

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

CHAPTER 15

Public Goods, Externalities, Information Asymmetries, and Market Failure

Topic	Question numbers
15.1 Public goods	1-45
Private goods characteristics	1-3
Public goods characteristics	4-13
Optimal quantity of a public good	14-15
Demand for public goods	16-23
Comparing MB and MC	24-27
Cost-benefit analysis	28-45
15.2 Externalities	46-104
Negative externalities	46-51
Positive externalities	52-59
Individual bargaining: Coase Theorem	60-64
Liability rules and lawsuits	65-67
Government intervention	68-77
A market-based approach to negative externalities	78-92
Society's optimal amount of externality reduction	93-102
Climate change	103-104
15.3 Information failures	105-123
Inadequate information about sellers	105-107
Inadequate information about buyers	108-109
Inadequate seller information about buyers	110-121
Qualification	122-123
15.4 The Economics of health care	124-133
Peculiarities of the health care market	124-129
Third party payments: Insurance	130
Possible solutions to excess demand	131-133
The last word	134-139
True-false	139-150

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

1. Which of the following is a characteristic of a private good:

- A) free-rider problem
- B) external benefits
- C) external costs
- D) excludability

Ans: D Level: Easy Main Topic: 15.1 Public goods Page: 349
Subtopic: Private goods characteristics Type: Application

2. Which of the following is correct?

- A) Private goods are subject to rivalry and excludability
- B) Private goods are indivisible.
- C) Private goods are subject to the free-rider problem.
- D) Private goods are produced in efficient or optimal amounts despite substantial externalities.

Ans: A Level: Moderate Main Topic: 15.1 Public goods Page: 349
Subtopic: Private goods characteristics Type: Application

3. Which of the following is a private good?

- A) a ballpoint pen
- B) national defence
- C) a highway
- D) a lighthouse

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 349
Subtopic: Private goods characteristics Type: Application

4. Which is a characteristic of a public good?

- A) rivalry among firms
- B) excludability
- C) external benefits
- D) no free-rider problem

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 349
Subtopic: Public goods characteristics Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

5. Which is a characteristic of a public good:

- A) the possibility of excluding payers from non-payers
- B) non-rivalry and non-excludability
- C) it is possible to withhold it from those who would not pay for it
- D) it is provided by the private sector

Ans: B Level: Easy Main Topic: 15.1 Public goods Page: 349
Subtopic: Public goods characteristics Type: Definition

6. A public good can be best defined as one which:

- A) has no externals associated with its production or consumption.
- B) entails rising costs of production.
- C) yields widespread benefits which cannot readily be denied the public at large.
- D) yields benefits only to the individual who decides to buy it.

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 349
Subtopic: Public goods characteristics Type: Definition

7. A public good:

- A) is not subject to rivalry and excludability.
- B) entails no externalities.
- C) is subject to rivalry and excludability.
- D) can not be produced by private firms.

Ans: A Level: Easy Main Topic: 15.1 Public goods Page: 349
Subtopic: Public goods characteristics Type: Application

8. A public good:

- A) generally results in substantial negative externalities.
- B) can never be provided by a nongovernmental organization.
- C) can't be provided to one person without making it available to others as well.
- D) costs essentially nothing to produce and thus is provided by the government at a zero price.

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 349
Subtopic: Public goods characteristics Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

9. The major difficulty in asking people to pay voluntarily what a government program is worth to them is:

- A) the free-rider problem.
- B) people have poor judgment.
- C) the fact that people don't know what programs they want.
- D) we would increase government expenditures too much.

Ans: A Level: Easy Main Topic: 15.1 Public goods Page: 349-350
Subtopic: Public goods characteristics Type: Application

10. The production of economically desirable public goods must be sponsored by government because:

- A) the existence of large external costs precludes their production in the private sector.
- B) public goods have characteristics which make it difficult or impossible for private firms to produce them profitably.
- C) the benefits derived from their production exceed the costs of producing them.
- D) the law of increasing marginal opportunity costs does not apply to public goods.

Ans: B Level: Easy Main Topic: 15.1 Public goods Page: 349-350
Subtopic: Public goods characteristics Type: Application

11. Which of the following statements is correct?

- A) Private goods yield direct benefits to the purchaser and are financed by government.
- B) Public goods yield widespread external benefits and are purchased by government with tax revenues.
- C) Public goods are bought voluntarily out of private incomes and yield no significant external benefits.
- D) Public goods are bought voluntarily out of private incomes and yield widespread external benefits.

Ans: B Level: Moderate Main Topic: 15.1 Public goods Page: 349-350
Subtopic: Public goods characteristics Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

12. Government must provide economically desirable public goods because:
- A) private production of these goods would entail unacceptably high levels of external costs.
 - B) the availability of such goods yields no benefits to individual consumers.
 - C) the benefits yielded by such goods cannot be withheld from those who refuse to pay for them.
 - D) their provision is necessary if we are to reduce unemployment and inflation.

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 349-350
Subtopic: Public goods characteristics Type: Application

13. Assume there is no way to prevent someone from using an inter-provincial highway, regardless of whether or not he or she helps pay for it. This characteristic is associated with:
- A) rival goods.
 - B) complementary goods.
 - C) public goods.
 - D) capital goods.

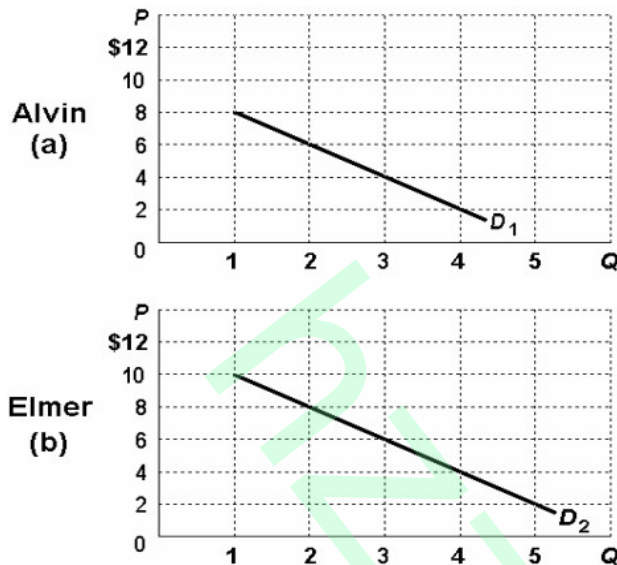
Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 349-350
Subtopic: Public goods characteristics Type: Application

14. The right and efficient amount of a public good will be produced when:
- A) the government follows the rule of $MR = MB$.
 - B) the government applies the rule of $MB = MC$.
 - C) the government makes the highest level of profit from producing it.
 - D) the government can exclude the payers from non-payers.

Ans: B Level: Easy Main Topic: 15.1 Public goods Page: 350
Subtopic: Optimal quantity of a public good Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

15. Refer to the diagrams below in which figures (a) and (b) show demand curves reflecting the prices Alvin and Elmer are willing to pay for a public good, rather than do without it. If the marginal cost of the optimal quantity of this public good is \$10, the optimal quantity must be:



- A) 1 unit.
- B) 2 units.
- C) 3 units.
- D) 4 units.

Ans: C Level: Difficult Main Topic: 15.1 Public goods Page: 350
Subtopic: Optimum quantity of a public good Type: Graphic

16. A demand curve for a public good is determined by:
- A) summing vertically the individual demand curves for the public good.
 - B) summing horizontally the individual demand curves for the public good.
 - C) combining the amounts of the public good that the individual members of society demand at each price.
 - D) multiplying the per-unit cost of the public good by the quantity made available.

Ans: A Level: Moderate Main Topic: 15.1 Public goods Page: 350-351
Subtopic: Demand for public goods Type: Definition

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

17. The market demand curve for a public good:

- A) is derived in the same manner as demand curves for private goods.
- B) is derived by horizontally summing all individual demand curves.
- C) shows the total value that all individuals place on each unit of the good.
- D) shows the total number of units that would be produced by the private sector at each possible price.

Ans: C Level: Moderate Main Topic: 15.1 Public goods Page: 350-351
Subtopic: Demand for public goods Type: Definition

18. For which one of the following goods would we need to sum individual demand curves vertically to obtain the total demand curve?

- A) frozen yogurt
- B) bubble gum
- C) microwave popcorn
- D) courts of law

Ans: D Level: Moderate Main Topic: 15.1 Public goods Page: 350-351
Subtopic: Demand for public goods Type: Application

Use the following to answer questions 19-21:

The following information is for a public good. P_a and P_b are the prices that individuals A and B are willing to pay for the last unit of a public good, rather than do without it. These people are the only two members of society.

Q	P_a	P_b
1	\$3	\$5
2	2	4
3	1	3
4	0	2
5	0	1

19. Refer to the above data. The collective willingness of this society to pay for the 2nd unit of this public good is:

- A) \$2.
- B) \$4.
- C) \$6.
- D) \$8.

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 350-351
Subtopic: Demand for public goods Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

20. Refer to the above data. Suppose government has already produced 4 units of this public good. The amount individual B is willing voluntarily to pay for the 4th unit is:
- A) \$14.
 - B) \$5.
 - C) \$2.
 - D) \$0.

Ans: D Level: Easy Main Topic: 15.1 Public goods Page: 350-351
Subtopic: Demand for public goods Type: Application

21. Refer to the above data. If this good were a private good instead of a public one, the total quantity demanded at a \$3 market price would be:
- A) 2 units.
 - B) 3 units.
 - C) 6 units.
 - D) 4 units.

Ans: D Level: Easy Main Topic: 15.1 Public goods Page: 350-351
Subtopic: Demand for public goods Type: Application

Use the following to answer question 22:

Answer the next question on the basis of the following information is for public good. P_a and P_b represent the prices that citizens (a) and (b), the only two people in this nation, are willing to pay for additional units of a quantity (Q_c) of the public good. Q_s represents the quantity of the public good supplied by government at each of the collective prices.

22. Refer to the information below. The collective willingness of this nation to pay for the fourth unit of the public good is:

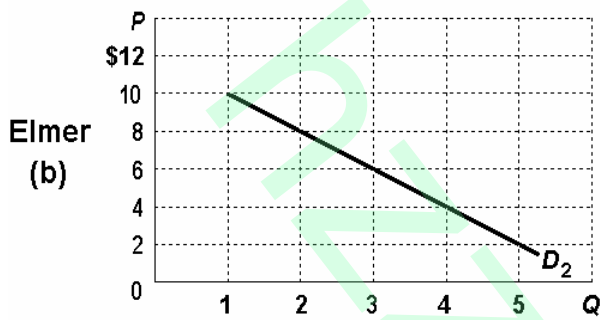
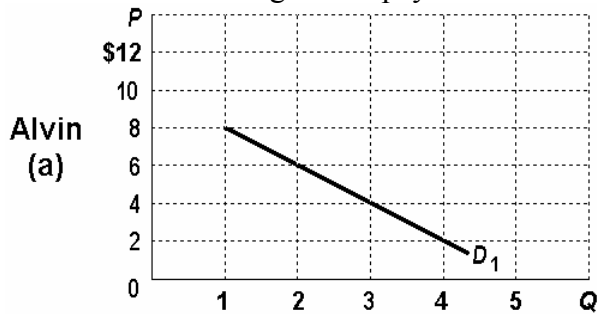
Q_c	P_a	P_b	Q_s
1	\$4	\$5	5
2	3	4	4
3	2	4	3
4	2	3	2
5	1	2	1

- A) \$7.
- B) \$6.
- C) \$5.
- D) \$3.

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 350-351
Subtopic: Demand for public goods Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

23. Refer to the below diagrams in which figures (a) and (b) show demand curves reflecting the prices Alvin and Elmer are willing to pay for a public good, rather than do without it. The collective willingness to pay for the 1st unit of this public good is:



- A) \$18.
B) \$14.
C) \$10.
D) \$6.

Ans: A Level: Moderate Main Topic: 15.1 Public goods Page: 350-351
Subtopic: Demand for public goods Type: Graphic

24. Suppose that Mick and Cher are the only two members of society and are willing to pay \$10 and \$8, respectively, for the third unit of a public good. Also, assume that the marginal cost of the third unit is \$17. We can conclude that:
- A) the third unit should not be produced.
B) the third unit should be produced.
C) zero units should be produced.
D) 4 units should be produced.

Ans: B Level: Moderate Main Topic: 15.1 Public goods Page: 351
Subtopic: Comparing MB and MC Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

25. Ed, Mike, and Scott are the only three people in a community and Ed is willing to pay \$20 for the 5th unit of a public good; Mike, \$15, and Scott, \$25. Government should produce the 5th unit of the public good if the marginal cost is:
- A) less than \$25.
 - B) less than \$15.
 - C) less than \$60.
 - D) less than \$300.

Ans: C Level: Moderate Main Topic: 15.1 Public goods Page: 351
Subtopic: Comparing MB and MC Type: Application

Use the following to answer question 26:

Answer the next question on the basis of the following information is for public good. P_a and P_b represent the prices that citizens (a) and (b), the only two people in this nation, are willing to pay for additional units of a quantity (Q_c) of the public good. Q_s represents the quantity of the public good supplied by government at each of the collective prices.

26. Refer to the information below. If the collective willingness to pay for an additional unit of this public good is \$6, then the collective quantity demanded will be:

Q_c	P_a	P_b	Q_s
1	\$4	\$5	5
2	3	4	4
3	2	4	3
4	2	3	2
5	1	2	1

- A) 1 unit and the socially optimal quantity supplied will be 5 units.
- B) 2 units and the socially optimal quantity supplied will be 4 units.
- C) 3 units and the socially optimal quantity supplied will be 3 units.
- D) 4 units and the socially optimal quantity supplied will be 2 units.

Ans: C Level: Moderate Main Topic: 15.1 Public goods Page: 351
Subtopic: Comparing MB and MC Type: Calculation

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

27. The following information is for a public good. P_a and P_b are the prices that individuals A and B are willing to pay for the last unit of a public good, rather than do without it. These people are the only two members of society.

Refer to the data below. If the marginal cost of this good at the optimal quantity is \$4, the optimal quantity must be:

Q	P_a	P_b
1	\$3	\$5
2	2	4
3	1	3
4	0	2
5	0	1

- A) 1 unit.
- B) 2 units.
- C) 3 units.
- D) 4 units.

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 351
Subtopic: Comparing MB and MC Type: Application

28. Cost-benefit analysis attempts to:
- A) compare the real worth, rather than the market values, of various goods and services.
 - B) compare the relative desirability of alternative distributions of income.
 - C) determine whether it is better to cut government expenditures or reduce taxes.
 - D) compare the benefits and costs associated with any economic project or activity.

Ans: D Level: Easy Main Topic: 15.1 Public goods Page: 351-352
Subtopic: Cost-benefit analysis Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

Use the following to answer questions 29-30:

Answer the next question(s) on the basis of the following information is for public good. P_a and P_b represent the prices that citizens (a) and (b), the only two people in this nation, are willing to pay for additional units of a quantity (Q_c) of the public good. Q_s represents the quantity of the public good supplied by government at each of the collective prices.

Q_c	P_a	P_b	Q_s
1	\$4	\$5	5
2	3	4	4
3	2	4	3
4	2	3	2
5	1	2	1

29. Refer to the above information. If only 1 unit of this public good is produced, then the marginal benefit is:

- A) \$3 and the marginal cost is \$9.
- B) \$4 and the marginal cost is \$7.
- C) \$6 and the marginal cost is \$3.
- D) \$9 and the marginal cost is \$3.

Ans: D Level: Moderate Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Calculation

30. Refer to the above information. In equilibrium, the marginal benefit and cost of the public good will be:

- A) \$7.
- B) \$6.
- C) \$5.
- D) \$3.

Ans: B Level: Difficult Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Calculation

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

Use the following to answer questions 31-32:

The following information is for four highway programs of increasing scope. All figures are in millions of dollars.

<u>Program</u>	<u>Total cost</u>	<u>Total benefit</u>
A	\$ 2	\$ 9
B	6	16
C	12	21
D	20	23

31. The above data indicate that:

- A) there is no highway program which is economically justifiable on the basis of cost-benefit analysis.
- B) the marginal cost and marginal benefit of Program A are \$2 and \$9 respectively.
- C) the marginal cost and marginal benefit of Program C are \$12 and \$21 respectively.
- D) the marginal cost and marginal benefit of Program A cannot be determined.

Ans: B Level: Easy Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Application

32. On the basis of the above data we can say that:

- A) Program D is the most efficient on economic grounds.
- B) Program C is the most efficient on economic grounds.
- C) Program B is the most efficient on economic grounds.
- D) Program A is the most efficient on economic grounds.

Ans: C Level: Moderate Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Calculation

33. An important problem in evaluating public projects through the use of cost-benefit analysis is that:

- A) real costs cannot be stated in monetary terms.
- B) one must decide whether to compare total costs and total benefits or marginal costs and marginal benefits.
- C) negative externalities and benefits associated with such projects may be difficult to measure.
- D) the funding of such projects is inherently inflationary.

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

Use the following to answer questions 34-37:

Answer the next question(s) based on the following information. Way-Below Normal University has found it necessary to institute a crime-control program on its campus to deal with the high costs of theft and vandalism. The university is now considering several alternative levels of crime control. This table shows the expected annual costs and benefits of these alternatives.

	Total costs per year	Total benefits per year (reduction in the costs of crime)
Level One -1 security officer	\$ 20,000	\$ 80,000
Level Two -1 security officer with guard dog	30,000	120,000
Level Three -1 security officer with guard dog and patrol car	40,000	140,000
Level Four -2 security officers with guard dog	50,000	155,000
Level Five -2 security officers with guard dog and patrol car	60,000	160,000

34. Refer to the above information. The marginal costs of additional levels of crime control are:

- A) \$60,000 for Level Two.
- B) \$20,000 for Level Three.
- C) \$5,000 for Level Five.
- D) \$10,000 for Levels Two, Three, Four, and Five.

Ans: D Level: Moderate Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Calculation

35. Refer to the above information. The marginal benefits of crime control for Level Two are:

- A) \$20,000.
- B) \$40,000.
- C) \$60,000.
- D) \$140,000.

Ans: B Level: Moderate Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Calculation

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

36. Refer to the above information. If Way-Below undertakes Level Three:

- A) total benefits will be less than total costs.
- B) marginal costs will exceed marginal benefits.
- C) there would be an under-allocation of resources to crime control.
- D) there would be an over-allocation of resources to crime control.

Ans: C Level: Moderate Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Application

37. Refer to the above information. Based on cost-benefit analysis, Way-Below should undertake

- A) Two.
- B) Three.
- C) Four.
- D) Five.

Ans: C Level: Difficult Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Calculation

38. Refer to the information below:

<u>Project</u>	<u>Marginal cost (in millions)</u>	<u>Marginal benefit (in millions)</u>
1	\$ 8	\$11
2	11	13
3	18	17
4	28	23

A government is considering undertaking one or more construction project(s). The estimated marginal costs and benefits of each project are given in the above table. What is the total amount that the government should spend on construction project?

- A) \$ 8 million.
- B) \$ 11 million.
- C) \$ 18 million.
- D) \$ 19 million.

Ans: D Level: Difficult Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Calculation

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

Use the following to answer questions 39-41:

The following data are for a series of increasingly extensive flood control projects:

PLANS	Total Cost per year	Total benefit per year
Plan A--levees	\$10,000	\$16,000
Plan B--small reservoir	24,000	36,000
Plan C--medium reservoir	44,000	52,000
Plan D--large reservoir	72,000	64,000

39. Refer to the above data. For Plan D marginal costs and marginal benefits are:

- A) \$72,000 and \$64,000 respectively.
- B) \$28,000 and \$12,000 respectively.
- C) \$24,000 and \$18,000 respectively.
- D) \$16,000 and \$28,000 respectively.

Ans: B Level: Moderate Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Calculation

40. Refer to the above data. On the basis of cost-benefit analysis government should:

- A) undertake Plan D.
- B) undertake Plan C.
- C) undertake Plan B.
- D) undertake Plan A.

Ans: C Level: Moderate Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Application

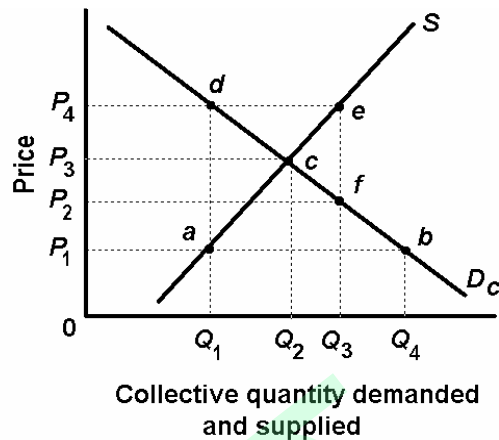
41. Refer to the above data. Plan C entails:

- A) marginal benefits in excess of marginal costs.
- B) fewer spillovers than either Plan A or Plan B.
- C) an over-allocation of resources to flood control.
- D) an under-allocation of resources to flood control.

Ans: C Level: Moderate Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

Use the following to answer questions 42-45:



42. Refer to the above supply and demand graph for a public good. Point c on the graph shows where the:

- A) total benefit equals the total cost of the public good.
- B) marginal benefit equals the marginal cost of the public good.
- C) average benefit equals the average cost of the public good.
- D) total benefit equals the marginal cost of the public good.

Ans: B Level: Easy Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Graphic

43. Refer to the above supply and demand graph for a public good. Line segment ad represents the amount at Q_1 by which the:

- A) marginal benefit of this public good is less than the marginal cost.
- B) total benefit of this public good is less than the total cost.
- C) marginal benefit of this public good is greater than the marginal cost.
- D) total benefit of this public good is greater than the total cost.

Ans: C Level: Easy Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Graphic

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

44. Refer to the above supply and demand graph for a public good. Which one of the following statements is correct?
- A) The supply curve reflects the marginal cost and the demand curve reflects the marginal benefit of this public good.
 - B) The demand curve reflects the marginal cost and the supply curve reflects the marginal benefit of this public good.
 - C) There will be an overallocation of resources at output level Q_1 .
 - D) There will be an underallocation of resources at output level Q_3 .

Ans: A Level: Easy Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Graphic

45. Refer to the above supply and demand graph for a public good. Which line segment would indicate the amount by which the marginal benefit of this public good is greater than the marginal cost?
- A) de
 - B) da
 - C) ef
 - D) ab

Ans: B Level: Easy Main Topic: 15.1 Public goods Page: 352-353
Subtopic: Cost-benefit analysis Type: Graphic

46. A negative externality or external cost occurs when:
- A) firms fail to achieve allocative efficiency.
 - B) firms fail to achieve productive efficiency.
 - C) price exceeds marginal cost.
 - D) the total cost of producing a good exceeds the costs borne by the producer.

Ans: D Level: Easy Main Topic: 15.2 Externalities Page: 354
Subtopic: Negative externalities Type: Application

47. Which of these is an example of an external cost?
- A) an increase in the value of land you own when a nearby development is completed.
 - B) the costs paid by a company to build an automated factory.
 - C) decreased property values in a neighbourhood where several houses are burglarized.
 - D) the higher price you pay when you buy a heavily advertised product.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 354
Subtopic: Negative externalities Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

48. In a market where there are external or negative externalities associated with consumption and production, the equilibrium will not be efficient because:
- A) price will be greater than MC.
 - B) firms will shut down until costs are reduced.
 - C) costs of production will, on average, be too high.
 - D) too many resources will be allocated to production of the good.

Ans: D Level: Moderate Main Topic: 15.2 Externalities Page: 354
Subtopic: Negative externalities Type: Application

49. When producing a good generates external or negative externalities, the private market for that good tends to produce too:
- A) much of the product at too low a price.
 - B) much of the product at too high a price..
 - C) little of the product at too low a price.
 - D) little of the product at too high a price

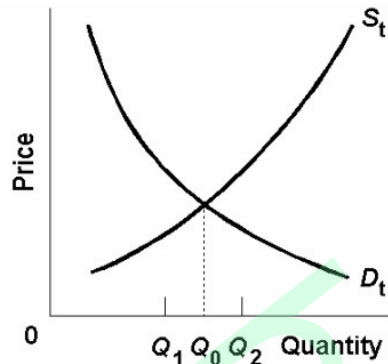
Ans: A Level: Easy Main Topic: 15.2 Externalities Page: 354
Subtopic: Negative externalities Type: Application

50. If a good that generates negative externalities was priced to take into account these negative externalities, then its:
- A) price would decrease and its output would increase.
 - B) output would increase but its price would remain constant.
 - C) price would increase and its output would decrease.
 - D) price would increase but its output would remain constant.

Ans: C Level: Moderate Main Topic: 15.2 Externalities Page: 354
Subtopic: Negative externalities Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

51. Refer to the below diagram of the market for product X. Curve S_t embodies all costs (including spillovers) and D_t embodies all benefits (including spillovers) associated with the production and consumption of X. Assuming the equilibrium output is Q_2 , we can conclude that the existence of spillover:



- A) costs has resulted in an over-allocation of resources to X.
- B) benefits has resulted in an over-allocation of resources to X.
- C) costs has resulted in an under-allocation of resources to X.
- D) benefits has resulted in an under-allocation of resources to X.

Ans: A Level: Moderate Main Topic: 15.2 Externalities Page: 354
Subtopic: Negative externalities Type: Graphic

52. A positive externality or external benefit occurs when:
- A) product differentiation increases the variety of products available to consumers.
 - B) the benefits associated with a product exceed those accruing to people who consume it.
 - C) a firm produces at the $P = MC$ output.
 - D) economic profits are zero in the long run.

Ans: B Level: Easy Main Topic: 15.2 Externalities Page: 354
Subtopic: Positive externalities Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

53. Which of the following is an example of externalities?

- A) There are not enough tickets available to concerts of extremely popular performers.
- B) The price of medical care has risen dramatically as a result of the introduction of sophisticated equipment and techniques.
- C) Polio shots and chest x-rays provide widespread benefits to the community as a whole as well as to the individuals who get them.
- D) Extensive decreases in the prices of electronic equipment resulted in large numbers of bankruptcies in the computer industry.

Ans: C Level: Moderate Main Topic: 15.2 Externalities Page: 354
Subtopic: Positive externalities Type: Application

54. If some activity creates external benefits as well as private benefits, then economic theory suggests that the activity ought to be:

- A) taxed.
- B) prohibited.
- C) subsidized.
- D) left alone.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 354
Subtopic: Positive externalities Type: Application

55. If there are external or positive externalities associated with consumption and production of a product, it can be said that the:

- A) government should consider placing a special tax on producers.
- B) government should consider prohibiting the production of the commodity.
- C) supply curve for the product lies too far to the right to provide an efficient allocation of resources.
- D) demand curve understates the total benefit from the product and resources are under-allocated to its production.

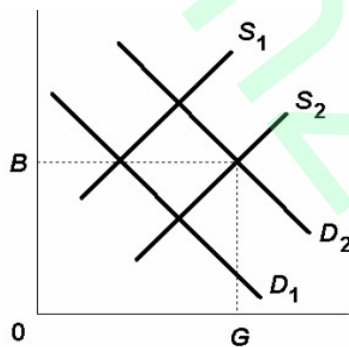
Ans: D Level: Easy Main Topic: 15.2 Externalities Page: 354
Subtopic: Positive externalities Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

56. If there are external or positive externalities associated with the consumption of a good or service:
- A) the private demand curve will overestimate the true demand curve.
 - B) the private demand curve will underestimate the true demand curve.
 - C) consumers will be willing to pay for all these benefits in private markets.
 - D) the market demand curve will be the vertical summation of the individual demand costs.

Ans: B Level: Easy Main Topic: 15.2 Externalities Page: 354
Subtopic: Positive externalities Type: Application

57. Refer to the below competitive market diagram for product Z. Assume that the current market demand and supply curves for Z are D_2 and S_2 . If there are substantial positive externalities associated with the production of Z, it can be argued that:

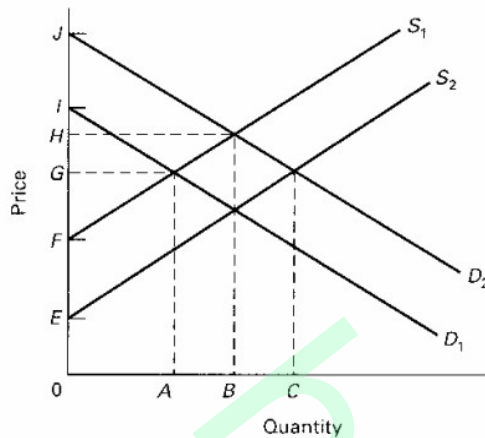


- A) efficient resource allocation occurs at output G and price B because the market mechanism does not measure all benefits.
- B) an output smaller than G would improve resource allocation.
- C) government should levy a per unit excise tax on Z to shift the demand curve toward D_1 .
- D) an output greater than G would result in a more efficient allocation of resources.

Ans: D Level: Moderate Main Topic: 15.2 Externalities Page: 354
Subtopic: Positive externalities Type: Graphic

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

58. Refer to the below supply and demand graph. Point A represents the current equilibrium level of output of this product and point B represents the optimal level of output from society's perspective. This supply and demand graph indicates that there is (are):

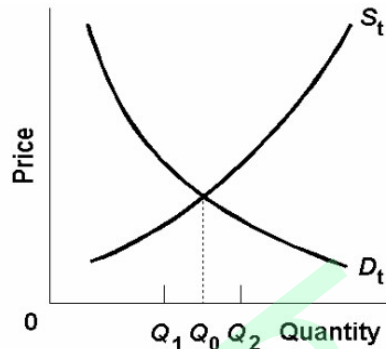


- A) positive externalities to the production of this product.
- B) negative externalities to the production of this product.
- C) an overallocation of resources to the production of this product.
- D) a negative externality from the production of this product.

Ans: A Level: Difficult Main Topic: 15.2 Externalities Page: 354
Subtopic: Positive externalities Type: Graphic

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

59. Refer to the below diagram of the market for product X. Curve S_t embodies all costs (including spillovers) and D_t embodies all benefits (including spillovers) associated with the production and consumption of X. Assuming the equilibrium output is Q_1 , we can conclude that the existence of spillover:



- A) costs has resulted in an over-allocation of resources to X.
- B) benefits has resulted in an over-allocation of resources to X.
- C) costs has resulted in an under-allocation of resources to X.
- D) benefits has resulted in an under-allocation of resources to X.

Ans: D Level: Moderate Main Topic: 15.2 Externalities Page: 354
Subtopic: Positive externalities Type: Graphic

60. The Coase Theorem states that:

- A) government should levy excise taxes on firms which generate spillover or external costs.
- B) taxes should be levied such that they change private behavior as little as possible.
- C) bargaining between private parties will remedy externality problems where property rights are clearly defined, the number of people involved are few, and bargaining costs are small.
- D) trading of votes to secure favorable voting outcomes may increase efficiency.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 355
Subtopic: Individual bargaining: Coase Theorem Type: Definition

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

61. The Coase Theorem:

- A) applies only to circumstances in which externalities are extensive and bargaining costs are high.
- B) holds that the median voter will decide the outcome of elections.
- C) states that in some circumstances majority voting can yield inconsistent results.
- D) suggests that in some circumstances government intervention is not needed to resolve externality problems.

Ans: D Level: Easy Main Topic: 15.2 Externalities Page: 355
Subtopic: Individual bargaining: Coase Theorem Type: Application

62. The proposition that under some circumstances externalities can get resolved through private negotiation is known as:

- A) the paradox of externalities.
- B) the median-voter theory.
- C) the Coase Theorem.
- D) logrolling.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 355
Subtopic: Individual bargaining: Coase Theorem Type: Definition

63. Suppose that a large tree on Shawn's property is blocking Sam's view of the lake below. Shawn accepts Sam's offer to pay Shawn \$100 for the right to cut down the tree. This situation describes:

- A) the Coase Theorem.
- B) the diamond-water paradox.
- C) logrolling.
- D) a market for externality rights.

Ans: A Level: Easy Main Topic: 15.2 Externalities Page: 355
Subtopic: Individual bargaining: Coase Theorem Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

64. Near an ocean beach, a high-rise building is being constructed that will block the scenic view of the ocean by the residents of a low-rise building. The Coase Theorem suggests that this type of dispute between the owners of high-rise and low-rise buildings would best be resolved by:
- A) the owners themselves.
 - B) city government officials.
 - C) a zoning ordinance restricting high-rise buildings.
 - D) a government fine for the builder of the high-rise.

Ans: A Level: Moderate Main Topic: 15.2 Externalities Page: 355
Subtopic: Individual bargaining: Coase Theorem Type: Application

65. One condition for individual bargaining to occur according to the Coase Theorem is that there must be:
- A) clearly defined property rights.
 - B) many people affected and involved.
 - C) government intervention to establish bargaining.
 - D) government creation of a market for externalities.

Ans: A Level: Easy Main Topic: 15.2 Externalities Page: 355-356
Subtopic: Liability rules and lawsuits Type: Application

66. Which one of the following is not one of the conditions for the Coase Theorem to hold?
- A) The ownership of property is clearly defined.
 - B) The number of people involved is small.
 - C) The amount of money disputed is minor.
 - D) The costs of bargaining are negligible.

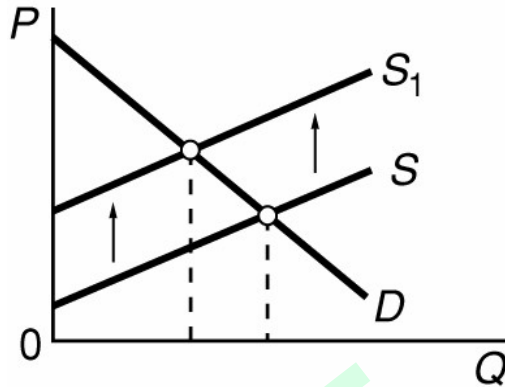
Ans: C Level: Moderate Main Topic: 15.2 Externalities Page: 355-356
Subtopic: Liability rules and lawsuits Type: Application

67. Clearly defined property rights and liability rules reduce negative costs by:
- A) threatening the perpetrators with lawsuits.
 - B) shifting the perpetrators' market supply curve rightward.
 - C) shifting the perpetrators' market demand curve leftward.
 - D) creating a market for externality rights.

Ans: A Level: Moderate Main Topic: 15.2 Externalities Page: 355-356
Subtopic: Liability rules and lawsuits Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

Use the following to answer questions 68-69:



68. Refer to the above diagram in which S is the market supply curve and S_1 is a supply curve comprising all costs of production, including external costs. Assume that the number of people affected by these external costs is large. Without government interference, this market will result in:

A) an optimal allocation of society's resources.
B) an under-allocation of resources to this product.
C) an over-allocation of resources to this product.
D) a higher price than is consistent with an optimal allocation of resources.

Ans: C Level: Moderate Main Topic: 15.2 Externalities
Page: 356-357 Subtopic: Government intervention Type: Graphic

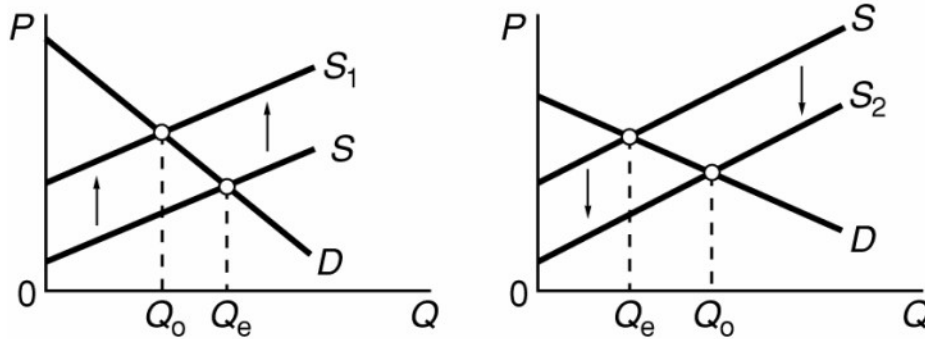
69. Refer to the above diagram in which S is the market supply curve and S_1 is a supply curve comprising all costs of production, including external costs. Assume that the number of people affected by these external costs is large. If the government wishes to establish an optimal allocation of resources in this market, it should:

A) not intervene because the market outcome is optimal.
B) subsidize consumers so that the market demand curve shifts leftward.
C) subsidize producers so that the market supply curve shifts leftward (upward).
D) tax producers so that the market supply curve shifts leftward (upward).

Ans: D Level: Difficult Main Topic: 15.2 Externalities
Page: 356-357 Subtopic: Government intervention Type: Graphic

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

Use the following to answer questions 70-72:



70. Refer to the above diagrams for two separate product markets. Assume that society's optimal level of output in each market is Q_0 and that government purposely shifts the market supply curve from S to S_1 in diagram (a) and from S to S_2 in diagram (b). We can conclude that the government is correcting for:

- A) negative externalities in diagram (a) and positive externalities in diagram (b).
- B) positive externalities in diagram (a) and negative externalities in diagram (a).
- C) negative externalities in both diagrams.
- D) positive externalities in both diagrams.

Ans: A Level: Moderate Main Topic: 15.2 Externalities

Page: 356-357 Subtopic: Government intervention Type: Graphic

71. Refer to the above diagrams for two separate product markets. Assume that society's optimal level of output in each market is Q_0 and that government purposely shifts the market supply curve from S to S_1 in diagram (a) and from S to S_2 in diagram (b). The shift of the supply curve from S to S_1 in diagram (a) might be caused by a per unit:

- A) subsidy paid to the producers of this product.
- B) tax on the producers of this product.
- C) subsidy paid to the buyers of this product.
- D) tax on the buyers of this product.

Ans: B Level: Moderate Main Topic: 15.2 Externalities

Page: 356-357 Subtopic: Government intervention Type: Graphic

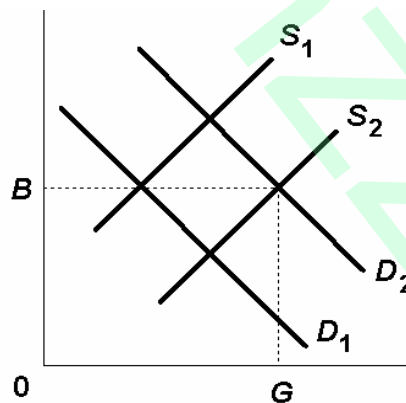
Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

72. Refer to the above diagrams for two separate product markets. Assume that society's optimal level of output in each market is Q_0 and that government purposely shifts the market supply curve from S to S_1 in diagram (a) and from S to S_2 in diagram (b). The shift of the supply curve from S to S_2 in diagram (b) might be caused by a per unit:
- A) subsidy paid to the producers of this product.
 - B) tax on the producers of this product.
 - C) subsidy paid to the buyers of this product.
 - D) tax on the buyers of this product.

Ans: A Level: Difficult Main Topic: 15.2 Externalities

Page: 356-357 Subtopic: Government intervention Type: Graphic

73. Refer to the below competitive market diagram for product Z. Assume that the current market demand and supply curves for Z are D_2 and S_2 . If there are substantial negative externalities associated with the production of Z, it can be argued that:



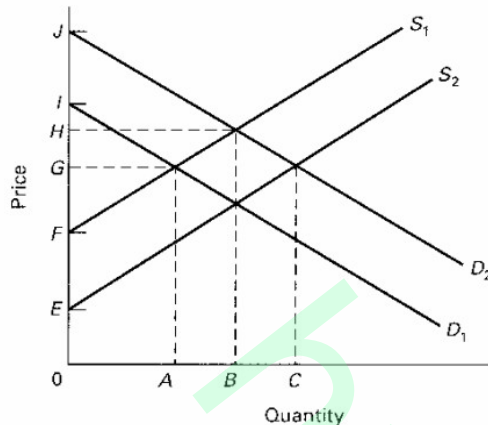
- A) a price lower than B and an output greater than G would improve resource allocation.
- B) government should levy a per unit excise tax on Z to shift the demand curve to the right.
- C) government should levy a per unit excise tax on Z to shift the supply curve toward S_1 .
- D) government should subsidize the production of Z to lower equilibrium price and increase equilibrium output.

Ans: C Level: Difficult Main Topic: 15.2 Externalities

Page: 356-357 Subtopic: Government intervention Type: Graphic

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

74. Refer to the below supply and demand graph. Point A represents the current equilibrium level of output of this product and point B represents the optimal level of output from society's perspective. If government decides to correct this externality with a subsidy to consumers, then the:



- A) demand curve will shift from D_2 to D_1 .
- B) supply curve will shift from S_1 to S_2 .
- C) demand curve will shift from D_1 to D_2 .
- D) supply curve will shift from S_2 to S_1 .

Ans: C Level: Moderate Main Topic: 15.2 Externalities
Page: 356-357 Subtopic: Government intervention Type: Graphic

75. It has been proposed that a government agency be charged with the responsibility for determining the amount of pollution which the atmosphere or a body of water can safely recycle, and sell these limited rights to polluters. What would be the advantage of such a market for pollution rights?
- A) Government agencies can make a great deal of money.
 - B) Pollution would be eliminated because nobody would want to pay for such a right.
 - C) The quality of water or air can be maintained at some acceptable standard through economic incentives.
 - D) The social consciousness of people would be raised as they obtain more appreciation for the importance of conservation.

Ans: C Level: Moderate Main Topic: 15.2 Externalities
Page: 356-357 Subtopic: Government intervention Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

76. If the production of a product or service involves external benefits, then the government can improve efficiency in the market by?:
- A) providing a subsidy to correct for an over-allocation of resources.
 - B) providing a subsidy to correct for an under-allocation of resources.
 - C) imposing a corrective tax to correct for an over-allocation of resources.
 - D) imposing a corrective tax to correct for an under-allocation of resources.

Ans: B Level: Easy Main Topic: 15.2 Externalities Page: 356-357
Subtopic: Government intervention Type: Application

77. Refer to the information below. Which of the following policies would be most appropriate for dealing with this problem?

It is the custom for paper mills located alongside the Layzee River to discharge waste products into the river. Operators of hydroelectric generating plants on the river find that they must clean up the river's water before it flows through their equipment.

- A) Levy a tax on the consumers of paper products and use the tax revenues to conduct research on new energy sources.
- B) Levy a tax on the consumers of electricity and use the tax revenues to subsidize the consumers of paper products.
- C) Levy a tax on the producers of electricity and use the tax revenues to clean up the river.
- D) Levy a tax on the producers of paper products and use the tax revenues to clean up the river.

Ans: D Level: Moderate Main Topic: 15.2 Externalities Page: 356-357
Subtopic: Government intervention Type: Application

78. The tendency for society to overuse and therefore abuse common resources is called the:
- A) law of conservation of matter and energy.
 - B) law of diminishing returns.
 - C) tragedy of the commons.
 - D) the Coase Theorem.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 358
Subtopic: A market-based approach to negative externalities Type: Definition

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

79. The tragedy of the commons is the tendency of:
- A) consumers to over consume scarce resources that are in limited supply.
 - B) government to over regulate common property resources.
 - C) private companies to use bribes and corruption of government officials to pollute the environment.
 - D) society to overuse common property resources to which no one holds property rights.

Ans: D Level: Easy Main Topic: 15.2 Externalities Page: 358
Subtopic: A market-based approach to negative externalities Type: Definition

80. The tendency of society to overuse and abuse common property resources to which no one holds property rights is referred to as:
- A) an asymmetric information problem.
 - B) the law of conservation of matter.
 - C) the tragedy of the commons.
 - D) the trading of pollution rights

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 358
Subtopic: A market-based approach to negative externalities Type: Definition

81. The tragedy of the commons is the idea that:
- A) society has a tendency to overuse and thus abuse common resources.
 - B) total negative externalities in society far outweigh total external benefits.
 - C) matter can be transformed to other matter or into energy but can never vanish.
 - D) crime rates typically are higher in public places than where property is privately owned.

Ans: A Level: Easy Main Topic: 15.2 Externalities Page: 358
Subtopic: A market-based approach to negative externalities Type: Definition

82. The overgrazing of cattle on public range lands would be an example of:
- A) a moral hazard problem.
 - B) an adverse selection problem.
 - C) the tragedy of the commons.
 - D) the market for pollution.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 358
Subtopic: A market-based approach to negative externalities Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

83. The primary rationale for establishing a public market for pollution rights is that:
- A) private industry has not done an effective job in marketing pollution rights.
 - B) public agencies could make a great deal of money by selling such rights.
 - C) the rights to use rivers, lakes, and other public lands are often held "in common."
 - D) no discharge of pollutants should be allowed so that the quality of the environment can be maintained.

Ans: C Level: Moderate Main Topic: 15.2 Externalities Page: 358-359
Subtopic: A market-based approach to negative externalities Type: Application

84. In a market for pollution rights an increase in demand would:
- A) raise the price of pollution rights, but leave the quantity unchanged.
 - B) stimulate the economic incentive to pollute.
 - C) increase the actual amount of pollution.
 - D) induce an increase in the supply of pollution rights.

Ans: A Level: Moderate Main Topic: 15.2 Externalities Page: 358-359
Subtopic: A market-based approach to negative externalities Type: Application

85. The creation of markets for pollution rights would provide:
- A) neither an incentive not to pollute nor revenue for environmental improvement.
 - B) funds for environmental improvement, but would not provide an incentive to refrain from polluting.
 - C) an incentive not to pollute, but would not provide funds for environmental improvement.
 - D) both an incentive not to pollute and revenue which could be devoted to environmental improvement.

Ans: D Level: Moderate Main Topic: 15.2 Externalities Page: 359
Subtopic: A market-based approach to negative externalities Type: Application

86. The creation of a market for pollution rights would:
- A) reduce air and water pollution to zero.
 - B) stimulate the search for pollution-reducing technologies.
 - C) induce an increase in the supply of pollution rights.
 - D) be in conflict with the concept of user charges.

Ans: B Level: Moderate Main Topic: 15.2 Externalities Page: 359
Subtopic: A market-based approach to negative externalities Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

87. A market for pollution rights can be expected to:

- A) eliminate all pollution.
- B) produce a shortage of pollution.
- C) encourage potential polluters to increase emissions.
- D) provide potential polluters with a monetary incentive to reduce emissions.

Ans: D Level: Easy Main Topic: 15.2 Externalities Page: 359

Subtopic: A market-based approach to negative externalities Type: Application

88. There is little incentive for an individual firm to voluntarily internalize its negative externalities because to do so would:

- A) cause it to forgo the diseconomies of agglomeration.
- B) shift its cost curves downward.
- C) put it at a competitive disadvantage compared to rival producers.
- D) make it subject to emission or effluent fees.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 359

Subtopic: A market-based approach to negative externalities Type: Application

89. The external costs of severe air pollution are usually paid:

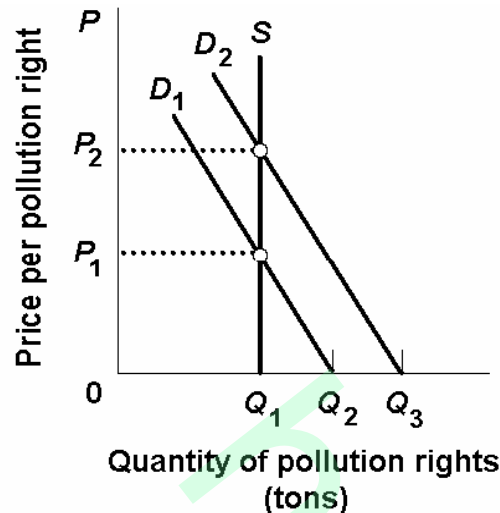
- A) by no one.
- B) by the producer alone.
- C) in part by the public through higher medical bills.
- D) totally by the consumers who purchase the product.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 359

Subtopic: A market-based approach to negative externalities Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

Use the following to answer questions 90-92:



90. Refer to the above diagram of a market for pollution rights. Which of the following would best explain the P_1 to P_2 increase in price of pollution rights?
- A) implementation of improved technology for reducing pollution
 - B) an expansion of the number of firms
 - C) a subsidy of P_1P_2 to polluters
 - D) a shift of the supply curve of pollution rights from some point to the left of S to S .

Ans: B Level: Moderate Main Topic: 15.2 Externalities Page: 359
Subtopic: A market-based approach to negative externalities Type: Graphic

91. Refer to the above diagram of a market for pollution rights. The increase in the price of pollution rights from P_1 to P_2 will:
- A) reduce the quantity of pollution rights.
 - B) increase the quantity of pollution rights.
 - C) increase the incentive for environmental groups to buy pollution rights.
 - D) increase the opportunity cost of polluting.

Ans: D Level: Moderate Main Topic: 15.2 Externalities Page: 359
Subtopic: A market-based approach to negative externalities Type: Graphic

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

92. Refer to the above diagram of a market for pollution rights. Without this market for pollution rights, the quantity (tons) of pollution would be:

- A) Q_3 , if demand is D_2 .
- B) Q_1 , if demand is D_1 .
- C) Q_2 , if demand is D_2 .
- D) Q_1 , if demand is D_2 .

Ans: A Level: Moderate Main Topic: 15.2 Externalities Page: 359

Subtopic: A market-based approach to negative externalities Type: Graphic

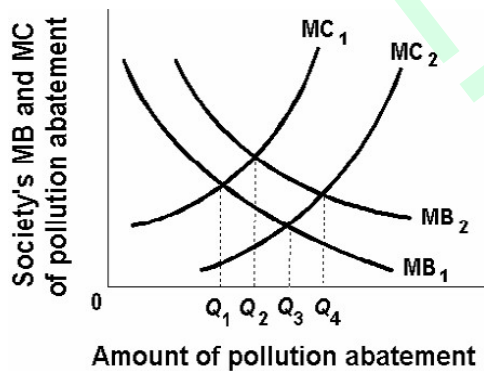
93. The socially optimal amount of pollution moderation occurs where society's marginal:

- A) benefit of moderation exceeds its marginal cost of moderation by the greatest amount.
- B) benefit of moderation equals its marginal cost of moderation.
- C) benefit of moderation is zero.
- D) cost of moderation is at its maximum.

Ans: B Level: Moderate Main Topic: 15.2 Externalities Page: 360

Subtopic: Society's optimal amount of externality reduction Type: Application

Use the following to answer questions 94-98:



94. Refer to the above diagram. From society's perspective, if MB_2 and MC_1 are relevant:

- A) Q_4 represents too little pollution moderation.
- B) Q_1 represents too little pollution moderation.
- C) Q_3 represents an optimal amount of pollution moderation.
- D) none of the above is true.

Ans: B Level: Moderate Main Topic: 15.2 Externalities Page: 360

Subtopic: Society's optimal amount of externality reduction Type: Graphic

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

95. Refer to the above diagram. With MB_1 and MC_1 , society's optimal amount of pollution moderation is:

- A) Q_1 .
- B) Q_2 .
- C) Q_3 .
- D) Q_4 .

Ans: A Level: Moderate Main Topic: 15.2 Externalities Page: 360
Subtopic: Society's optimal amount of externality reduction Type: Graphic

96. Refer to the above diagram. From society's perspective, if MB_1 and MC_2 are relevant:

- A) Q_4 represents too little pollution moderation.
- B) Q_1 represents too much pollution moderation.
- C) Q_2 represents an optimal amount of pollution moderation.
- D) none of the above is true.

Ans: D Level: Difficult Main Topic: 15.2 Externalities Page: 360
Subtopic: Society's optimal amount of externality reduction Type: Graphic

97. Refer to the above diagram. Which one of the following might shift the marginal cost curve from MC_1 to MC_2 ?

- A) major new studies strongly linking cancer to pollution
- B) improved technology for reducing pollution
- C) a change in consumer tastes from services to manufactured goods
- D) an increase in the price of recycled goods

Ans: B Level: Moderate Main Topic: 15.2 Externalities Page: 360
Subtopic: Society's optimal amount of externality reduction Type: Graphic

98. Refer to the above diagram. Which one of the following might shift the marginal benefit curve from MB_1 to MB_2 ?

- A) major new studies strongly linking cancer to pollution
- B) improved technology for reducing pollution
- C) a change in consumer tastes from manufacturing goods to services
- D) a decrease in the price of recycled goods

Ans: A Level: Moderate Main Topic: 15.2 Externalities Page: 360
Subtopic: Society's optimal amount of externality reduction Type: Graphic

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

99. The marginal benefit to society of reducing pollution declines with increases in pollution moderation because of the law of:

- A) increasing costs.
- B) diminishing returns.
- C) diminishing marginal utility.
- D) conservation of matter and energy.

Ans: C Level: Moderate Main Topic: 15.2 Externalities Page: 360
Subtopic: Society's optimal amount of externality reduction Type: Application

100. The marginal cost to society of reducing pollution rises with increases in pollution moderation because of the law of:

- A) diminishing marginal utility.
- B) conservation of matter and energy.
- C) demand.
- D) diminishing returns.

Ans: D Level: Moderate Main Topic: 15.2 Externalities Page: 360
Subtopic: Society's optimal amount of externality reduction Type: Application

Use the following to answer questions 101-102:



101. The MC curves in the above diagram slope upward because of the law of:

- A) demand.
- B) conservation of matter and energy.
- C) diminishing marginal utility.
- D) diminishing returns.

Ans: D Level: Easy Main Topic: 15.2 Externalities Page: 360
Subtopic: Society's optimal amount of externality-Reduction Type: Graphic

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

102. The MB curves in the above diagram slope downward because of the law of:

- A) conservation of matter and energy.
- B) diminishing returns.
- C) diminishing marginal utility.
- D) increasing cost.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 360

Subtopic: Society's optimal amount of externality-Reduction Type: Graphic

103. According to the 1997 Kyoto Protocol the industrially advance countries have agreed to:

- A) Cut their greenhouse gas emissions by the year 2012 between 6 to 8 percent below the 1990 level.
- B) Cut their greenhouse gas emissions by the year 2012 between 4 to 6 percent below the 1990 level.
- C) Cut their greenhouse gas emissions by the year 2012 between 2 to 4 percent below the 1990 level.
- D) Cut their greenhouse gas emissions by the year 2012 all together.

Ans: A Level: Easy Main Topic: 15.2 Externalities Page: 361

Subtopic: Climate change Type: Application

104. Economists stress that climate-change policies that reduce greenhouse gas emissions and thus slow or eliminate global warming:

- A) create benefits only.
- B) create costs only.
- C) create costs as well as benefits.
- D) is waste of time and money because climate change is not happening.

Ans: C Level: Easy Main Topic: 15.2 Externalities Page: 362

Subtopic: Climate change Type: Application

105. Where there is asymmetric information between buyers and sellers.

- A) product shortages will occur at the equilibrium price.
- B) product surpluses will occur at the equilibrium price.
- C) markets can produce inefficient outcomes.
- D) markets will fail due to the "free-rider problem."

Ans: C Level: Easy Main Topic: 15.3 Information failures Page: 363

Subtopic: Inadequate information about sellers Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

106. Sellers will opt out of markets in which:

- A) there are significant negative externalities.
- B) standardized products exist.
- C) there are only foreign buyers.
- D) information about buyers is inadequate, and some buyers can impose high costs on the sellers.

Ans: D Level: Easy Main Topic: 15.3 Information failures Page: 363
Subtopic: Inadequate information about sellers Type: Application

107. Which one of the following would be an example of where the government has intervened to correct a market failure caused by inadequate information about sellers?

- A) providing unemployment compensation insurance
- B) sponsoring legislation to reduce pollution
- C) licensing of medical doctors and surgeons
- D) requiring car drivers to buy auto insurance

Ans: C Level: Easy Main Topic: 15.3 Information failures Page: 363
Subtopic: Inadequate information about sellers Type: Application

108. Buyers will opt out of markets in which:

- A) there are significant negative externalities.
- B) standardized products are being produced.
- C) there is inadequate information about sellers and their products.
- D) there are only foreign sellers.

Ans: C Level: Easy Main Topic: 15.3 Information failures Page: 364
Subtopic: Inadequate information about buyers Type: Application

109. Inadequate information about buyers can cause market failure in the form of:

- A) an increase in the number of market sellers.
- B) an increase in the number of market buyers.
- C) an under-allocation of resources to the provision of the product.
- D) an over-allocation of resources to the provision of the product.

Ans: C Level: Moderate Main Topic: 15.3 Information failures Page: 364
Subtopic: Inadequate information about buyers Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

110. The moral hazard problem arises primarily because of:

- A) individual bargaining.
- B) negative externalities.
- C) asymmetric information.
- D) poorly defined property rights.

Ans: C Level: Easy Main Topic: 15.3 Information failures Page: 364
Subtopic: Inadequate seller information about buyers Type: Application

111. As it applies to insurance, the moral hazard problem is the tendency for:

- A) those most likely to collect on insurance to buy it.
- B) those who buy insurance to take less precaution in avoiding the insured risk.
- C) sellers to price discriminate.
- D) sellers to restrict output and charge high prices.

Ans: B Level: Easy Main Topic: 15.3 Information failures Page: 364
Subtopic: Inadequate seller information about buyers Type: Application

112. Because the federal government typically provides disaster relief to farmers, many farmers do not buy crop insurance even though it is federally subsidized. This illustrates:

- A) the adverse selection problem.
- B) the moral hazard problem.
- C) a failure of the market for externalities.
- D) the existence of external benefits.

Ans: B Level: Easy Main Topic: 15.3 Information failures Page: 364
Subtopic: Inadequate seller information about buyers Type: Application

113. If a person drives with less care after purchasing auto insurance, this situation would be an example of a(n):

- A) Coase Theorem problem.
- B) negative externality problem.
- C) adverse selection problem.
- D) moral hazard problem.

Ans: D Level: Easy Main Topic: 15.3 Information failures Page: 364
Subtopic: Inadequate seller information about buyers Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

114. Which would be an example of a moral hazard problem?

- A) a person in poor health who purchases life insurance
- B) a person who is taxed on the purchase of a carton of cigarettes
- C) a person who purchases auto insurance and then drives more recklessly
- D) a person who receives a subsidy from the Federal government to insulate a home

Ans: C Level: Moderate Main Topic: 15.3 Information failures Page: 364
Subtopic: Inadequate seller information about buyers Type: Application

115. Upon buying a car having airbags, Joe begins to drive recklessly. This is an example of the:

- A) principle-agent problem.
- B) adverse selection problem.
- C) moral hazard problem.
- D) free-rider problem.

Ans: C Level: Easy Main Topic: 15.3 Information failures Page: 364
Subtopic: Inadequate seller information about buyers Type: Application

116. As it applies to insurance, the adverse selection problem is the tendency for:

- A) those most likely to collect on insurance to buy it.
- B) those who buy insurance to take less precaution in avoiding the insured risk.
- C) sellers to price discriminate.
- D) sellers to restrict output and charge high prices.

Ans: A Level: Moderate Main Topic: 15.3 Information failures Page: 365
Subtopic: Inadequate seller information about buyers Type: Application

117. Which would be an example of an adverse selection problem?

- A) a person in ill health who purchases disability insurance
- B) a person who buys a product that contributes to pollution
- C) a person who purchases home insurance and then is less careful
- D) a person who lobbies for government intervention to settle a property rights dispute

Ans: A Level: Easy Main Topic: 15.3 Information failures Page: 365
Subtopic: Inadequate seller information about buyers Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

118. There is an adverse selection problem in the market for used cars because:

- A) owners of poor-quality cars have a strong incentive to sell their cars, while owners of high-quality used cars have more incentive to keep their cars.
- B) owners of high-quality cars will have a strong incentive to sell their cars to obtain the higher prices, while owners of poor-quality cars will have more incentive to keep theirs.
- C) most people prefer new cars, but the high prices for new cars force most of them to buy used cars.
- D) government actions to pass "lemon" laws have reduced information on used cars.

Ans: A Level: Difficult Main Topic: 15.3 Information failures Page: 365
Subtopic: Inadequate seller information about buyers Type: Application

119. Suppose a firm offers its workers a "cafeteria plan" in which it allows workers to allocate a set amount of fringe benefit money toward specific insurance. Mary, who has five kids needing braces, selects the family dental coverage. This is an example of the:

- A) free-rider problem.
- B) principle-agent problem.
- C) adverse selection problem.
- D) moral hazard problem.

Ans: C Level: Moderate Main Topic: 15.3 Information failures Page: 365
Subtopic: Inadequate seller information about buyers Type: Application

120. Firms are not likely to provide sufficient workplace safety if:

- A) workers are unaware of workplace hazards.
- B) they have some degree of monopoly power.
- C) they are pure competitors and therefore price takers.
- D) they are profit-maximizers.

Ans: A Level: Easy Main Topic: 15.3 Information failures Page: 365
Subtopic: Inadequate seller information about buyers Type: Application

121. Government can promote workplace safety by:

- A) breaking up concentrations of monopoly power.
- B) reducing monopsony power.
- C) promoting the use of recycled inputs.
- D) providing workers information about workplace hazards.

Ans: D Level: Easy Main Topic: 15.3 Information failures Page: 365
Subtopic: Inadequate seller information about buyers Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

122. Which action would counteract the tendency for poor-quality products to drive out high-quality products in a market?

- A) the increased use of the market to sell products
- B) the availability of transferable warranties for products
- C) less information from the government
- D) less information from sellers

Ans: B Level: Moderate Main Topic: 15.3 Information failures Page: 366
Subtopic: Qualification Type: Application

123. To overcome the lack of information, many firms offer:

- A) information about government interventions.
- B) information about themselves and their products.
- C) information about the external benefits and costs of their product.
- D) information about buyers of their products.

Ans: B Level: Easy Main Topic: 15.3 Information failures Page: 366
Subtopic: Qualification Type: Application

124. The health care sector in Canada is:

- A) a competitive market industry.
- B) not a competitive market industry.
- C) private.
- D) a competitive market industry and thus desirable.

Ans: B Level: Easy Main Topic: 15.4 The economics of health care
Page: 366-367 Subtopic: peculiarities of the health care market Type: Application

125. The health care insurance can change the people's behaviour in two ways which are:

- A) some insured people might be less careful about their health and, have greater incentive to use the health care more intensively.
- B) some insured people are more careful about their health and, use the health care services less intensively.
- C) Some insured people might be less careful about their health and, use the health care services less intensively.
- D) Some insured people might be more careful about their health and, have greater incentive to use the health care more intensively.

Ans: A Level: Easy Main Topic: 15.4 The economics of health care
Page: 367 Subtopic: peculiarities of the health care market Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

126. The health care market is characterized by:

- A) extensive negative externalities.
- B) significant positive externalities.
- C) perfect knowledge by both buyers and sellers.
- D) perfectly elastic demand.

Ans: B Level: Easy Main Topic: 15.4 The economics of health care

Page: 367 Subtopic: peculiarities of the health care market Type: Application

127. If the existence of health insurance increases one's incentive to use the health care system more intensively, this is an illustration of:

- A) the adverse selection problem.
- B) the benefits-received principle.
- C) the moral hazard problem.
- D) the Coase Theorem.

Ans: C Level: Moderate Main Topic: 15.4 The economics of health care

Page: 367 Subtopic: peculiarities of the health care market Type: Application

128. The problem of asymmetric information in the case of health care is that:

- A) neither health care buyers nor providers are well-informed.
- B) health care providers are well-informed, but buyers are not.
- C) the outcomes of many complex medical procedures cannot be predicted.
- D) health care providers and the consumers are equally informed.

Ans: B Level: Moderate Main Topic: 15.4 The economics of health care

Page: 367 Subtopic: peculiarities of the health care market Type: Application

129. A major implication of asymmetric information in the case of health care is that:

- A) health care suppliers may reduce the supply of health care.
- B) collusion between health care suppliers and purchasers may accelerate the rise in costs.
- C) resources may be underallocated to the health care industry.
- D) health care suppliers may increase the demand for health care.

Ans: D Level: Easy Main Topic: 15.4 The economics of health care

Page: 367 Subtopic: peculiarities of the health care market Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

130. The fact that the health care consumers in Canada do not pay for the service:
- A) results in excess production of health care services.
 - B) results in excess consumption of health care services.
 - C) results in over production and less consumption of health care services.
 - D) results in less production of health care services.

Ans: B Level: Easy Main Topic: 15.4 The economics of health care Page: 367
Subtopic: Third party payments: Insurance Type: Application

131. The solution to the existing problem of excess demand in the Canadian health care services is:
- A) to increase the supply by collecting higher taxes.
 - B) to charge a user fee to reduce the quantity demanded.
 - C) to divert more resources to the health care industry.
 - D) all of the above.

Ans: D Level: Moderate Main Topic: 15.4 The economics of health care
Page: 368 Subtopic: possible solutions to excess demand Type: Application

132. At the present time Canada spends about 10% of its GDP on the health care while:
- A) the U.S. health care system consumes about 12% of its GDP.
 - B) the U.S. health care system consumes about 14% of its GDP.
 - C) the U.S. health care system consumes about 16% of its GDP.
 - D) the U.S. health care system consumes about 8% of its GDP.

Ans: C Level: Moderate Main Topic: 15.4 The economics of health care
Page: 368 Subtopic: possible solutions to excess demand Type: Application

133. Solutions to the existing excess demand for health care services in Canada, are:
- A) limiting the access to the health care and at the same time reducing the supply of health care services.
 - B) establishing user fees and at the same time diverting some of the resources now used in the health care system to an alternative.
 - C) switching to private health care and denying the service to terminal patients.
 - D) either increasing the supply by diverting more tax revenues to health care, or establishing user fees to reduce quantity demanded of health care services.

Ans: D Level: Moderate Main Topic: 15.4 The economics of health care
Page: 368 Subtopic: possible solutions to excess demand Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

134. Installing a car alarm system by some car owners could simply redistribute the crime rather than reducing it. This is because:
- A) The equipped vehicles are less subject to theft.
 - B) The vehicles that do not have the alarm system are creating an external benefit to other automobiles.
 - C) Law prohibits installing such a device in an automobile.
 - D) All of the above

Ans: A Level: Easy Main Topic: Last word Page: 369 Type: Application

135. If installation of an auto antitheft device called Lojack creates positive externalities as well as private benefits to the car owners, then the economic theory suggest that this activity should be:
- A) Prohibited
 - B) left alone
 - C) taxed
 - D) subsidized

Ans: D Level: Easy Main Topic: Last word Page: 369 Type: Application

136. The Lojack is an example of a product that:
- A) produces a positive externality.
 - B) produces a negative externality.
 - C) contributes to global warming.
 - D) contributes to the tragedy of the commons.

Ans: A Level: Moderate Main Topic: Last word Page: 369 Type: Application

137. Private car alarm systems with red blinking lights would tend to:
- A) decrease the likelihood of car thefts to all car owners.
 - B) increase the likelihood of car thefts to all car owners.
 - C) redistribute the likelihood of a car theft from those car owners with such a device to those car owners without such a device.
 - D) offer a positive externality to those car owners who did not pay for the device.

Ans: C Level: Moderate Main Topic: Last word Page: 369
Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

138. According to a study by economists Ian Ayres and Steven Levitt, the division of the total benefit of the Lojack to its owners and all other car owners is:

- A) 100% to the car owner with a Lojack, 0% to other car owners.
- B) 75% to the car owner with a Lojack, 25% to other car owners.
- C) 50% to the car owner with a Lojack, 50% to other car owners.
- D) 10% to the car owner with a Lojack, 90% to other car owners.

Ans: D Level: Moderate Main Topic: Last word Page: 369 Type: Application

139. The optimal quantity of a public good occurs where the marginal benefit of the citizen who has the highest preference for the good just equals the good's marginal cost.

Ans: False Level: Easy Main Topic: 15.1 Public goods Page: 350
Type: Definition

140. A demand curve for a public good is determined by summing horizontally the individual demand curves for the public good.

Ans: False Level: Moderate Main Topic: 15.1 Public goods Page: 351
Type: Application

141. Cost-benefit analysis is frequently difficult to apply because it is difficult to quantify the full benefits of a public good or service.

Ans: True Level: Easy Main Topic: 15.1 Public goods Page: 351-353
Type: Application

142. The principle that private negotiation can resolve potential externalities without resort to government intervention is known as the Coase Theorem.

Ans: True Level: Easy Main Topic: 15.2 Externalities Page: 355
Type: Definition

143. If there are significant external benefits associated with the production or consumption of a good or service, there will be an under-allocation of resources to its production unless some corrective action is taken.

Ans: True Level: Moderate Main Topic: 15.2 Externalities Page: 356-357
Type: Application

Chapter 15 Public Goods, Externalities, Information Asymmetries, and Market Failure

144. Society's optimal amount of pollution moderation is where society's marginal benefit of moderation is zero.

Ans: False Level: Moderate Main Topic: 15.2 Externalities Page: 360
Type: Application

145. An improvement in the technology of pollution control is likely to increase society's optimal amount of pollution moderation.

Ans: True Level: Easy Main Topic: 15.2 Externalities Page: 360
Type: Application

146. Society's marginal cost of pollution moderation curve slopes upward because of the law of diminishing marginal utility.

Ans: False Level: Moderate Main Topic: 15.2 Externalities Page: 360
Type: Application

147. Pollution is a good example of the moral hazard problem.

Ans: False Level: Easy Main Topic: 15.3 Information failures Page: 364
Type: Application

148. The moral hazard problem is the tendency of some parties to a contract to alter their behaviour as a result of the contract in ways which are costly to the other party.

Ans: True Level: Easy Main Topic: 15.3 Information failures Page: 364
Type: Definition

149. The adverse selection problem is the tendency for workers to shirk when they are not being monitored.

Ans: False Level: Easy Main Topic: 15.3 Information failures Page: 365
Type: Definition

150. A competitive health care sector may not deliver as much as society deems desirable.

Ans: True Level: Easy Main Topic: 15.4 The economics of health care
Page: 367 Type: Application