**ECON / ENVR / SOSC 2310 Midterm Exam**

March 21, 2019

(20 Points in Total)

The exam will be Thursday, Mar. 21th from 10:30am to 11:45am.

1. Write your Student ID Number and name on the answer sheet.

2. Do NOT open this exam paper until you are told to do so.

3. Please turn off your phone.

4. Label all graphs, axes, curves, lines, points, etc., carefully.

5. Use economics reasoning.

6. You have 75 minutes work on the exam. Please budget your time accordingly.

7. NO calculators allowed.

8.You may NOT use any of the following devices or technologies: cell phones, computers, personal digital assistants or text messaging. Use of such devices or technologies on the exam will result in a failing grade.

9. This is a closed-book exam. You may NOT use any books or notes.

10. Please do your own work: collaboration of any kind on the exam is NOT allowed. Cheating will result, at a minimum, in a failing grade for the exam.

11. Please HAND IN the EXAM PAPER with your ANSWER SHEET together.

1. **Please explain the concepts below using two to three lines (6 Points)**
2. Opportunity Cost

The opportunity cost of making a particular choice is the value of the most valuable choice out of those that were not taken. (-0.5 if fail to mention about the highest value or similar terms)

1. Pareto Improvement

Pareto improvement is defined to be a change to a different allocation that makes at least one individual better off without making any other individual worse off. (0.5 points for each highlighted term)

1. Marginal Social Cost

Mathematically, social marginal cost is the sum of private marginal cost and the external costs. Or is the change in society's total cost brought about by the production of an additional unit of a good or service.

1. Coase Theorem

The Coase Theorem states that if property rights are well defined and privates parties can bargain without cost over the allocation of resources, then the private market will always solve the problem of externalities on its own and allocate resources efficiently. (0.5 points for each highlighted term)

1. Positive Externality

Positive externality is any difference between the private benefit of an action or decision to an economic agent and the social benefit.

1. Market Efficiency

Social welfare is maximized.

1. **Multiple Choices (8 Points) (There can be more than one correct answer)**

（Get full points if you choose all the correct answers, -0.5 if your answer is a subset of correct answers, -1 if your choose any wrong answer）

1. What are reasons for “correlation does not mean causation”?
2. There can be a “time lag” effect
3. There is incomplete information
4. There are omitted variables
5. There can be reverse causality
6. The table shows how much a worker can produce in one day. Which of the following statements is true?

|  |  |  |
| --- | --- | --- |
|  | Pen | Apple |
| Country A | 10 | 5 |
| Country B | 8 | 2 |

1. The opportunity cost of producing 1 pen in Country A is 2 apples.
2. The opportunity cost of producing 1 apple in Country **B** is 4 pens.
3. Country A has an absolute advantage in the production of pen and apple.
4. Country A has a comparative advantage in the production of apple while Country B has a comparative advantage in the production of pen.
5. Private markets fail to account for externalities because
6. Externalities don’t occur in private markets
7. Sellers include costs associated will externalities in the price of their products
8. Decision makers in the market fail to include the costs of their behaviours to third parties.
9. The government cannot easily estimate the optimal level of pollution
10. A subsidy results in the following:

A. A larger consumer surplus

B. A larger producer surplus

C. A larger social welfare

D. A smaller social welfare

1. Usually the labor supply is less elastic (or steeper in terms of slope) than the labor demand. The government decides to impose a salary tax. Which ones of the following are correct?

A. If the firms pay the tax, the labourers are better off

B. If the labourers pay the tax, the labourers are better off

C. If firms and labours each pay a half, it is more fair

D. Labourers always pay the larger share of the tax

1. To internalize a negative externality, appropriate public responses include:

A. Ban the production of the goods creating negative externalities

B. Have the government take over the production of the good causing the externality

C. Set a quota to restrict production

D. Tax the good

1. Suppose there is a park between Bob and Ann’s houses. Bob leaves trash in the park. This bothers Ann. According to Coase’s theorem, the optimal level of trash in the park can be achieved:
2. If Bob owns the park, Ann cannot do anything about it.
3. If Bob owns the park, Ann can pay to him to limit his dumping.
4. Ann moves.
5. Someone is assigned the property rights to the park.
6. In a market with negative externality, which ones of the following are correct?

A. The optimal tax rate should be higher if the demand is more elastic (flatter)

B. The optimal tax rate should be lower if the demand is more elastic (flatter)

C. If the demand is inelastic (steep), the socially optimal level of production is not very far from the competitive market equilibrium

D. Producers dislike any regulation

1. **True or False? Please explain using 3~4 lines (with examples and graphs if necessary) (6 points)**
2. Some very talented people have a comparative advantage in everything they do.

(F, 0.5 pts; comparative advantage is different from absolute advantage, 1pts)

1. A rent control policy will generate a larger deadweight loss in the long run. (T, 0.5 pts; in the long run, supply becomes more elastic (flatter) 1pts)
2. Market regulations that limit the total outputs (quotas) will decrease consumer welfare and producer welfare because some of the transactions cannot be realized.

(False/Partially True, quota does not necessarily lead to lower PS, -0.5 if fail to consider the change of PS is uncertain )

1. The Coase Theorem implies that, if there are no transaction costs, how we distribute the tradable permits initially will not affect the equilibrium pollution levels and the costs of pollution of each firm because firms will buy/sell the permits.

(False/Partially True: it will not affect the equilibrium levels, but it DOES affect the costs of pollution of each firm. The party receiving the rights will have lower costs, -0.5 if fail to consider the costs of each firm.)