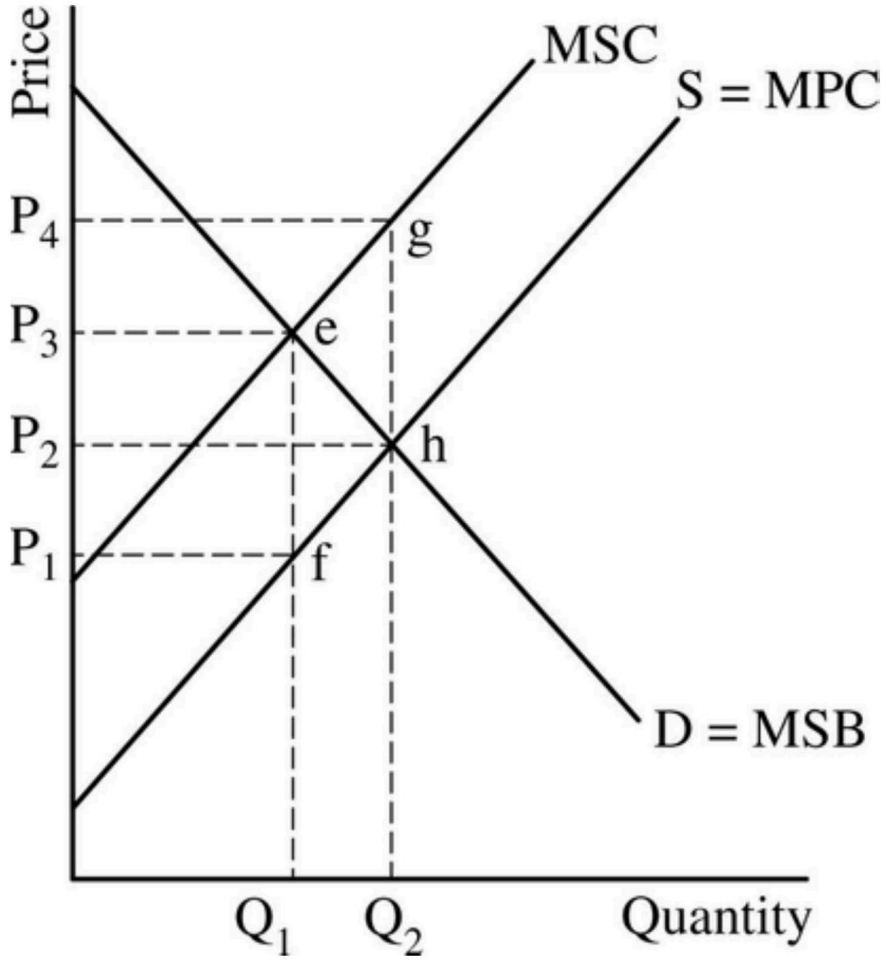
Unit 6.2 Externalities

AP Microeconomics — 37 Questions (25 QB + 9 MCQ + 3 FRQ)

Question Bank

1.

The following questions refer to the following diagram, which shows the marginal social cost (MSC), the marginal private cost (MPC), and the marginal social benefit (MSB) associated with the production of a good in a market.



Which of the following describes the type of externality generated by the unregulated private market and the resulting deadweight loss?

	Type of Externality	Deadweight Loss
(A)	Positive	egh
(B)	Positive	ehf

(C)	Negative	ehf
(D)	Negative	egh
(E)	Negative	P_4ghP_2

Source: externality MCQ.pdf, Q14

2.

Which of the following is always true about a negative externality?

(A) It can be corrected by the government subsidizing the good or activity that creates the externality.

(B) It results in a market output that is smaller than the socially optimal output.

(C) It results in a market output that is greater than the socially optimal output.

(D) It results in a larger deadweight loss than a positive externality does.

(E) It results in a smaller deadweight loss than a positive externality does.

Source: externality MCQ.pdf, Q18

3.

Good X is produced in a perfectly competitive industry in long-run equilibrium. If the consumption of good X generates positive externalities, the private market will produce

(A) less than the socially optimum amount of good X

(B) more than the socially optimum amount of good X

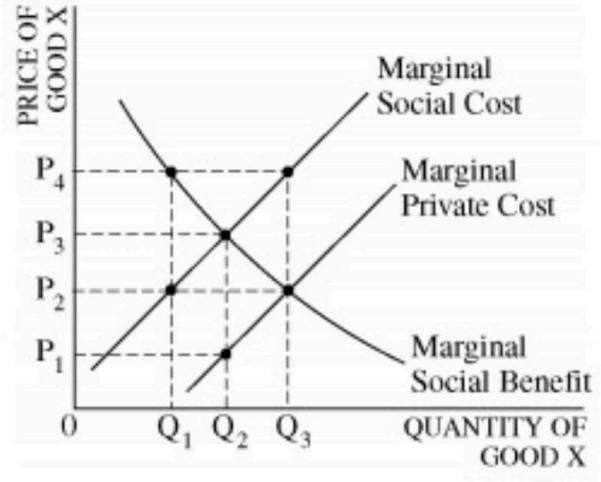
(C) the socially optimum amount of good X

(D) good X only if the government grants a subsidy for the production of good X

(E) good X only if the government levies a corrective tax on the production of good X

Source: externality MCQ.pdf, Q25

4.



Given the position of the marginal social cost curve, one can conclude that the

(A) private cost of producing good X exceeds the social cost of production at all levels of output

(B) production of good X creates a negative externality

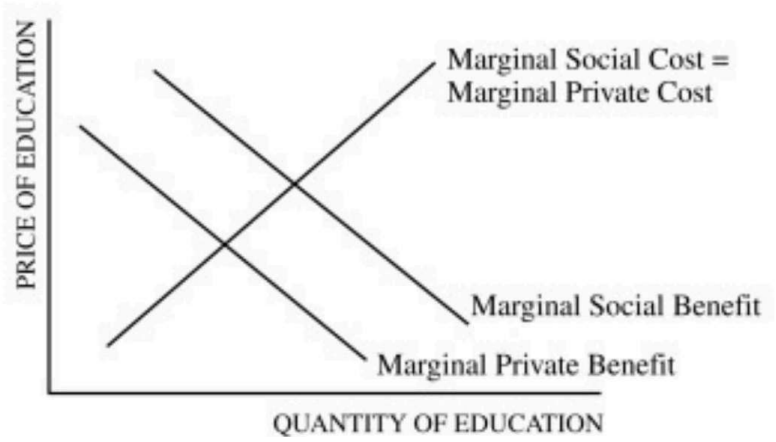
(C) production of good X occurs in an imperfectly competitive market

(D) market quantity, Q_3, is the socially optimal quantity

(E) free market will produce too little of good X

Source: externality MCQ.pdf, Q27

5.



Which of the following is true based on the graph above?

(A) The quantity of education in the private market is more than the socially optimal quantity.

(B) Consumers of education could be subsidized in order to achieve the socially optimal quantity.

(C) Producers of education could be taxed in order to achieve the socially optimal quantity.

(D) Consumers of education could be taxed in order to achieve the socially optimal quantity.

(E) Consumption of education has a negative externality.

Source: externality MCQ.pdf, Q32

6.

If an industry ignores the external costs it generates in its production, which of the following will be true at the competitive market equilibrium output?

(A) Price will be greater than the marginal social cost.

(B) Price will be less than the marginal social cost.

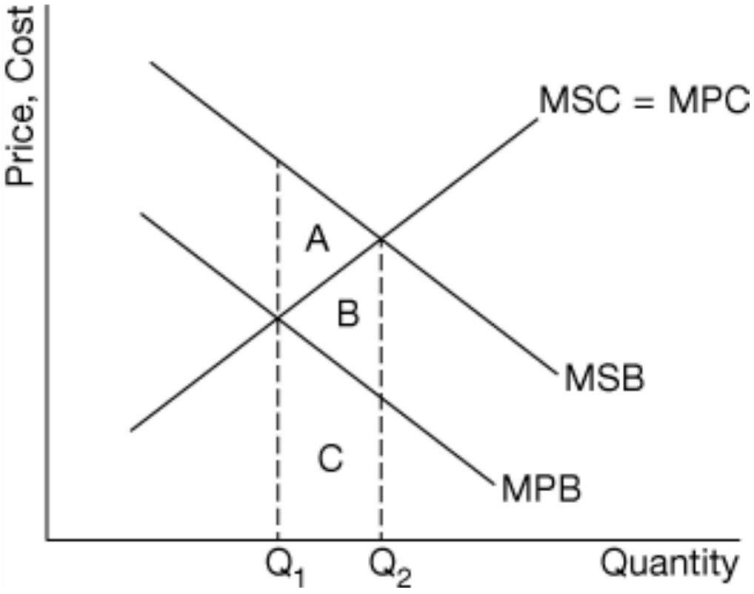
(C) Price will be equal to the marginal social cost.

(D) Marginal private cost will be equal to marginal social cost.

(E) Marginal private cost will be greater than the marginal social cost.

Source: externality MCQ.pdf, Q47

7.



The diagram provided illustrates the marginal private benefit (MPB), marginal social benefit (MSB), marginal private cost (MPC), and marginal social cost (MSC) measured in dollars for a competitive market.

Assume that the goal of the government is to increase efficiency in the market. The cost of a government intervention that increases market output from Q_1 to Q_2 is $1.2 million. The intervention will definitely improve market efficiency if the area of

(A) A is greater than $1.2 million

(B) B is less than $1.2 million

(C) C is less than $1.2 million

(D) A+B is greater than or equal to $1.2 million

(E) B+C is greater than or equal to $1.2 million

Source: externality MCQ.pdf, Q51

8.

There are negative externalities associated with the use of a freeway in a major city at rush hour because during this time

(A) drivers slow down other drivers because of the high traffic volume

(B) drivers value their time more

(C) government revenues from toll roads increase

(D) revenues of bus companies increase

(E) gasoline costs more

Source: externality MCQ.pdf, Q65

9.

The surgeon general has determined that smoking causes cancer and heart disease for both smokers and passive smokers, nonsmokers who breathe smoke-filled air. If cigarette prices are determined in a free market, which of the following will be true?

(A) The price of cigarettes will be too low and the quantity sold will be too high.

(B) The price of cigarettes will be efficient but the quantity sold will be too high.

(C) The market will be efficient because markets always equate marginal benefits and marginal costs.

(D) The price of cigarettes will reflect the marginal social benefit received by nonsmokers.

(E) The price of cigarettes will overstate the true social cost imposed on nonsmokers.

Source: externality MCQ.pdf, Q66

10.

Which of the following is true when the production of a good results in negative externalities?

(A) The government must produce the good.

(B) The private market will produce too little of the good.

(C) The private market price will be too low.

(D) The government must prevent the production of the good.

(E) Private firms will not be able to maximize profits.

Source: externality MCQ.pdf, Q67

11.

Whenever the production of a good creates negative externalities, an unregulated market will result in

(A) too little of the good being produced

(B) an optimal amount of the good being produced as long as the market is perfectly competitive

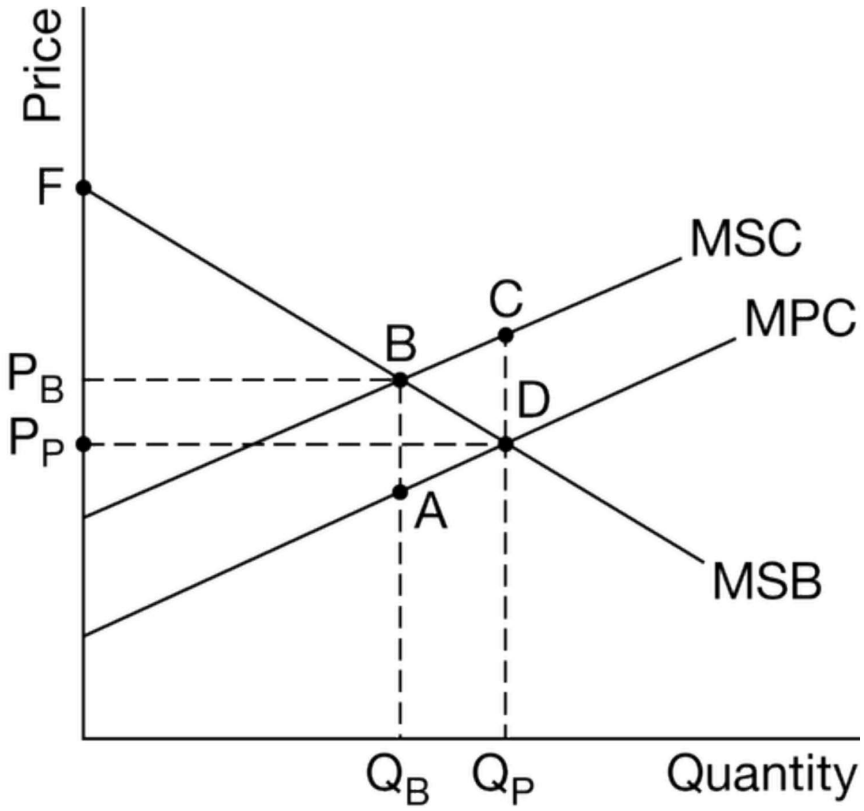
(C) society’s marginal cost being higher than the firm’s marginal cost

(D) the firm’s marginal cost being higher than society’s marginal cost

(E) the firm’s marginal cost being equal to society’s marginal cost

Source: externality MCQ.pdf, Q68

12.



The graph above depicts the marginal social cost (MSC), marginal private cost (MPC), and marginal social benefit (MSB) associated with the production of a good that generates an externality. Based on the information in the graph, which of the following is true?

(A) There is a positive externality because, relative to the socially optimal output, too little is produced in an unregulated market.

(B) The unregulated market produces Q_B and sets price at P_B.

(C) The allocatively efficient level of output is Q_P.

(D) The good generates an external benefit equal to AB.

(E) There is a negative externality because marginal social cost exceeds marginal private cost.

Source: externality MCQ.pdf, Q69

13.

Which of the following is true when there are negative externalities associated with the production of a good?

(A) The market will adjust automatically to equate marginal social costs and marginal social benefits.

(B) Marginal social costs will exceed marginal private costs unless businesses are forced to internalize the external costs.

(C) Marginal private costs will exceed marginal social costs, but the government can correct the problem.

(D) Producers should be subsidized so that they will produce more of the good.

(E) Consumers should be subsidized so that they will consume more of the good.

Source: externality MCQ.pdf, Q70

14.

Which of the following is true if the production of a good imposes external costs?

(A) The market supply curve lies above the social supply curve.

(B) An appropriate government policy would be to subsidize production of the good.

(C) A competitive market would not provide the good at all.

(D) A competitive market would produce more than the socially optimal amount.

(E) A persistent market surplus would occur.

Source: externality MCQ.pdf, Q71

15.

If the production of a good generates a negative externality, which of the following is true at the private market equilibrium?

(A) The private market equilibrium quantity is greater than the socially optimal quantity.

(B) The private market equilibrium quantity is equal to the socially optimal quantity.

(C) The marginal private cost is greater than the marginal social cost.

(D) The marginal social benefit is greater than the marginal social cost.

(E) The price of the product equals the marginal social cost.

Source: externality MCQ.pdf, Q72

16.

Which of the following best represents a positive externality?

(A) Purchasing a pass for an amusement park

(B) Dining at a favorite restaurant

(C) Being disturbed by neighboring construction noise

(D) Enjoying watching birds at a neighbor’s bird feeder

(E) Dumping waste on someone else’s property

Source: externality MCQ.pdf, Q74

17.

Assume the demand curve for a good is perfectly inelastic and the production of each unit of this good generates external costs. A profit-maximizing firm producing the good in an unregulated free market will

(A) generate deadweight loss because marginal social cost is greater than marginal private cost

(B) generate deadweight loss only if marginal costs are constant

(C) not generate deadweight loss because the equilibrium quantity is socially optimal

(D) not generate deadweight loss unless marginal costs are constant

(E) not generate deadweight loss unless fixed costs are zero

Source: externality MCQ.pdf, Q75

18.

Which of the following is the best example of a negative externality?

(A) An increase in the price of oil due to the imposition of environmental regulations

(B) An increase in the price of oil due to action taken by the Organization of Petroleum Exporting Countries (OPEC)

(C) A decline in oil stock prices as a result of bad management

(D) Oil leakages from drilling platforms in the Gulf of Mexico

(E) Declining restrictions on the importation of foreign-made cars

Source: externality MCQ.pdf, Q77

19.

In a competitive market in which the production of a good causes pollution, the socially optimal output is different from the competitive market equilibrium output of that good because the

(A) marginal social benefit is higher than the marginal social cost

(B) marginal social benefit is lower than the marginal private cost

(C) marginal social cost is higher than the marginal private cost

(D) marginal social benefit is higher than the marginal private benefit

(E) total social cost is less than the total social benefit

Source: externality MCQ.pdf, Q86

20.

If a positive externality exists in the consumption of a good, the private market equilibrium quantity will be

(A) the same as the socially optimal quantity, since the marginal private benefit equals the marginal social benefit

(B) greater than the socially optimal quantity, since the marginal social cost exceeds the marginal private cost

(C) greater than the socially optimal quantity, since the marginal private benefit exceeds the marginal social benefit

(D) less than the socially optimal quantity, since the marginal social benefit exceeds the marginal private benefit

(E) less than the socially optimal quantity, since the marginal private benefit exceeds the marginal private cost

Source: externality MCQ.pdf, Q88

21.

Which of the following would create a positive externality?

(A) Congestion on city highways

(B) Water pollution

(C) A neighbor's loud music that wakes you up

(D) Flu vaccination

(E) The greenhouse effect and global warming

Source: externality MCQ.pdf, Q91

22.

When consumption of a good generates a positive externality, which of the following must be true at the market equilibrium?

(A) Marginal social benefit is less than marginal private cost.

(B) Marginal social benefit is greater than marginal private benefit.

(C) Marginal social cost is greater than marginal social benefit.

(D) Marginal social cost is less than marginal private benefit.

(E) Marginal social cost is equal to marginal external benefit.

Source: externality MCQ.pdf, Q92

23.

If the production of good X creates a positive externality, then from society's perspective, the industry that produces good X tends to produce

(A) less than the socially optimal amount of good X

(B) greater than the socially optimal amount of good X

(C) the socially optimal amount of good X

(D) a surplus of good X, unless subsidized

(E) a shortage of good X, unless taxed

Source: externality MCQ.pdf, Q127

24.

A perfectly competitive manufacturing industry pollutes public water in its production process, leaving the water unsuitable for use by the surrounding communities. At the market equilibrium output level, which of the following is true?

(A) Marginal private cost exceeds marginal social cost.

(B) Marginal private cost exceeds marginal private benefit.

(C) Marginal social cost exceeds marginal social benefit.

(D) The market equilibrium output is equal to the socially efficient output.

(E) The market equilibrium output is less than the socially efficient output.

Source: externality MCQ.pdf, Q131

MCQ — Past Exam Questions

25. 2021 AP Micro Q23

Which of the following is always true about a negative externality?

(A) It can be corrected by the government subsidizing the good or activity that creates the externality.

(B) It results in a market output that is smaller than the socially optimal output.

(C) It results in a market output that is greater than the socially optimal output.

(D) It results in a larger deadweight loss than a positive externality does.

(E) It results in a smaller deadweight loss than a positive externality does.

26. 2022 AP Micro Q19

One reason many governments provide free access to mandatory primary education is because primary education

(A) generates negative externalities

(B) helps to reduce future income inequality

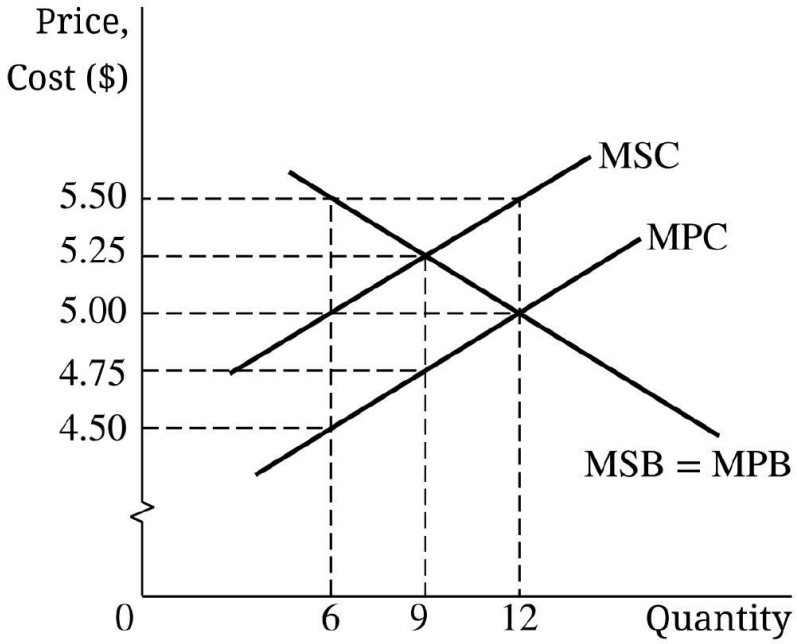
(C) is only provided by a natural monopoly

(D) is nonrival and therefore subject to overcrowding

(E) is nonexcludable and therefore subject to the free rider problem

27. 2022 AP Micro Q28

Questions 27–28 are based on the graph provided, which shows the marginal private cost (MPC), marginal social cost (MSC), marginal private benefit (MPB), and marginal social benefit (MSB) in a market for a good that has an external cost.



What are the socially efficient and market equilibrium quantities?

(A) Socially efficient quantity is 6, and market equilibrium quantity is 12.

(B) Socially efficient quantity is 9, and market equilibrium quantity is 9.

(C) Socially efficient quantity is 9, and market equilibrium quantity is 12.

(D) Socially efficient quantity is 12, and market equilibrium quantity is 12.

(E) Socially efficient quantity is 12, and market equilibrium quantity is 9.

28. 2022 AP Micro Q29

What is the dollar value of the marginal external cost?

(A) $0.25

(B) $0.50

(C) $1.00

(D) $5.00

(E) $5.50

29. 2022 AP Micro Q39

Which of the following is true if the production of a good creates negative externalities?

(A) The market produces the socially efficient level of output.

(B) Antitrust laws are violated.

(C) The market price equals the marginal social cost.

(D) The marginal social cost exceeds the marginal private cost.

(E) The good is produced by the public sector.

30. 2023 AP Micro Q5

Apple trees need bees to pollinate their flowers and produce apples. Apple farmers hire beekeepers to bring bees to their orchards to pollinate the flowers. This is an example of a

(A) negative externality

(B) tragedy of the commons

(C) public good

(D) market transaction

(E) free-rider problem

31. 2023 AP Micro Q50

Which of the following is most likely true if textile production generates pollution during the production process?

(A) The market will underproduce textiles relative to the socially optimal quantity, and the government would need to provide a lump-sum subsidy to firms to correct the externality.

(B) The market will underproduce textiles relative to the socially optimal quantity, and the government would need to provide a per-unit subsidy to firms to correct the externality.

(C) The market will overproduce textiles relative to the socially optimal quantity, and the government would need to impose a lump-sum tax on firms to correct the externality.

(D) The market will overproduce textiles relative to the socially optimal quantity, and the government would need to impose a per-unit tax on firms to correct the externality.

(E) The market will produce the socially optimal quantity of textiles, and the government would not need to intervene in the market to influence the production decisions of firms.

32. 2024 AP Micro Q30

Quantity	Marginal Private Cost ($)	Marginal Private Benefit ($)
21	25	65
22	35	55
23	45	45
24	55	35
25	65	25

The table provided shows the marginal private cost and marginal private benefit for Good X. The market for Good X is in equilibrium. If the production of Good X generates a constant marginal external cost of $20 per unit, which of the following actions will improve efficiency in this market?

(A) Imposing a $20 per-unit tax on producers, which will decrease output to 22 units

(B) Imposing a $20 per-unit tax on consumers, which will decrease output to 21 units

(C) Granting a $20 per-unit subsidy to consumers, which will increase output to 25 units

(D) Granting a $20 per-unit subsidy to producers, which will decrease output to 21 units

(E) Implementing a price floor at $20, which will increase output to 24 units

33. 2025 AP Micro Q28

Which of the following is an example of a negative externality in production?

(A) An electronics store decreases the price of televisions during the holidays.

(B) A car insurance company charges a higher price for teenage drivers.

(C) A local paper mill emits an odor, imposing additional costs on nearby residents.

(D) A pine tree in a public park provides pleasant shade for residents.

(E) A photographer accepts a price for work below marginal cost.

FRQ — Past Exam Questions

34. 2021 AP Micro FRQ, Set 2, Question 2

Copper is produced in a perfectly competitive market with an upward-sloping supply curve and a downward-sloping demand curve. Assume the production of copper results in liquid waste, which seeps into local rivers. The contaminated river water causes human illnesses and crop failures downstream. The marginal external cost from producing copper is constant across all quantities of copper produced.

(a) Draw a correctly labeled graph of the copper market with the marginal social benefit (MSB), marginal private benefit (MPB), marginal social cost (MSC), and marginal private cost (MPC) curves, and show each of the following.

(i) The market equilibrium quantity, labeled Q_M

(ii) The socially efficient quantity, labeled Q_S

(b) Suppose the demand for copper decreases. On your graph in part (a), show the deadweight loss at the new market equilibrium, shaded completely.

(c) Suppose the government is considering levying a tax on copper.

(i) What per-unit tax level would achieve the socially optimal quantity?

(ii) Explain why a lump-sum tax on producers will not achieve the socially optimal quantity in the short run.

35. 2022 AP Micro FRQ, Question 2

Homeowners purchase and plant trees for their personal benefit to improve the appearance of their yards. The market for these trees is perfectly competitive.

(a) Assume that the trees planted in homeowners' yards also provide constant external marginal benefits to the homeowners' neighbors. Draw a correctly labeled graph of the market with the marginal social benefit (MSB), marginal private benefit (MPB), marginal social cost (MSC), and marginal private cost (MPC), and show each of the following.

(i) The market equilibrium quantity, labeled Q_M

(ii) The socially optimal quantity, labeled Q_S

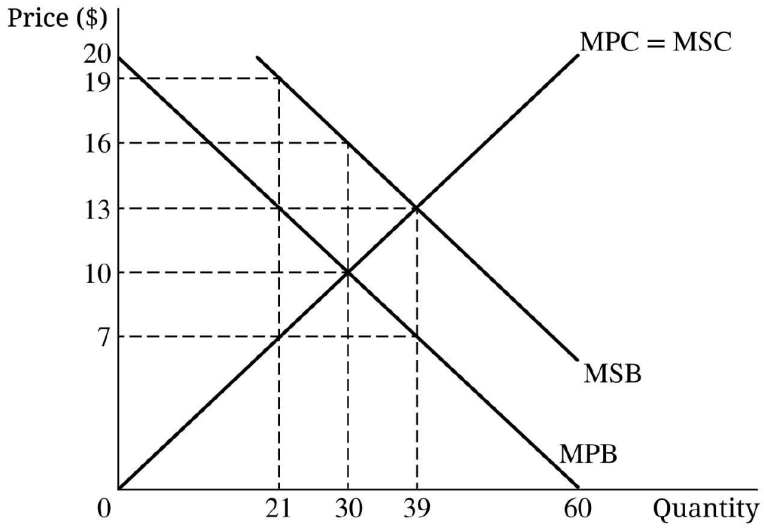
(b) Assume the government wants homeowners to internalize the externality to achieve the socially optimal quantity of trees using a per-unit subsidy. On your graph for part (a), shade the area representing the government's total expenditure on the subsidy.

(c) Assume trees are normal goods. If consumers' incomes were to increase, what would happen to the socially optimal quantity of trees? Explain.

(d) Instead, assume that the trees do not benefit the neighbors; rather, the leaves from trees planted by homeowners fall into their neighbors' yards, costing the neighbors time and money to clean up. In the absence of government intervention, is the socially optimal quantity of these trees greater than, less than, or equal to the market equilibrium quantity? Explain.

36. 2023 AP Micro FRQ, Question 2

The provided graph shows the marginal private cost (MPC) curve, the marginal social cost (MSC) curve, the marginal private benefit (MPB) curve, and the marginal social benefit (MSB) curve in the market for smoke alarms.



(a) Does the graph show a negative consumption externality or a positive consumption externality? Explain.

(b) Identify the socially optimal quantity of smoke alarms.

(c) What is the dollar value of the marginal externality?

(d) Calculate the deadweight loss in the market for smoke alarms at the market equilibrium. Show your work.

(e) The government wants the socially optimal quantity of smoke alarms to be produced and consumed. Would the government implement a per-unit tax on producers, a lump-sum subsidy to producers, a per-unit subsidy to consumers, or a lump-sum tax on consumers? Explain.

37. 题库 Marginal Analysis Q36 (FRQ)

Marginal analysis is essential to microeconomics decision making. Discuss how marginal analysis is used in each of the following cases.

(a) To derive the supply curve for a perfectly competitive firm

(b) To identify the least-cost combination of capital and labor used to produce a given level of output.

(c) To regulate an industry that produces a product that generates negative externalities