买者的影响。为简便，假定仅有两类买者：富人和穷人。首先分析没有限购的情况。

（4） 从左至右画出三幅图，分别表示穷人的需求曲线，富人的需求曲线，市场总供求曲线。穷人和富人的需求曲线的区别是什么？画出市场总供求曲线使得市场均衡下穷人购房量等于零（即“买不起房”）。（2 分）

下面考虑有限购政策的情况。假定限购政策使得每个人（无论穷人还是富人）的需求量在任何给定价格下均下降一半。

（5） 当住房供给弹性较大时。限购政策能使穷人买得起房吗？富人受益还是受损？运用图形回答。（提示：考虑供给完全弹性。）（2 分）

（6） 当住房供给弹性较小时，限购政策有可能使穷人买得起房吗？必定使穷人买得起房吗？你的回答如何依赖于富人的需求弹性？运用图形说明你的所有答案。限购政策必定对穷人有利而对富人不利吗？（提示：考虑供给完全无弹性）。（4 分）

（7） 现在改变限购使得所有人都减少一半需求量的假设。假定限购使得富人的需求量降为零，但穷人的需求不变。（因为富人拥有的住房数量已经达到了上限，穷人并不想买两套房）。限购政策必定使穷人买得起房吗？限购政策必定对穷人有利而对富人不利吗？（提示：考虑供给弹性。）（2 分）

3. Health Insurance (23 points)

Consider how health insurance affects the quantity of healthcare services performed. Suppose that the typical medical procedure has a cost of $\$c$. A typical individual (inverse) demand curve for healthcare services is $p=b-a*n$, where p is price of each medical procedure, n is the number of procedures an individual demands, b and a are constant. There are N individuals in the society.

a. What is the other name for demand curve in economics? What is the socially optimal amount of medical procedure *per person* in this society? Here social optimum means the maximization of total social surplus. Illustrate this point in a proper graph.(2 points)

b. In a free market, what is the equilibrium amount of procedures per person? Illustrate it in the *same* graph. Does the equilibrium realize the social optimum? (1 point)

Suppose now the health insurance system is introduced. Suppose also that everyone in this system is fully insured. That is, in this system, each procedure a person receives would be fully paid by the insurance system. However, the system must be budget balanced, i.e., it would recoups the money it pays through premiums *as a whole*.

c. In this system, what would be the number of procedure each person chooses to receive? Specify your calculation. When N approach infinity, what would this number equal to? (Hint:

consider a cost (or expenditure) function of a typical person i as $c(n_i, n_{-i})$, where n_i is the number of procedures he receives, n_{-i} is the number all the other people received.) Show your result in the graph above by assuming N is infinite. (3 points)

d. Is the result in part (c) socially optimal? What kind of problem happens in the system as economists call it? (1 point)

Now the system switches to a partial insurance (or co-insurance) system. In such a system, a person would pay 20% of the full procedure cost out of pocket. The system would pay the remaining 80%.

e. In this new system, what would be the number of procedure each person chooses to receive? Specify your calculation. When N approach infinity, what would this number equal to? Show your result in the graph above when N is infinite. (3 points)

f. Is the result in part (e) socially optimal? How does it compare to full insurance system in part (c) ? (1 point)

Suppose now the system changes to a system with both co-insurance and deductions. In particular, a person needs to pay the full cost until he reaches a certain number of procedures, $\bar{n}$. After that, he only needs to pay 20% of the full cost for each procedure he receives.

g. Assume first the deduction is so small that $\bar{n} \leq (b-c)/a$. In this system, what would be the number of procedure each person chooses to receive? Show your result in a *separate* graph, assuming N is infinite. Is the result efficient? How does it compare to result in part (e)? (4 points)

h. Now assume the deduction is moderate that $(b-0.2c)/a > \bar{n} > (b-c)/a$. In this system, what would be the number of procedure each person chooses to receive? Show your result in a *separate* graph. Assume N is infinite. Is the result efficient? How does it compare to result in part (e)? (Hint: Draw the graph first and analyze by using the graph.) (3 points)

i. Now assume the deduction is very large that $\bar{n} > (b-0.2c)/a$. What would be the number of procedure each person chooses to receive? Show your result in a *separate* graph. Assume N is infinite. Is the result efficient? How does it compare to result in part (e)? (1 points)

Suppose now the system changes to yet another system with co-insurance and ceilings. In particular, a person only needs to pay 20% of the full cost for each procedure he receives until he reaches a certain number of procedures, $\bar{n}$. After that, he needs to pay the full cost.

j. In this system, what would be the number of procedure each person chooses to receive? How does your answer depend on the level of $\bar{n}$? Show your result in a *separate* graph Assume N is infinite. Is the result efficient? How does it compare to result in part (e)? (3 points)

k. Let's compare the last two insurance systems: coinsurance with deductions (CID) and coinsurance with ceilings (CIC), with the same level of the cutoff point, $\bar{n}$. Which system is more likely to be efficient? Which system is better for more severely ill persons and which system is better for less severely ill persons? Assume more severely ill persons have higher evaluation on medical procedures. Explain. (1 points)