1. Assume that the government passes a tax on all airline flights to pay for new security measures. Airlines, not passengers are required to pay this tax, $20/ seat sold, to the government. Which of the following results are likely?
   a. Buyers pay the same amount for their tickets. The airlines receive less, after taxes, for each ticket sold.
   b. Buyers pay more for their tickets. The airlines receive less, after taxes, for each ticket sold.
   c. Buyers pay more for their tickets. The airlines receive the same amount, after taxes, for each ticket sold.
   d. Buyers pay more for their tickets. The airlines receive more, after taxes, for each ticket sold.

2. According to the text, when income tax rates were cut during the Reagan years, what happened to the amount of income tax revenue collected?
   a. Income tax revenues, adjusted for the growth of average incomes, fell.
   b. Income tax revenues, adjusted for the growth of average incomes, remained almost constant (within 1% of the previous tax collections).
   c. Income tax revenues, adjusted for the growth of average incomes, rose slightly (about + 3%).
   d. Income tax revenues, adjusted for the growth of avg. incomes, rose significantly (about + 11%).

3. According to the text, where was the United States on the Laffer Curve (with respect to income taxes) just prior to the Reagan tax cuts? Choose one of the answers below. C

   ![Laffer Curve Diagrams]

   E. None of the above represent the U.S. economy’s position on the Laffer curve prior to the Reagan tax cuts.

4. Our text mentioned an historical figure, a thinker from the late 1800’s who wrote the book *Progress and Poverty*. Who was this thinker?
   a. Adam Smith  
   b. David Ricardo
   c. Alfred Marshal 
   d. Henry George
   e. Alexis Carnov
5. What did this individual (from # 4 above) advocate taxing?
   a. incomes of the richest few %
   b. incomes of the poorest few %
   c. all incomes, (incomes of both rich and poor) at the same % tax rate
   d. land
   e. food

6. Which of the following graphs best represent the market this person (#’s 4 – 5 above) wanted to tax?  **B**

   ![Graphs]

   E. None of the above illustrate what the author in question was talking about.

7. To truly accomplish what this person (#’s 4 – 7 above) advocated would require:
   a. knowing not just a person’s income that year, but their income in all past and future years.
   b. nearly 0% under reporting of income (i.e. no cheating on income taxes).
   c. distinguishing between land (which is to be taxed) and the value of buildings etc. on that land (which is not to be taxed).
   d. a way of ensuring farmers do not export their food products instead of selling it domestically.

8. Assume that boat rentals in Booberry Wisconsin are currently not taxed. Economists estimate that (own price) elasticity of demand for boat rentals is .31. (Own price) elasticity of supply is .93. If a $8 tax per boat rental is imposed, what will likely happen?
   a. Buyers will pay a lot more, say $6 more after the tax. Sellers will receive a bit less, say $2, after taxes.
   b. Buyers will pay a little more, say $2 more after the tax. Sellers will receive a lot less, say $6, after taxes.
   c. Buyers will pay more by the full amount of the tax. Buyers will pay $8 more. Sellers will receive the same amount after taxes.
   d. Each will be “hit” the same amount. Buyers will $4 more, i.e. half the tax. Sellers will, after taxes, receive $4 less, i.e. half the tax.

9. Surprise! The federal government, in an emergency session, impose a tax on sales of beef, effective immediately. One year later, the tax has generated $5 billion dollars in revenues and an estimated $1 billion in deadweight loss. Assuming there is no inflation and no changes in average incomes, what will probably happen as times go by?
   a. Beef tax revenues/year will likely increase.
   b. Beef tax revenues/year will likely stay roughly the same.
   c. Beef tax revenues/year will likely decrease
10. Walley Worker would be willing to work an extra part time job if he gets, after taxes, at least $18/hour in take home pay. Emily Employer would be willing to hire Walley if she could pay $20/hour or less for him. However, income taxes are $4/hour. For Walley to take home $18/hour he has to be paid $22/hour, more than Emily is willing to pay. Walley, therefore, never gets hired. **What is this an example of?**
   a. a mono-incidence tax
   b. a pigouvian tax
   c. a regressive tax
   d. a progressive tax
   e. a deadweight loss

11. Bob is an Iowa farmer. The state of Iowa will let him use Dursban, an insecticide. However, because Dursban may be bad for the environment, Bob has to pay a special “environmental impact fee” on each gallon of Dursban he buys. What is this fee an example of?
   a. a pigouvian tax
   b. a regressive tax
   c. a progressive tax
   d. a deadweight loss
   e. none of the above

12. Woo Hoo! Here’s some real world data on the Social Security/Medicare tax: What is this Social Security/Medicaid tax an example of?
<table>
<thead>
<tr>
<th>Income</th>
<th>SS/Medicare Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>$50,000</td>
<td>$7,250</td>
</tr>
<tr>
<td>$100,000</td>
<td>$12,180</td>
</tr>
<tr>
<td>$150,000</td>
<td>$12,180</td>
</tr>
<tr>
<td>$200,000</td>
<td>$12,180</td>
</tr>
</tbody>
</table>

13. #’s 13-14. It is the year 2012. Rick Sanchez and Tanya Perry and are running for president. Both candidates have been asked about their opinion on a proposed “citizen user fee”. This would be a tax in which each adult pays $2,000, irrespective of their situation, in order to pay for “services” (national defense, etc.) all citizens receive from the government.

13. Rick Sanchez states; “My position on this, and any tax is solely based on my very strong desire to maximize economic efficiency; the net $ gain to society. Therefore (transcript garbled) the tax.” Does Mr. Sanchez support or oppose this tax? **Little deadweight loss.**
   a. He supports it.
   b. He opposes it.
   c. No evidence is given either way. Economic efficiency is not an argument for or against this tax.

14. Tanya Perry states; “My position on this, and any tax is solely based on my very strong concern for equity issues: promoting greater equality of outcomes. Therefore (transcript garbled) the tax.” Does Ms. Perry support or oppose this tax? **This tax is very regressive.**
   a. She supports it.
   b. She opposes it.
   c. No evidence is given either way. Equity is not an argument for or against this tax.

15. True story. A long time ago in a neighborhood far, far away (Alief, 1983), Raymond Kowalski changes the oil in his car. That night, Raymond dumps the used oil in Mrs. and Mr. Dixit’s yard, killing their grass. What is this an example of?
   a. a negative externality
   b. a cost that is internalized
   c. a positive externality
   d. failure to externalize a cost
   e. none of the above
16. Christmas break is here! You take a little time off to enjoy some skiing and … unfortunately get trapped in a glacier for 2,000 years! When you thaw out, the local population, having lost a lot of knowledge after the collapse of civilization, worships you as a wise sage. They ask: “Which of the following items, according to 21st century economics, would be best to tax?” Assume none of the goods produce any externalities. Further assume that all income groups spend the same % of their income on each good. Which, ceteris paribus, would be the best to tax?

| Good | Price (before tax) | Qty sold (before tax) | $D$ | $s$
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Rastors</td>
<td>$20/bunch</td>
<td>18,000 bags</td>
<td>1.95</td>
<td>.90</td>
</tr>
<tr>
<td>b. Reekies</td>
<td>$20/bag</td>
<td>18,000 kg</td>
<td>2.86</td>
<td>.92</td>
</tr>
<tr>
<td>c. Rotos</td>
<td>$20/lb</td>
<td>18,000 liters</td>
<td>.21</td>
<td>.94</td>
</tr>
<tr>
<td>d. Runties</td>
<td>$20/flower</td>
<td>18,000 bunches</td>
<td>.97</td>
<td>.96</td>
</tr>
</tbody>
</table>

17. You’ve now been promoted to Head Tax Dude. Your next task is to pick which of the following goods to tax. Which of the following would be the best to tax according to what was learned in class?

| Good | Price (before tax) | Qty sold (before tax) | Externalities generated? | $D$ | $s$
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Skrates</td>
<td>$10/bunch</td>
<td>29,000 bags</td>
<td>Yes, a significant neg. externality</td>
<td>1.25</td>
<td>.84</td>
</tr>
<tr>
<td>b. Smangels</td>
<td>$10/bag</td>
<td>29,000 kg</td>
<td>Yes, a significant pos. externality</td>
<td>1.23</td>
<td>.82</td>
</tr>
<tr>
<td>c. Sqimps</td>
<td>$10/lb</td>
<td>29,000 liters</td>
<td>None</td>
<td>1.27</td>
<td>.80</td>
</tr>
</tbody>
</table>

↓↓↓↓ #'s 18 – 24: Below, you are given the supply and demand curves, before any ↓ taxes, for motel rooms in Beraboo, Wisconsin. The city then decides to impose a tax, with the legal incidence on sellers, of $30 per room (per day).

18. How many motel rooms will be rented (per day) after the tax?
   a. 150
   b. 250
   c. 350
e. none of the above

19. What is the price buyers will be paying for a motel rooms after the tax?
   a. $45
   b. $55
c. $65
d. $75
e. none of the above
20. What is the $ amount, per motel room, that sellers will receive keep after paying the tax?
   a. $35  
   b. $45  
   c. $55  
   d. $65  
   e. none of the above

21. What is the level of consumer surplus after the tax?
   a. $1,250  
   b. $2,500  
   c. $3,750  
   d. $5,000  
   e. none of the above The horizontal axis doesn’t start correctly. The 1st jump is from 0 to 100, not a 50 Q jump like all the others. Therefore, CS could be ($77.5-$65)×50×½ = $1,562.5.

22. What is the level of producer surplus after the tax?
   a. $1,250  
   b. $2,500  
   c. $3,750  
   d. $5,000  
   e. none of the above The horizontal axis doesn’t start correctly. The 1st jump is from 0 to 100, not a 50 Q jump like all the others. Therefore, PS could be ($35-$10)×50×½ = $3,125.

23. What is the level of deadweight loss after the tax?
   a. $1,250  
   b. $2,500  
   c. $3,750  
   d. $5,000  
   e. none of the above ($3,000)

24. What is the level of tax revenues generated by this tax?
   a. $1,250  
   b. $2,500  
   c. $3,750  
   d. $5,000  
   e. none of the above ($7,500)

25. Another true story from Alief. An certain person drives his 74 Pontiac Gran Prix without an exhaust at night. He owns the '74 Gran Prix. The noise from the unmuffled, souped up, 400 cubic inch engine is enough to rattle windows one block away. What is this an example of?
   a. a system in which property rights are well defined and enforced
   b. a cost that is internalized
   c. a positive externality
   d. failure to externalize a cost
   e. none of the above

26. Love those Alief stories! Alan Alvarez and John Lovett have been painting Mike’s rent houses for $5 an hour. Alan and John, without consulting Mike, raise their rate to $5.50 per hour. Mike is unhappy with this. What is this an example of?
   a. a negative externality
   b. a cost that is internalized
   c. a positive externality
   d. failure to externalize a cost
   e. a Pigouvian tax

27. Assume an activity generates a positive externality. Private markets, if left to themselves, will:
   a. never do any of the activity.
   b. do less of the activity than is "socially optimal".
   c. do the "socially optimal" level of the activity.
   d. do more of the activity than is "socially optimal".
Henrik Ibsen’s play “Enemy of the People” involves a small Norwegian town in the 1880s. The town’s economy relies on tourists who come to visit its natural springs. A doctor discovers that the town’s many springs are being polluted by tanneries (leather factories). People’s health and the tourist industry are threatened by this.\(^1\) Norway has a very well developed code of law and court system.

### Case 1

There are 51 tanneries and 64 health spas in the area each with a different owner. Good estimates of the amount of damage suffered by the spas, from various levels of pollution, exist. There is not, however, a cheap and easy way to measure the amount of pollution any given tannery emits, or even the amount of leather they produce. According to lecture and the text, which of the following solutions would probably be the most efficient and effective?

- **a.** offer the spa a subsidy for every visitor they serve.
- **b.** direct government regulation specifying the amount of leather produced and/or the technology used to produce it. Key: You can’t measure the activity.
- **c.** direct government regulation closing the tannery down
- **d.** a tax on the pollution emitted by tanneries

### Case 2

There are 51 tanneries and 64 health spas in the area each with a different owner. Good estimates of the amount of damage suffered by the spas, from various levels of pollution, exist. There is a cheap and easy way to measure the amount of pollution any given tannery emits. The tanneries are also very diverse (i.e. have a lot of differences) in the style of factory and the technology they use. According to lecture and the text, which of the following solutions would probably be the most efficient and effective?

- **a.** offer the spa a subsidy for every visitor they serve.
- **b.** direct government regulation specifying the amount of leather produced and/or the technology used to produce it. Key: You can measure the activity.
- **c.** direct government regulation closing the tannery down
- **d.** a tax on the pollution emitted by tanneries

### Consider lands around the Chesapeake Bay

The cheapest way for private firms to raise chickens involves leaving the chicken feces exposed to the weather. Using this method, large amounts of chicken feces runs into the bay, killing oyster and fish populations in the bay. According to lecture and the text, which of the following is true?

- **a.** The private sector is producing the socially optimal amount of chickens and chicken feces. It is not practical, nor desired by buyers, to change production.
- **b.** It is socially optimal to continue to produce chickens and the resulting chicken feces in waterways. However, less should be produced and emitted (than the unregulated private sector was producing and emitting). Key: The optimal level of pollution is seldom zero.
- **c.** Although profitable for the private sector, it is socially optimal for there to be no chicken production in lands around the Chesapeake Bay.

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\(^1\) Actually, the main theme of the play is not really pollution. Instead it is about self-interest vs public interest, hypocrisy, and mistaking the bandwagon, i.e. the latest fads in intellectual thought, for the leading edge of thought. It’s a cool play.
No. 31 – 32: Lake Woebehere is being polluted! There is one tomato soup canning plant on the lake and one commercial fisherman on the lake. The soup cannyy dumps a lot of tomato peelings into the public lake. These tomato peelings lead to legal bloom and fewer fish caught. It is physically possible to cut back on tomato peelings dumped by either producing less soup or by buying more expensive peeling machines. It is also relatively easy to accurately measure the amount of tomato peelings dumped into the lake.

31. Assume that a judge assigns ownership of the lake to the fisherman. What is a likely result?
   a. Zero tomatoes are peeled. The fisherman blocks any tomato pollution in to his lake.
   b. The cannery pays the fisherman to pollute some. The cannery pollutes less than before.
   c. The same amount of pollution occurs. The cannery, however, now pays the fisherman to be able to use, i.e. dump tomato peels, in the lake.
   d. More pollution occurs. The cannery, however, now pays the fisherman to be able to use, i.e. dump tomato peels, in the lake.

32. Assume that a judge assigns ownership of the lake to the cannery. What is a likely result?
   a. Zero tomatoes are peeled. The fisherman pays the cannery to not pollute at all.
   b. The fisherman pays the cannery to cut back on pollution. The cannery pollutes less than before.
   c. The same amount of pollution occurs.
   d. More pollution occurs.

33. Consider a situation in which a lake is being polluted by 52 different lumber mills. 247 commercial fishermen fish on the lake. Ownership of the lake is given to Susan, a typical fisherman. How effective, according to the text, will this be at fixing the pollution problem? Why?
   a. Not very effective. Susan will insist on zero pollution regardless of what is socially optimal.
   b. Not very effective. The large number of parties mean very high transactions costs.
   c. Quite effective. The large number of parties mean lots of competition.
   d. Quite effective. Susan, being a typical fisherman, will represent their interest well.

34. Yikes! Elephants in East Africa were in serious trouble by the early 1990’s. These “unowned” herds were being hunted to near extinction for their tusks. In the middle 1990’s, several east African governments decided to give each herd of elephants to a particular tribe or family. These elephants were to be owned by that tribe or family. Assume these elephant owners can protect their property. What is a likely result according to our text and lecture?
   a. Elephants will be slaughtered at a much faster rate than before.
   b. As long as the market $ value of elephant tusks remains the same, elephants will disappear at the same rate as before.
   c. Elephants will be slaughtered at a much slower rate than before.
   d. Elephants will become domesticated house pets.

35. True(a) or False(b): A major drawback of the government selling tradable pollution permits is that, because they make that type of pollution legal, they seldom reduce the level of pollution.
36. At right, you are given the (private) supply and demand curves for pre Kindergarten (i.e. pre school) instruction of 4 year olds in the U. S. Economists have estimated that each day a 4 year old spends in of pre-school produces $20 in external benefits. Assume this estimate is accurate. What is the socially optimal amount of after pre school for 4 year olds?

a. 0  
b. 3 Million  
c. 4 Million  
d. 5 Million  
e. none of the above

37. Assume the federal government wishes to correct this problem (from # 36 above) with a tax or subsidy. What (tax or subsidy) should it do? How much should the amount of the tax or subsidy be?

a. a tax of $55/day  
b. a tax of $20/day  
c. a subsidy of $55/day  
d. a subsidy of $20/day  
e. none of the above
Scratch Paper

Keep this attached to your exam. i.e. Make sure you turn this in with your exam.