Appalachian State University
Economics 2030 – Microeconomics
October 2016 Test 2

Instructions: Attempt ALL questions. Values for questions are shown in (). Exam is due by 11 AM Monday October 3. Neat work, please. I'll reduce your grade for messy work.

1. (25) The students at Enormous State University love to drink Gzot at football games. Each student has the following WTP schedule (demand):

Bottle	**WTP**
1	$5
2	$4
3	$3
4	$2
5	$1
6	$0

a. The production cost (including return on capital) of a bottle of Gzot is $2.25 and it sells at this price. How many bottles will each student buy? What is each student's consumer surplus?
b. Students must drink Gzot from red plastic cups that they throw away at the end of the game. The cost of the cups to the students is zero but the cost of recycling these cups is $1.00 each and the students must use a fresh cup for each bottle they consume. Taking this cost into account what is the total surplus per person in the allocation you described in part a?
c. Fred, a student at ESU, is very "green" and he decides to reduce his consumption of Gzot by one bottle to reduce the recycling costs. What happens to Fred's consumer surplus? How does Fred's decision affect the total recycling cost at ESU?
d. Mayor Ball in the town where ESU is located imposes a tax of $1.00 on each bottle of Gzot. What is the consumption per person now? How much does the tax raise per person? What is the external cost per person with the tax? What is the total surplus per person?
e. Is Mayor Ball's policy efficient? Why?

2. (15) Higher consumption of alcohol leads to more motor vehicle accidents and, thus imposes costs on people who do not drink and drive.
a. Illustrate the market for alcohol, labeling the demand curve, the supply curve and the social cost curve. Show the market equilibrium output and the efficient level of output.
b. On your graph shade in the area showing the deadweight loss.
c. What policy would you suggest to make the market output equal to the efficient level of output?

3. (10) Wireless high-speed Internet is provided for free in the town of Bland.
a. At first only a few people use the service. What type of good is this and why? That is, what are the characteristics of this good?

b. As more people find out about the service they begin to use it. The speed of the connection begins to fall. Now what type of good is this?
c. What is your prediction for the quality of the service (speed and reliability) as time goes on? Why? Can you suggest a policy that would correct the problems that may arise?

4. (10) Describe the "time inconsistency" effect. Give an example and show how this can lead to behavior that appears to be irrational.

5. (15) Look up the "Cash for Clunkers" program that ran in 2009.
   a. List some beneficial externalities from this program. Explain.
   b. Can you identify an unintended consequence of the program that may have had harmful effects? Describe these effects.
   c. What steps might have been taken to reduce the potential adverse effects?

6. (15) Identify a campus facility that is a pure public good. Why? Identify a campus facility that is a club good. Why? Identify a campus facility that is a pure private good. Why? Identify a campus facility that is a common property resource. Why?

7. (10) Moral hazard arises in situations involving principals and agents. Consider this course (Econ 2030). Who is the principal? Who is the agent? Identify a moral hazard type of problem that might arise here. What institutional rules might mitigate this problem?