

1. The market will fail in the allocation of a resource that is congestible and common property, but not scarce.
  - A) No it will not fail
  - B) There is not enough information to answer the question
  - C) Yes it will fail.

If it is not scarce it will not fail. Everyone consuming as much as they want is the efficient outcome, so free access is good.

2. If Jack and Jill are positioned inside of their UPF curve (not on the line) then which one of the following scenarios is NOT possible:
  - A) The situation may be equitable from their point of view
  - B) They are not consuming all of the goods
  - C) Production efficiency is being achieved
  - D) All of the above are possible scenarios
  
3. Imagine the U.N. requires that carbon dioxide emissions by China and the U.S. be reduced by 100 units, a small percentage of each country's current carbon-dioxide emissions. Imagine that in the 100 unit range, the cost, on the margin, of reducing carbon emissions is always less in China than in the U.S. This is likely to be the case because China tends to produce heat and energy using carbon more intensely than does the U.S. Given all this, which of the following statements is both most likely and most informative?
  - A) Reducing carbon dioxide emission by 100 units in China (zero units in the U.S.) will cost less in terms of the world's scarce resources because, in the relevant range, the marginal cost of abatement is always lower in China.
  - B) The cost-effective way to achieve the required reduction is for the reduction to occur in the U.S. because production is more efficient in the U.S. than in China.
  - C) The cost-effective way to achieve the required reduction is for some of the reduction to occur in the U.S. and for some of it to occur in China.
  - D) Efficiency requires that the 100 unit reduction be achieved by reducing emissions by 100 units in China and zero units in the U.S because labor is abundant in China.

4. Suppose Alice consumes only wine and cheese. Alice's income increases, the price of wine decreases, and the price of cheese increases. Consider Alice's budget line with wine on the horizontal axis and cheese on the vertical axis. What will happen to the slope of Alice's budget line?
- A) There is not enough information to tell.
  - B) It becomes steeper.
  - C) It necessarily remains the same.
  - D) It becomes flatter.
5. How much of the following is correct? "(1) In a competitive market economy, everyone faces the same exogenous prices for goods, and (2) if there are no external effects, the relative prices of two goods reflect how much less of the one can be produced if society produces one more unit of the other, (3) in equilibrium everyone has the same marginal rates of substitution. And (4) because of (3), everyone consumes the same amounts of each good."
- A) The first three statements are correct, but there is not enough information to determine whether (4) is correct. Everyone might consume the same amounts of each good.
  - B) Only (1) is correct
  - C) The first three statements are correct, but (4) is incorrect.
  - D) All four statements are correct.
6. Which of the following statements is both correct and most informative?
- A) One can have overall efficiency without efficiency in production.
  - B) Efficiency in production is a necessary condition for overall efficiency.
  - C) None of the other statements is correct
  - D) If there is inefficiency in production, there is not overall efficiency because society could increase the production of one or more goods without decreasing the production of other goods. And, if this happened the extra goods could be used to make someone better off without making anyone else worse off.
- D is more informative than B
7. Congestion in private amusement parks (like Disneyland) implies their use levels are inefficient.
- A) Yes
  - B) No

The firm has an a profit incentive to charge the price that achieves the efficient amount of congestion.

8. Let's say you want to know how responsive Fred's miles skied are to a change in the number of hours she skis (her labor). From the following list which is the best measure.
- A) How much more time she needs to ski one more mile.
  - B) Her labor elasticity of miles skied
  - C) How much she needs to increase her time skied (labor) in percentage terms to increase her miles skied by 1%.
9. It costs residents of Boulder a lot more to ski Aspen for a day than it costs residents of Aspen. Which statement is both correct and most informative?
- A) Given the information provided little can be concluded about how much consumer's surplus an Aspen resident gets from her Aspen ski days compared to how much a Boulder resident gets from her Aspen ski days.
  - B) Since they pay more per day to ski Aspen, Boulder residents who ski Aspen must value skiing Aspen more highly than do residents of Aspen.
  - C) Residents of Boulder necessarily get less consumer's surplus from their Aspen ski days than Aspen residents get from their Aspen ski days.
10. Whales in the ocean are common-property resources if \_\_\_\_\_. And, if in addition, they are \_\_\_\_\_, they will be harvested at an \_\_\_\_\_ rate.
- A) access to them is uncontrolled; scarce; inefficient
  - B) access to them is uncontrolled; ; not scarce; efficient
  - C) Both of the other answers are correct.
11. It is impossible for two people to consume the same unit of a good.
- A) True
  - B) False
12. Consider a utility possibilities frontier. Imagine a society must choose between one specific efficient allocation and one specific inefficient allocation. The society will always choose the efficient allocation.
- A) True
  - B) False

13. Suppose we invent and produce 10 million robots, and then forget how to produce robots. Each of those robots has an absolute advantage over us (humans) in the production of everything, except robots. Like us, the robots do not know how to produce robots. Further assume the robots are maintenance free but need electricity to operate. Further assume that these 10 million robots can produce, without any help from us, current output levels, plus the electricity they need to run. What they produce, above and beyond the electricity they need to run, is given to us humans, for free, so we can all consume what we are currently consuming without any of us working. In this world, all, or most, of us humans will surely end up unemployed?
- A) True
  - B) False

The answer is false unless we are satiated in the consumption of all produced commodities.

14. Assuming no technical progress, at every level of output, no point on a shortrun average cost curve can lie below the corresponding point on the longrun average cost curve.
- A) True
  - B) False
15. Krugman and Wells put goods into four categories based on two characteristics of goods. What do they call goods that are both non-rivalrous (what Edward would call non-congestible) and excludable?
- A) Common Resources
  - B) Artificially Scarce Goods
  - C) Public Goods
  - D) Private Goods
16. Many roads and highways in the U.S. are effectively common-property transportation inputs.
- A) Yes
  - B) No
17. The efficient amount of drunk driving is positive, not zero.
- A) True
  - B) False

18. My demand curve for cigars, per day, is  $C=8-4P$ , where  $P$  is the price of a cigar and  $C$  is the number of cigars I buy and smoke. Assume the current price is \$2/cigar. My total WTP for cigars is
- A) \$4
  - B) not enough information to answer the question
  - C) \$8
  - D) \$16

Note we are asking about total WTP not WTP to buy cigars at \$2 each.

19. Imagine of society of two individuals (Colin and Sofia) and two goods: operas CDs,  $O$ , and BBQ steaks,  $B$ . Both are goods for both individuals. Further assume a manna-from-heaven model (no production). Assume we have correctly drawn their UPF. Society is currently operating at a point inside this UPF. At this point, it must be the case that not all of the steaks and CDs are being consumed.
- A) True
  - B) False

False: Their might have been unconsummated trades that would have made both Colin and Sofia better off.

20. You donate to a food bank because it makes you feel good. Those who get food from the food bank are better off because of your donation. Before your donation there was inefficiency.
- A) True
  - B) False

The donation makes both parties better off. As long as there are no negative external effects on other members of society, the answer is true. I should have added the comment, "assume no negative effects on other members of society."

21. In our George tattoo example in class, efficiency can necessarily be achieved by taxing George, at some appropriate level, for each tattoo he has.
- A) True
  - B) False

No, the problem is that the negative effect is caused not by his tattoos but because he shows them in public (runs around nude).

22. Santa Claus, on Christmas Eve when he is delivering toys to children, is. (If you do not know about Santa, ask Edward or a T.A.)
- A) a public good because the fact that he delivered toys to my house does not preclude him from delivering toys to your house. That is, he is non-congestible.
  - B) a private good
  - C) what the textbook calls an artificially-scare good
  - D) what the textbook calls an artificially-scare good. The market efficiently allocates such goods.

23. A rational consumer will always choose to consume a commodity bundle that is on her budget line.

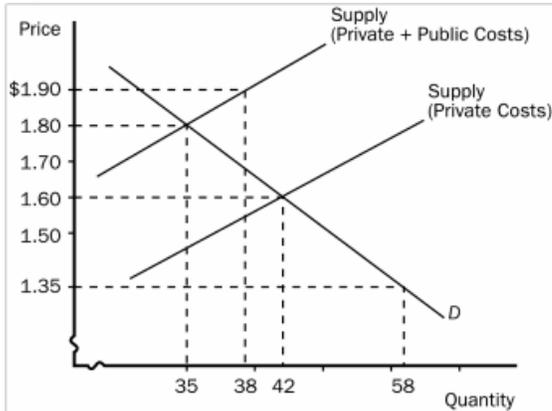
- A) Yes
- B) No

The answer is no unless one assumes all commodities are goods.

24. Public goods should be produced up to the point at which the marginal cost of production equals:

- A) the sum of the individual marginal benefits from all consumers of that unit.
- B) the maximum price any individual is willing to pay for that unit.
- C) the highest marginal benefit from any individual consumer of the good.
- D) zero, which is the marginal cost of allowing another individual to consume the good.

25. Figure: MB and MC of the Tobacco Industry



This graph represents the tobacco industry, in which the firm's optimal choice is different from the socially optimal choice. Which of the following could be a possible method for the market to reach the socially efficient point? The industry is producing tobacco.

- A) Issue 35 tradable emissions permits to produce tobacco.
- B) The government imposes a \$0.20 tax on each unit of tobacco produced.
- C) There is no need for government intervention. The market equilibrium point is already the socially efficient point.
- D) Give each firm a permission to produce only 35 unit of tobacco.

26. Based on Edward's definition of a public commodity, sufficient conditions for a commodity to be a public commodity are

- A) non-congestible, non-excludable, and everyone must consume every unit produced
- B) non-congestible and non-excludable
- C) non-rivalrous
- D) none of the properties listed in any of possible answer are sufficient to make a good a public good.

My definition is A

27. Consider a world with only two commodities: beer and bibles. For Wilma, beer is a good, but for Wilma bibles start off as a bad but eventually turns into a good. Consider Wilma's indifference curves with bibles on the horizontal axis and beer on the vertical axis Which statement is both correct and most informative?
- A) Her indifference curves are all upward sloping
  - B) Her indifference curves are U-shaped (increasing beer consumption from zero, first the slope is negative but then switches to positive)
  - C) Her indifference curves are shaped like an inverted U (increasing bible consumption from zero, first the slope is positive but then switches to negative)
  - D) Her indifference curves are all downward sloping.

When one is a bad and the other a good, the indifference curve is positively sloped. When they are both goods (at some level of consumption of bibles), the indifference curve is negatively sloped.

28. A rational individual will continue to buy and consume more units of a good as long as the total benefits he gets from the quantity he consumes are greater than the total costs of consuming that quantity.
- A) Yes
  - B) No

No, as long as marginal benefits are greater than marginal costs.

29. In unregulated markets where external effects are produced, the efficient amounts of the external effects will be produced.
- A) True
  - B) False

30. Consider a situation where the potential seller's WTA (willingness-to-accept) the loss of the good is less than the potential buyer's WTP (willingness-to-pay) for the good. This situation is likely if the price is not the market equilibrium price.
- A) True
  - B) False

It is true. If WTA is less than WTP at the current price, the price can't be the equilibrium price because there are unconsummated trades. The price is too high.

31. In the threesome discussed in class -- John, Thelma, and Barbed Wire-- which of the following best describes, in economic terms, the situation before John arrived, before Barbed arrived, and after Barbed arrived? Which answer is both correct and most informative?
- A) John was treated poorly by Thelma.
  - B) The farm while "owned" was effectively a common-property resource from the perspective of cattle drives. John's arrival eliminated the CP problem, but at a high cost. John got dumped.
  - C) The farm while "owned" was effectively a common-property resource from the perspective of cattle drives. John's arrival eliminated the CP problem, but at a high cost. Barbed could enforce the property right at a lower cost than could John.
  - D) The farm while "owned" was effectively a public good/commodity, everyone could use it. The arrival of John eliminated the public good aspect of the farm, but at a high cost. Barbed could eliminate the public good-problem more cheaply than could John.

C is more economically informative than A and B. The farm is not a public commodity.

32. It is impossible for two people to consume the same unit of a private good.
- A) True
  - B) False
33. The isocost line in producer theory is analogous to which of the following from consumer theory?
- A) A budget line.
  - B) An indifference curve
  - C) An isoquant
  - D) None of the above
34. Consider a firm that uses capital and labor to produce its output, bottles of bad wine. It is a competitive firm in that the price of labor, the price of capital, and the price of bad wine are all exogenous. Given all of this, the firm's longrun production function and its longrun cost function are
- A) two different ways of describing the state of technology for producing bad wine.
  - B) both need to be known to determine the firm's profit-maximizing amount of bad wine.
  - C) all that one needs to determine the firm's profit-maximizing amount of bad wine.

35. Imagine a world where no one is affected by the health of others, and everyone has to pay for their own medical care. Suppose that smoking cigarettes creates no negative or positive external effects, but, as is well known, causes a lot of smokers to get lung cancer. If the government does not interfere in the cigarette market, then\_\_\_\_\_.
- A) The market equilibrium quantity of cigarettes smoked will be greater than the socially efficient number.
  - B) There is not enough information to answer the question.
  - C) The market equilibrium quantity of cigarettes smoked will be less than the socially efficient number.
  - D) The market equilibrium quantity of cigarettes smoked will be the efficient number from society's perspective.
- D) The market equilibrium is efficient.
36. Assume that one can only consume what he or she personally buys (no gifting). In competitive market equilibrium, there could be people who are not consuming scotch that have a higher WTP for scotch than some of the people who are consuming it. Choose the answer that is both correct and most informative.
- A) False
  - B) True, but unlikely
  - C) True

False because it can't be equilibrium: those with a higher WTP will buy the scotch off those with a lower WTPs

37. Consider Adam and Eve in the Garden of Eden **before** God kicked them out. Adam and Eve could harvest from the Garden to their hearts content--it was a garden of plenty. (Choose the answer that is most likely to be correct.)
- A) Because the Garden was a CP resource, Adam and Eve harvested an inefficient amount of its resources.
  - B) Because the resources in the Garden are public goods, Adam and Eve harvested an inefficient amount of them.
  - C) Assuming Adam and Eve were utility maximizers, an efficient amount of the Garden's resources were harvested.

38. Consider commodity X and consider the marginal social benefit curve for the consumption of Commodity X (units consumed on the horizontal axis and marginal social benefits on the vertical axis). Which of the following statements is both correct and most informative?
- A) If X is a public good, the marginal social benefit curve is the vertical summation of every individual's marginal private benefit curve.
  - B) If X is a public good, the marginal social benefit curve is the horizontal summation of every individual's marginal private benefit curve.
  - C) If X is a congestible good, the marginal private benefit curve and marginal social benefit curve for X are always one and the same.
  - D) More than one of the other answers is correct.
39. Regardless of whether or not they pay for them, people cannot be excluded from receiving the benefits of:
- A) common resources.
  - B) public goods and common-property resources.
  - C) private goods.
  - D) public goods.
40. A firm faced with a per-unit tax on the amount of a pollutant it emits will continue to pollute its current amount if the tax is less than the cost of reducing pollution by an additional unit. Said another way, it will not reduce emissions further if the marginal abatement cost is greater than the tax.
- A) True
  - B) False

True: It is cheaper to pollute and pay the tax.

41. Public goods differ from common-property resources in that:
- A) both are non-rivalrous in consumption, but public goods are excludable, while common-property resources are non-excludable.
  - B) both are excludable, but public goods are non-rivalrous in consumption, while common-property resources are rivalrous in consumption.
  - C) both are non-excludable, but public goods are non-rivalrous in consumption, while common-property resources are rivalrous in consumption.
  - D) both are rival in consumption, but public goods are non-excludable, while common-property resources are excludable.

42. Which of the following statements is correct? (Note that this question might help you in answering some of the other questions.)
- A) The marginal rate of substitution of good X for good Y by individual i,  $MRS_{XY}^i$ , describes the rate at which individual i is willing to substitute good X for good Y.
  - B) In competitive equilibrium, if goods are divisible in production and consumption, Fred's MRS between X and Y will equal the  $MRT_{XY}$ .
  - C) The marginal rate of transformation of good X for good Y,  $MRT_{XY}$ , describes the rate at which good X can be substituted for good Y in production.
  - D) All of the answers about MRS and/or MRT are correct
  - E) In competitive equilibrium, if goods are divisible, every individual will have the same  $MRS_{XY}$
  - F) Some, but not all, of the answers about MRS and/or MRT are correct

If you got this one correct, it could help you with a bunch of the other questions.

43. George makes candy bars. Inputs are chocolate, c, and sugar, s. The constant  $MRTS_{cs} = 3/4$ . George will use both chocolate and sugar to produce his candy bars
- A) Likely
  - B) Unlikely

It is unlikely because the two inputs are perfect substitutes. George will produce candy using only one input, the one what has the highest marginal product per \$1 cost.

44. Assuming the model (theory) of consumer behavior taught in class and in the book, and assuming all commodities are goods, reducing an individual's budget set will always make the individual worse off.
- A) True
  - B) False

False because this is not always true. For example, I am consuming only one good, cigars, and the price of Coke goes up, I will continue to consume the same bundle and not be worse off because my budget set decreased.

45. Willy can only produce apples and carrots. Willy's production-possibilities frontier can be represented with the function  $C=20-2A$  where C is the number of carrots he produces and A is the number of apples he produces. For Willy, the opportunity cost of producing a carrot is \_\_\_ and the opportunity cost of producing an apple is \_\_\_
- A) 1/2 apple, 2 carrots
  - B) 1 apple, 2 carrots
  - C) 1 apple, 1 carrot
  - D) 2 apples, 1/2 carrot

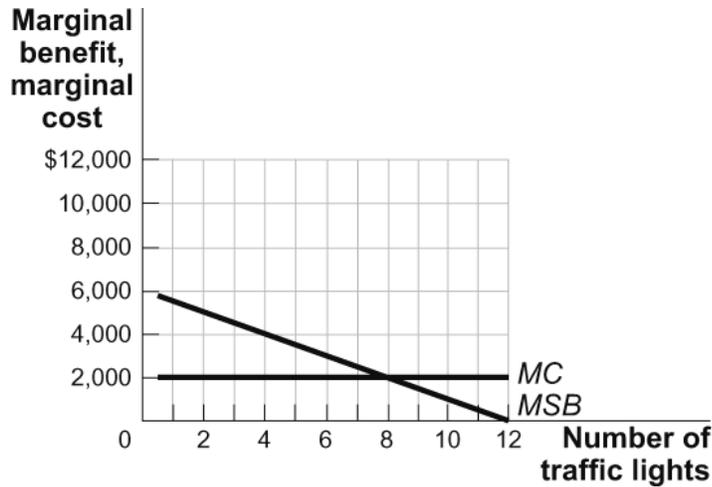
46. Traffic congestion causes higher costs and discomfort to residents of a city. An outcome like this arises for common resources because:
- A) the marginal social cost of any one individual's use of the roads is less than the individual's marginal cost.
  - B) the marginal social cost of any one individual's use of the roads is greater than the individual's marginal cost.
  - C) the marginal social cost of any one individual's use of the roads equals the individual's marginal cost.
  - D) it is impossible to compare the marginal social cost of any one individual's use of the roads with the individual's marginal cost.
47. Wanda's willingness-to-pay for beer is as follows: she is willing to pay \$10 for one beer, \$19 for two, \$24 for three, and \$27 for four beers. The cost of a beer is \$8, regardless of how many she drinks. How many beers should she purchase?
- A) 3
  - B) 2
  - C) 4
  - D) 1
48. The marginal rate of transformation of good X for good Y,  $MRT_{XY}$ , is the rate at which an individual is willing to trade off good Y for good X
- A) True
  - B) False
49. Society consists of Bubba, Molly, and a bunch of other people. Bubba owns a copy of "Real Man Magazine" and Molly owns a copy of "Fifty Shades of Grey." They trade making both of them better off. Which of the following statements is both necessarily correct and most informative?
- A) After the trade the allocation of goods is efficient
  - B) The trade is efficiency increasing because they are both better off.
  - C) The trade might be efficiency increasing, we don't know for sure.

We don't know for sure. There might be negative external effects associated with the reading of the two.

50. Which of the following best describes the relationship between a utility-possibilities frontier and a production-possibilities frontier?
- They are both representations of efficiency. The UPF identifies combinations of utility that are efficient. The PPF identifies combinations of goods where there is efficiency in production.
  - They both describe the maximum amount of an output that can be produced holding constant the amounts of the other outputs produced. For the PPF the outputs are goods and for the UPF the outputs are utility levels.
  - They are conceptually unrelated.
  - More than one of the other answers is correct.
51. Assume two inputs (K and L) and two goods (X and Y). Further assume you know the production functions for goods X and Y. Society consists of only one person, and you know their preferences (utility function). To determine a point on the production-possibilities frontier, you could choose a given amount of \_\_\_\_ to allocate to the \_\_\_\_ . You would then determine the maximum amount of \_\_\_\_ that can be \_\_\_\_\_ with these amounts. You would then determine, the maximum amount of \_\_\_\_ that can be \_\_\_\_\_ with the \_\_\_\_
- L and K; production of X; X: produced; Y; produced; remaining L and K.
  - X and Y; production of utility; utility; produced; utility; produced; remaining L and K.
52. So, Fred and Wilma are retiring, selling their home in New Orleans and buying a house in Boulder. George, a longtime resident of Boulder has already rented but now has saved up enough money to buy the house of his dreams for \$700K, the asking price. But he loses it to Fred and Wilma who agree to buy it for \$710K. George has obviously been made worse off by the action of Fred and Wilma.
- This is an example of the market working.
  - This is an example of an externality-type market failure because one agent's actions have a negative external effect on another agent.
53. Consider a situation where purchases do not occur because the potential seller's WTA (willingness-to-accept) the loss of the good is greater than the potential buyer's WTP (willingness-to-pay) for the good. This situation can occur at the market equilibrium price.
- True
  - False
- True

Use the following to answer questions 54-55:

**Figure: Traffic Lights in Plymouth**



54. (Figure: Traffic Lights in Plymouth) Plymouth has 1,000 residents. The figure Traffic Lights in Plymouth shows the marginal social benefit and marginal cost of traffic lights in town. We know that each of the residents has the same individual marginal benefit per traffic light. If the government provides the efficient number of traffic lights, there will be :
- A) 8.
  - B) 12.
  - C) 0.
  - D) 4.
55. (Figure: Traffic Lights in Plymouth) Plymouth has 1,000 residents. The figure Traffic Lights in Plymouth shows the marginal social benefit and marginal cost of traffic lights in town. We know that each of the residents has the same individual marginal benefit per traffic light. Without government intervention or any other type of collective action, the town will have \_\_\_\_\_ traffic lights.
- A) 0
  - B) 8
  - C) 12
  - D) 4

56. Assume a world of no external effects, and consider the demand and supply curves for low-skilled workers with the wage rate on the vertical axis. Now assume that the government has imposed a binding "maximum" wage for low-skilled workers. That is, firms cannot pay workers more than the legislated amount. Choose the statement about the effect of this binding maximum wage that is both correct and most informative.
- A) There will be an excess supply of low-skilled workers at the legislated maximum wage, and the allocation of low-skilled workers will be efficient.
  - B) There will be an excess demand for low-skilled workers at the legislated maximum wage, and the allocation of low-skilled workers will be inefficient
  - C) From an efficiency perspective, too few of the low-skilled will work, and there will be firms who want to hire the low skilled at the legislated maximum wage, but cannot.
  - D) More than one of the other answers is correct.
  - E) Since it is a binding maximum wage rather than a binding minimum wage, it has no effect and the efficient number of low-skilled workers will be employed.

57. Thelma's love for Wayne never waned. (Note that "waned" means "diminished".)
- A) True
  - B) False

False: a quote directly from the online notes of Thelma, Wayne, and barbed wire.

58. Barak Obama, in his capacity as President of the U.S, is
- A) a public good
  - B) a public commodity

Not a public good because many dislike him in his capacity as President of the U.S.

59. Production is efficient when
- A) The only way to increase the production of a good requires that the production of some other good or goods be decreased.
  - B) Both of the other answers are correct.
  - C) The only way to make one member of society better off requires that another member be made worse off.

Both answers are correct. If there is overall efficiency there must be efficiency in production.

60. If individuals text while driving without considering the costs texting while driving imposes on other drivers and pedestrians: (Choose the answer that is both correct and most informative.)
- A) the number of texts sent by each driver will be inefficient from his or her perspective, and be inefficient from society's perspective.
  - B) the number of texts sent by each driver will be efficient from his or her perspective, but not efficient from society's perspective.
  - C) the number of texts sent by drivers will be inefficient.

61. In our George tattoo example in class, efficiency can necessarily be achieved by taxing George, at some appropriate level, for each tattoo he shows in public.
- A) True
  - B) False

True: the negative external effect is caused by the number of tattoos he shows in public.

62. You work in an office and one of your co-workers has announced his retirement. You have offered to purchase the retirement gift, so you place a collection jar in the lunch room for anonymous donations to help pay for the gift. After a week, you find that very few dollars are in the jar, so you end up paying for a large share of the retirement gift. You are the victim of the:
- A) free-rider problem.
  - B) common-resource problem.
  - C) overuse of a common resource problem.
  - D) private good problem.

63. Economic situations that are in equilibrium are \_\_\_\_\_ efficient. (Choose the answer that is both correct and most informative.)
- A) never
  - B) sometimes
  - C) always
  - D) almost

Sometimes

64. Consider George from lectures, the guy with the tattoos. Why isn't the number of tattoos George shows in public zero? (Choose the answer that is both correct and most informative, assuming what was assumed in the lectures.)
- A) Some people like to see his tattoos
  - B) George is a member of society and he likes his tattoos, and he likes being naked in public

B) Remember we assumed other members of society don't like to see his tattoos.

65. Assume a world of only two commodities: adult diapers and Hostess Twinkies. These two commodities are produced using only two inputs: labor and plastic. Assume, you know society's stock of labor and plastic, and the production functions for the two commodities. Given all this, you have sufficient information to determine society's production-possibilities frontier. (Choose the answer that is both correct and most informative.)
- A) False because this information is necessary, but not sufficient, to derive the PPF.
  - B) False
  - C) True
- True: you have enough information.
66. Consider George from lectures, the guy with the tattoos. Society consists only of residents of New York City and George resides in NYC, and he never leaves town. Residents of NYC are used to both tattoos and nudity, so they do not care how George looks when he walks around town. Visitors to the city, however, while not caring about tattoos are offended by George's nudity. (Choose the answer that is both correct and most informative)
- A) George displays both the efficient amount of skin and the efficient amount of tattoos.
  - B) George shows an inefficient number of tattoos in public
  - C) George wears an inefficient amount of clothes in public
  - D) George displays the efficient amount of tattoos but shows too much skin
- A: the tourists don't count. George is a member of society and likes to walk around nude. And, no other member of society cares what George looks like.
67. I am a firm that needs to dump my toxic waste in a stream, only one stream. I know that after I do it, I will be sued by the Federal Government and forced to pay damages in the sum of total lost consumer's surplus to everyone who fished at the site before I dumped. Ignoring the varying cost of transporting the toxic waste to different streams, which of the following stream options would be my best choice if my intent is to minimize the damages I pay?
- A) a pristine stream with a lot of good substitutes because many anglers will get almost as much utility by fishing at one of those close substitutes.
  - B) a pristine stream with few good substitutes because many anglers will then no longer care about fishing.
  - C) a polluted stream with few fish located near a good number of pristine trout streams.
  - D) a polluted stream with few fish, located near a good number equally polluted streams.
- C

68. An electronic book is an artificially-scarce good because the private market \_\_\_\_\_ prevent consumption by people who do not pay for it. Further, the same e-Book \_\_\_\_\_ be consumed by more than one person at the same time.
- A) cannot; cannot  
 B) cannot; can  
 C) can; cannot  
 D) can; can
69. Which of the following is both correct and most explanatory as an ending for the sentence? The cost of producing another unit of a public good ....
- A) is typically positive but once another unit produced, the cost of supplying it to additional individuals is zero  
 B) is zero because once it is produced for one individual it is there for everyone.
70. Consider a world of only two perfectly divisible goods: anchovies and onions. Currently, Willy's marginal utility from anchovies is greater than his marginal utility from onions. And, anchovies cost more than onions. Willy should :
- A) Buy more onions and less anchovies  
 B) There is not enough information provided to determine what he should do  
 C) Definitely buy more onions but there is not enough information to determine whether he should buy less anchovies.  
 D) Buy more anchovies and less onions

Use the following to answer question 71:

**Table: Marginal Benefit, Cost, and Consumer Surplus**

<b>Consumer</b>	<b>Individual Marginal Benefit</b>
Adriana	\$2
Bhagesh	15
Chizuko	1
Denzel	10
Emma	5
Frank	4

71. (Table: Marginal Benefit, Cost, and Consumer Surplus) The table Marginal Benefit, Cost, and Consumer Surplus shows six consumers' willingness to pay (his or her individual marginal benefit) for one iTunes download of a Justin Timberlake song. Their WTP for additional copies is zero. If the marginal social cost of download is constant at \$0, then the efficient price is \_\_\_\_\_, and, with the efficient number of downloads, total consumers' surplus is \_\_\_\_\_.
- A) \$5; \$32
  - B) \$0; \$37
  - C) \$4; \$33
  - D) \$1; \$36
72. I am thinking about hiring someone to go through my thousands of photos and delete at least half of them. I need to clear up space on my hard drive. Besides, there are just too many of them. Given that the goal is to delete half of the photos (Choose the alternative that is both correct and most informative.)
- A) A real economist would never hire someone who does not know him and his family to do this.
  - B) It only makes sense if the person I hire can do it more quickly than I can.
  - C) It makes sense if the person hired has a comparative advantage in choosing the photos to delete.
73. Consider a society that is currently operating a point inside their Utility-Possibilities Frontier. Is it possible to have a Pareto improvement and not achieve efficiency? Is it possible to have a change that is not a Pareto improvement but achieves efficiency?
- A) The answer to the first question is yes and the answer to the second is no
  - B) The answer to the first question is not and the answer to the second is yes
  - C) The answer to both questions is yes
  - D) The answer to both questions is no.
74. A private good is:
- A) excludable and rivalrous in consumption.
  - B) non-excludable and rivalrous in consumption.
  - C) non-excludable and non-rivalrous in consumption.
  - D) excludable and non-rivalrous in consumption.

75. Which of the following statements best describes how most environmental economists view CO<sub>2</sub> emissions and global warming (GW)? (Choose the answer that is both correct and most informative.) In choosing your answer, assume that GW is real and is caused by CO<sub>2</sub> emissions.
- A) The market produces an inefficient amount of CO<sub>2</sub> emissions (too many) **because** the private cost of emitting CO<sub>2</sub> is less than the social cost of emitting CO<sub>2</sub>
  - B) Too much CO<sub>2</sub> is emitted into the atmosphere (an inefficient amount) **because** many people do not believe CO<sub>2</sub> emissions are causing GW.
  - C) Too much CO<sub>2</sub> is emitted into the atmosphere (an inefficient amount) **because** many people do not care about GW.
- A) While many people might not believe in GW, making them believe will not solve cause the private cost of emitting CO<sub>2</sub> to equal the social cost.
76. Boulder Colorado wants to reduce its emissions of Guber gas by 10 units. Two firms in town emit Guber gas. For Firm 1 they can always decrease their emission of GG by one unit at a cost of \$5. In contrast, for Firm 2, it costs \$1 to eliminate the first unit, \$3 to eliminate the second unit, \$6 for the third unit, \$10 for the 4th unit, \$17 for the fifth unit, etc. The cost-minimizing way to reduce these ten units is \_\_\_\_\_, and the total cost will be \_\_\_\_\_. If each firm reduces 5 units the total cost of the 10-unit reduction will be \_\_\_\_\_.
- A) For Firm 1 to reduce 10 units; \$50; \$60
  - B) For Firm 2 to reduce two units and Firm 1 to reduce 8 units; \$65; \$62
  - C) For Firm 2 to reduce two units and Firm 1 to reduce 8 units; \$44; \$62
  - D) For each firm to reduce five units; \$65; \$65
77. Which of the following is an example of a common-property resource?
- A) A Miley Cyrus concert where the tickets are \$100 each, but seats are not assigned.
  - B) A highway to which access is granted only to those who pay a specified toll
  - C) A public beach with no entry fee.
  - D) Two, but only two, of other answers are correct.
  - E) The Boston Commons back in the day when anyone who lived in Boston could graze their livestock on it without paying a fee.

78. Two firms in town emit Guber gas. For Firm 1 they can always decrease their emission of GG by one unit at a cost of \$5. In contrast, for Firm 2, it costs \$1 to eliminate the first unit, \$3 to eliminate the second unit, \$6 for the third unit, \$10 for the 4th unit, \$17 for the fifth unit, etc. The two firms together currently emit 25 units of guber gas, 10 by Firm 1 and 15 by Firm 2. The City want to reduce the total to 20 units, so they issue 20 pollution permits for Guber gas, and require each firm to have a permit for each unit of gas they emit. Given all this, when the permit market is in equilibrium, Firm 2 will emit 13 units (reduce by 2) and Firm one will emit 7 units (reduce by 3 units). And the equilibrium price of a permit will be between \$5 and \$6.
- A) False
  - B) Not enough information to determine whether it is true or false.
  - C) True
79. Eating chocolate bars causes people to be less violent. That said, while people like the taste of chocolate not much of it is consumed because people don't like to eat things that are brown. People care less about whether eating chocolate makes them more or less violent--they don't even know it has this effect. Given this, is the following statement true or false? "This side effect of chocolate means that, all else constant, the equilibrium quantity of chocolate consumed in a world with flexible chocolate prices will be too low from an efficiency point of view, and a more efficient amount of chocolate could be produced if the government subsidized the consumption of chocolate."
- A) True
  - B) False
80. Production efficiency is being achieved. Is there overall efficiency?
- A) Yes
  - B) No
  - C) Maybe
- Production efficiency is necessary but not sufficient for overall efficiency.

81. Consider instead of George and his Tattoos, pollution from automobiles. Burning gasoline generates a number of pollutants, two being CO<sub>2</sub> emissions (a greenhouse gas) and particulates (small particles that get stuck in one's lungs). Assume that the amounts of these pollutants currently emitted are inefficient--too large. As we learned in class, a direct tax on a pollutant can reduce the amount emitted to its efficient amount, and achieve this reduction at minimum cost. But directly taxing what comes out of tailpipes is difficult so instead consider a tax on gasoline as a way to achieve the efficient amount of car pollution, and achieve it at minimum cost. (Which of the following statements is both correct and more informative? Hint: Recollect the distinction between George having tattoos and George showing those tattoos in public )
- A) A tax on gasoline can be used to reduce the amount of a pollutant that cars emit to the efficient level but will only achieve the reduction at minimum cost if there is a fixed relationship between the amount of gas burned and the amount of the pollutant emitted.
  - B) A tax on gasoline cannot be used to reduce the amount of a pollutant that cars emit to the efficient level unless there is a fixed relationship between the amount of gas burned and the amount of the pollutant emitted.
  - C) A tax on gasoline can be used to reduce the amount of a pollutant that cars emit to the efficient level but won't necessarily achieve the reduction at minimum cost.
  - D) A tax on gasoline can be used to reduce the amount of a pollutant that cars emit to the efficient levels but will definitely not achieve the reduction at minimum cost.

A): A) is more informative than C). B is incorrect. A tax on gas can lower the amount of the pollutant to its efficient level, just not necessarily at minimum cost. D is also not correct because of the word "definitely".

82. To produce 10 deep-fried cats efficiently, one must operate on the isoquant for 10 deep-fried cats.
- A) True
  - B) False

True: one could operate to the right of the isoquant (use inputs in an inefficient/wasteful manner) but that would not be efficient.

83. In London, any motorist entering a particular area in the city center during certain specified times must pay a congestion fee equal to £8, with fines for noncompliance rising to as high as £120. The congestion fee is: (Choose the answer that is both correct and most informative.)
- A) the wrong policy tool for solving the problem of congestion; instead, motorists should be allowed to make deals to determine when and where individuals are permitted to drive.
  - B) an attempt to internalize the costs due to traffic delays and congestion that are created by drivers in the specified area.
  - C) an example of a Pigouvian tax aimed at regulating the use of the common resource of city streets and an attempt to internalize the costs due to traffic delays and congestion that are created by drivers in the specified area.
  - D) an example of a Pigouvian tax aimed at regulating the use of the common resource of city streets.
84. Assume the following: (1) Members of the Tea Party are not Democrats. (2) The existence of the Tea Party makes Democrats happy. (3) Happy people never smile. (4) Obama belongs to the Tea Party. (5) Sarah P. is not a Republican. (6) The Tea Party exists. And (7) Democrats are people. Which of the following predictions follows from these assumptions?
- A) Democrats are not smiling, and Obama is not a Democrat
  - B) All Republicans are smiling
  - C) All the members of the Tea Party are smiling
  - D) Obama is not smiling
  - E) Obama is smiling

## Answer Key

1. A
2. D
3. A
4. D
5. C
6. D
7. B
8. B
9. A
10. C
11. B
12. B
13. B
14. A
15. B
16. A
17. A
18. C
19. B
20. A
21. B
22. C
23. B
24. A
25. A
26. A
27. C
28. B
29. B
30. A
31. C
32. A
33. A
34. A
35. D
36. A
37. C
38. A
39. B
40. A
41. C
42. D
43. B
44. B

- 45. A
- 46. B
- 47. B
- 48. B
- 49. C
- 50. D
- 51. A
- 52. A
- 53. A
- 54. A
- 55. A
- 56. D
- 57. B
- 58. B
- 59. B
- 60. B
- 61. A
- 62. A
- 63. B
- 64. *(No Answer Provided)*
- 65. C
- 66. A
- 67. C
- 68. D
- 69. A
- 70. B
- 71. B
- 72. C
- 73. C
- 74. A
- 75. A
- 76. C
- 77. D
- 78. C
- 79. A
- 80. C
- 81. A
- 82. A
- 83. C
- 84. A