

Part I: Each is worth 2 points.

1. Which of the following properly compares/contrasts the public choice view of government and markets?
 - a) Individuals in government act for the public interest, whereas individuals in markets act according to their self-interest.
 - b) When producers in markets act in their self-interest, they make society better off. This is not necessarily the case with government.
 - c) Individuals in government cannot help but act in the public interest. It is in their job description.
 - d) Individuals in government are taught to cooperate, while those outside government are taught to compete.

Question 2 refers to the table below:

Rank	Tom	Dick	Harry
1st	B	A	C
2nd	A	C	B
3rd	C	B	A

2. The table above shows the preference rankings of policies A, B, and C of the only three voters, Tom, Dick, and Harry. If two elections were held, one to choose between policies A and B and another to choose between the winner and C, which issue will win the first and the second election respectively?
 - a) A, A
 - b) A, B
 - c) A, C
 - d) B, B
 - e) B, C
3. The main reason special interest groups are able to get costly programs enacted that favor their interests is that:
 - a) those in special interest groups have no morals.
 - b) program costs are spread out so individuals have little incentive to lobby against such programs.
 - c) many politicians are members of such special interest groups, and they have similar interests.
 - d) politicians are corrupt.
4. According to economic models of public choice, the objective of politicians is to
 - a) promote the public interest.
 - b) get elected and remain in office.
 - c) maximize free-ridership.
 - d) maximize total public utility
5. Voters are asked to vote for either proposition X or proposition Y. Proposition X will lose if it
 - a) is farther from efficiency.
 - b) is opposed by bureaucrats.
 - c) is opposed by the median voter.
 - d) generates greater social costs than social benefits.
6. Public choice theory explains why
 - a) farmers lobby for milk price supports.
 - b) consumers lobby for milk price supports.
 - c) bureaucrats do not want milk price supports.
 - d) All of the above.

7. Public goods are those for which
- individuals who do not pay can be excluded from consuming.
 - individuals who do not pay cannot be excluded from consuming.
 - external costs exist.
 - no external costs exist.
8. Of those listed below, the best example of a public good is:
- a state lottery
 - a book
 - a rock concert held in a small auditorium
 - a radio broadcast

Levee Height (feet)	Total benefit (millions of dollars)	Total cost (millions of dollars)
1	100	20
2	155	40
3	200	70
4	235	110
5	260	160

9. Valley City is considering building a levee to protect its residents from flooding. The total costs and benefits are in the table above. The levee height that achieves the maximum net benefit is
- 2 feet.
 - 3 feet.
 - 4 feet.
 - 5 feet.
10. The free rider problem implies that public goods:
- must be paid for through government and produced by the government.
 - must be paid for through government and can be produced by private firms.
 - must be produced by the government but can be sold to consumers by private firms.
 - will be overprovided by government.
11. An example of a good produced by the government that does NOT have features of a public good is:
- national defense
 - postal delivery
 - police protection
 - the judicial and legal system
 - highways
12. The Coase theorem applies when property rights are given
- to the victim of pollution but not to the polluter.
 - to the polluter but not to the victim.
 - to either the polluter or the victim.
 - neither to the polluter nor to the victim.

13. An example of an activity that generates an external cost is
- dumping soapsuds into a trout stream.
 - national defense services.
 - planting flowers along an interstate highway.
 - eating an apple.

The following table refers to Questions 14 and 15.

Quantity (tons)	Marginal private benefit (dollars per ton)	Marginal private cost (dollars per ton)	Marginal social cost (dollars per ton)
1,000	140	50	80
2,000	120	60	90
3,000	100	70	100
4,000	80	80	110
5,000	60	90	120
6,000	40	100	130

14. The above table shows the marginal benefits and costs from production of fertilizer. If the market is perfectly competitive and unregulated, the equilibrium output will be
- 2,000 tons.
 - 3,000 tons.
 - 4,000 tons.
 - 5,000 tons.
15. The above table shows the marginal benefits and costs from production of fertilizer. If the market is perfectly competitive and unregulated, the socially efficient level of output could be achieved by setting a per ton tax of
- \$30.
 - \$70.
 - \$100.
 - \$110.
16. The efficient level of pollution in the environment is
- zero.
 - the level at which the average social cost of cleanup equals the average benefit of cleanup.
 - the level at which the marginal social cost of cleanup equals the marginal benefit of cleanup.
 - the level that minimizes the total cost of cleanup.
17. Taxes can yield the efficient level of pollution if the tax is set equal to
- marginal benefit of pollution.
 - marginal external cost of the activity.
 - marginal social cost of the activity.
 - equilibrium price of the activity.
18. Tradable permits give a firm an incentive to:
- find more costly forms of pollution control.
 - increase its emissions.
 - lower its emissions because the firm can sell a permit if it does not use it.
 - hold a permit for the long term if it does not use the permit.

19. One reason that education has external benefits is that:
- knowledge has diminishing marginal productivity.
 - education creates job opportunities for teachers.
 - education creates better citizens.
 - property owners pay taxes to support the school system.
20. In a market with external benefits, social efficiency can be achieved by:
- leaving the market alone.
 - monopolizing the market.
 - offering a subsidy equal to the external benefit
 - imposing a tax equal to the external cost.
21. A consequence of a *negative consumption externality* is that social benefits are _____ than private benefits, and the socially optimal level of output is _____ than the private level of output.
- greater; greater.
 - greater; less.
 - less; less.
 - less; greater.
22. Which of the following is the best example of a public good?
- Public transportation.
 - Clean air.
 - Community swimming pools.
 - Postal services.
23. A free rider problem exists if
- those consuming the good pay more than the cost of providing the good so that the firm's profits increase ("free ride") as a result of the overpayment.
 - those consuming the good pay nothing for it.
 - two consumers can jointly consume a good, which lowers the price per person.
 - a firm can obtain technology at a fair price.
24. Public goods tend to be
- under supplied by the government.
 - over supplied by the private market.
 - under supplied by the private market.
 - over supplied by international trade
25. John receives a marginal benefit of \$80 from one missile. Nick receives a marginal benefit of \$50 from one missile. Christina receives a marginal benefit of \$65 from one missile. John, Nick, and Christina are the only people in the economy. What is the economy's marginal benefit from one missile?
- \$50
 - \$65
 - \$80
 - \$195
26. The efficient quantity of a public good is provided when the economy's
- total benefit from the good equals its total cost.
 - total benefit from the good is less than its total cost.
 - marginal benefit from the good equals its marginal cost.
 - marginal benefit from the good is greater than its marginal cost.

27. Fish in the sea are "owned" communally. No individual, group of individuals, or firm has the right to buy, sell, and/or trade the fish of the sea. A leading consequence of this lack of ownership is:
- a) monopoly power in commercial fishing because of the ease of restricting entry.
 - b) that individual fisherman have almost no incentive to practice conservation.
 - c) full economies of scale cannot be attained with respect to the size of individual fishing boats.
 - d) that fisherman inevitably earn lower wages than persons in other activities.
28. Public choice theory suggests that political entrepreneurs will be most likely to favor redistribution of income from:
- a) the rich to the poor.
 - b) disorganized individuals to well-organized special interest groups.
 - c) middle-income taxpayers to both the rich and the poor.
 - d) well-organized business and labor groups to consumers.
29. If a house near a chemical plant sells for a lower price because of unpleasant odors,
- a) the government should buy all the affected homes.
 - b) regulation is needed.
 - c) the externalities may have already been corrected for by market mechanisms.
 - d) all of the above.
 - e) none of the above.
30. A purely private good is one:
- a) from which it is possible to exclude consumption.
 - b) which is perfectly rivalrous.
 - c) for which free-riders is a significant problem.
 - d) (a) and (b).
 - e) (a), (b), and (c).
31. Josh finds that when a lot of people are logged on to his university's Internet server, it takes much longer for him to download his homework assignments from the Internet. Access to the university server is an example of
- a) an impure public good because of rivalry in consumption.
 - b) an impure private good because of excludability.
 - c) a pure public good.
 - d) a private good.
32. Cars entering central London during business hours must pay a fee of 5 pounds. The government claims that this is an optimal policy to manage inner-city pollution and congestion. This is true only if _____:
- a) The social benefit of an additional car driven is maximized
 - b) The marginal external cost of an additional car driven in central London is 5 pounds
 - c) The marginal external benefit of an additional car driven in central London is 5 pounds
 - d) 5 pounds is the maximum willingness to pay for each driver to drive in central London
33. Which of the following statements is correct?
- a) Hidden actions and hidden characteristics are both associated with the moral-hazard problem.
 - b) Hidden actions and hidden characteristics are both associated with the adverse-selection problem.
 - c) Hidden actions are associated with the moral-hazard problem, whereas hidden characteristics are associated with the adverse-selection problem.
 - d) Hidden actions are associated with the adverse-selection problem, whereas hidden characteristics are associated with the moral-hazard problem.

34. Which of the following practices would indicate that an employer is trying to overcome a moral-hazard problem with his employees?
- a) The employer pays his workers wages that are unusually high for the industry and region.
 - b) The employer has voluntarily removed video cameras from the factory floor.
 - c) The employer has discontinued the practice of giving his employees' year-end bonuses.
 - d) Both A and B are correct.
35. The temptation of imperfectly-monitored workers to shirk their responsibilities is
- a) an example of the moral hazard problem.
 - b) an example of the adverse selection problem.
 - c) an example of screening.
 - d) an example of signaling.
36. When a jeweler sells a low quality diamond to a young man who believes the diamond is the highest quality, she is engaging in
- a) both moral hazard and adverse selection
 - b) neither moral hazard nor adverse selection
 - c) moral hazard, but not adverse selection
 - d) adverse selection, but not moral hazard
37. Suppose that residents of a town are asked to vote on the best way to improve the safety of an intersection. The three choices are: a stoplight, a 4-way stop, and a 2-way stop. The mayor asks the residents to assign 3 points to their first choice, 2 points to their second choice, and 1 point to their last choice. The intersection will be determined by the method that receives the most points. This voting scheme is called
- a) Arrow's impossibility theorem
 - b) the Condorcet paradox
 - c) a Borda count
 - d) the median voter theorem
38. The Arrow impossibility theorem shows that:
- a) democracy should be abandoned as a form of government.
 - b) it is impossible to improve upon democratic voting methods as a mechanism of social choice.
 - c) all voting systems are flawed as a mechanism for social choice.
 - d) the median voter's preferences will always win in a two-way vote.
39. Economic theory assumes that people are always rational. Yet observation indicates that people do not always behave rationally. Which of the following is not a systematic mistake people make in their decision-making?
- a) people often interpret information to fit beliefs already held.
 - b) people place too much emphasis in their decision-making on a few extreme situations of which they are aware.
 - c) people tend to view current prices differently than they view future prices.
 - d) people are too sure of their own abilities.
40. Brian and Andrea are playing the ultimatum game, starting with \$100. The coin flip results in Brian being the one to propose a division of the \$100. Brian proposes that he gets \$99 and Andrea gets \$1.
- a) Because the 99-1 split isn't fair, Brian should not make this offer.
 - b) Conventional economic theory predicts that Brian will propose a 99-1 split, just as he did.
 - c) Experimental evidence suggests that Andrea will accept the 99-1 split, even though it isn't fair, it's better than nothing.
 - d) Economic theory predicts that Brian should choose a 60-40 split to maximize his payoff.

Part II: Short Answers

41. Why does the free market have difficulty providing "public goods"? What two characteristics define a public good? Explain each.
42. Why is it rational for individuals to be ignorant about public goods but not about private goods?
43. Why would the amount of immunization provided be inefficient if subsidies to immunization were not provided? Use a graph of the market for immunization to illustrate your argument.
44. A lumber company and a bird watcher's club share a forest on federal lands. Initially there is no government regulation of the forest. The lumber company tends to clear cut the trees from the forest. The loss of trees makes it difficult to observe rare bird species due to the loss of habitat. The bird watcher's club estimates the economic value of the bird species to be \$3,000,000. A sustainable bird habitat requires about 40,000 trees. The lost habitat can be restored by the bird watcher's club if they plant new trees. Each new tree costs \$50 a piece. The lumber company can restore the lost habitat by setting aside a portion of the remaining forest at a cost of \$70 per tree.
 - a) If transactions costs are low and the lumber company is given the right to harvest trees at will, what outcome do you predict and why?
 - b) If transactions costs are low and the bird watcher's club is given the right to a sustainable bird habitat, what outcome do you predict and why?
 - c) Suppose that transactions costs are so high that private bargaining is impossible. If the lumber company is required by law to compensate the bird watcher's club for any lost species, then what outcome do you predict and why?
45. Suppose 35 percent of people want nothing spent on welfare, 20 percent of people want 50 percent of national income spent on welfare, 25 percent of people want 25 percent of national income spent on welfare, 10 percent of people want 5 percent of national income spent on welfare, and 10 percent of people want 10 percent of national income spent on welfare. According to the median voter theorem, what percentage of national income will be spent on welfare? Explain.