Unit 6.1 Socially Efficient and Inefficient Market Outcomes

AP Microeconomics — 19 Questions (8 QB + 8 MCQ + 3 FRQ)

Question Bank

1.

The table above shows the total cost and the total benefit of cleaning up pollution in a community. Which of the following cleanup levels is socially optimal?

Levels of Cleanup	Total Cost of Cleanup ($)	Total Benefit of Cleanup ($)
0	0	0
1	7	45
2	37	80
3	92	105
4	172	125
5	272	140

(A) 1

(B) 2

(C) 3

(D) 4

(E) 5

Source: externality MCQ.pdf, Q1

2.

Which of the following is likely to result in allocative inefficiency?

(A) An oligopoly market structure

(B) A firm producing at the level of output where price is equal to marginal cost

(C) A perfectly competitive market in long-run equilibrium with no externalities

(D) A perfectly price-discriminating monopoly

(E) A monopsonist that faces a minimum wage where marginal revenue product equals the supply of labor

Source: externality MCQ.pdf, Q2

3.

The table above shows the total benefit associated with reducing different levels of pollution on a small island. The cost of eliminating one ton of pollution is $150. Which of the following is the optimal quantity of pollution to eliminate?

Quantity of Pollution Reduction (in tons)	Total Benefit (in dollars)
0	0
1	300
2	550
3	650
4	725
5	775

(A) 5 tons

(B) 4 tons

(C) 3 tons

(D) 2 tons

(E) 1 ton

Source: externality MCQ.pdf, Q34

4.

In the absence of externalities, which of the following is true of a competitive market in equilibrium?

(A) Consumer surplus is maximized.

(B) Producer surplus is maximized.

(C) Marginal benefit exceeds marginal cost.

(D) Marginal social benefit equals marginal social cost.

(E) Consumer surplus equals producer surplus.

Source: externality MCQ.pdf, Q52

5.

The socially optimal quantity of a public good is provided when

(A) marginal private cost equals marginal private benefit

(B) marginal social cost equals marginal social benefit

(C) total private cost equals total social benefit

(D) total social cost equals total social benefit

(E) marginal social benefit minus marginal social cost is at a maximum

Source: externality MCQ.pdf, Q56

6.

An industry will produce more than the socially efficient level of output under which of the following conditions?

(A) The production or consumption of a good generates a positive externality.

(B) The production or consumption of a good generates a negative externality.

(C) The industry is a monopoly.

(D) The industry produces a public good.

(E) The industry produces a private good.

Source: externality MCQ.pdf, Q73

7.

Assume a profit-maximizing monopoly and firms in a perfectly competitive market have identical cost and revenue conditions. In which market will a binding price ceiling result in a more efficient outcome and why?

(A) The perfectly competitive market will become more efficient because the deadweight loss will decrease.

(B) The perfectly competitive market will become more efficient because consumers will be able to purchase greater quantities of the good at a lower price.

(C) The monopoly will become more efficient because the deadweight loss will decrease.

(D) The monopoly will become more efficient because producers will be able to sell greater quantities of the good at a higher price.

(E) Both markets will become more efficient because total economic surplus will increase.

Source: externality MCQ.pdf, Q93

8.

A perfectly competitive market produces the socially efficient level of output when the marginal social benefit of the last unit of output produced is

(A) equal to the marginal social cost

(B) less than the marginal social cost

(C) zero

(D) greater than the total producer surplus

(E) equal to the total producer surplus

Source: externality MCQ.pdf, Q109

MCQ — Past Exam Questions

9. 2021 AP Micro Q35

A monopoly is producing the allocatively efficient output if, for the last unit produced,

(A) price equals minimum average total cost

(B) price equals marginal cost

(C) marginal cost equals marginal revenue

(D) marginal cost equals average variable cost

(E) marginal revenue equals average variable cost

10. 2021 AP Micro Q55

A perfectly competitive market produces the socially efficient level of output when the marginal social benefit of the last unit of output produced is

(A) equal to the marginal social cost

(B) less than the marginal social cost

(C) zero

(D) greater than the total producer surplus

(E) equal to the total producer surplus

11. 2022 AP Micro Q21

Imperfectly competitive markets do not achieve allocative efficiency because profit maximization for each firm occurs when which of the following is true?

(A) Price equals average total cost.

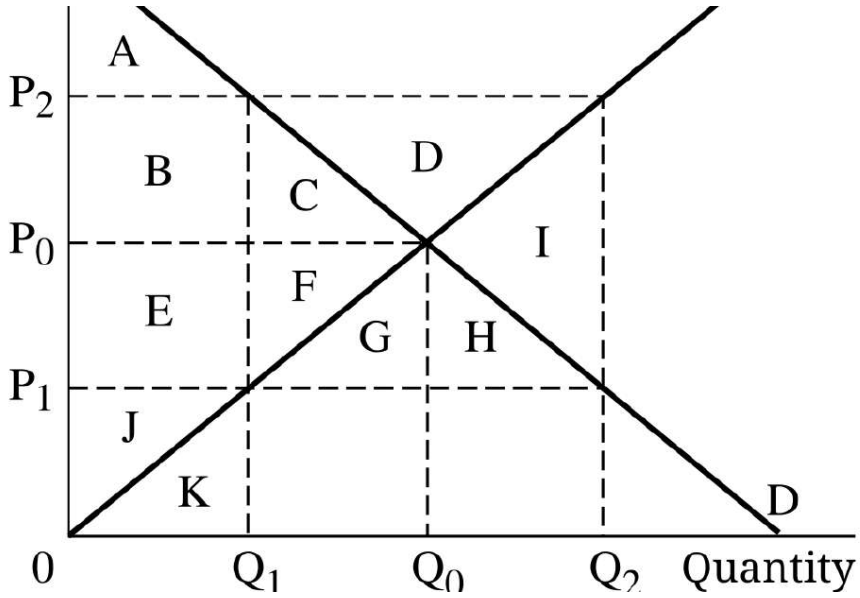
(B) Price is greater than marginal cost.

(C) Price equals marginal revenue.

(D) Price is less than marginal benefit.

(E) Price is less than marginal revenue.

12. 2022 AP Micro Q58



The efficient market outcome shown in the graph provided is

(A) at price P_1, quantity Q_1, and total economic surplus is J + K

(B) at price P_2, quantity Q_2, and total economic surplus is B + C + D + E + F + G + H + I

(C) at price P_0, quantity Q_0, and total economic surplus is B + C + E + F

(D) at price P_0, quantity Q_0, and total economic surplus is A + B + C + E + F

(E) at price P_0, quantity Q_0, and total economic surplus is A + B + C + E + F + J

13. 2023 AP Micro Q2

The allocatively efficient level of output is produced in any market structure when

(A) firms are experiencing economies of scale

(B) marginal revenue is equal to zero

(C) long-run economic profit is equal to zero

(D) price is equal to marginal cost

(E) average variable cost is at a minimum

14. 2023 AP Micro Q31

The market for Good Z has relatively elastic supply and demand curves. Market efficiency is attained when

(A) total labor cost is minimized for each firm

(B) each firm experiences economies of scale

(C) consumer surplus is greater than producer surplus

(D) producer surplus is zero

(E) deadweight loss is zero

15. 2024 AP Micro Q18

For the last unit produced, allocative efficiency is achieved when

(A) price is equal to marginal cost

(B) price is equal to average total cost

(C) price is equal to marginal revenue

(D) marginal cost is equal to average total cost

(E) marginal cost is equal to average variable cost

16. 2025 AP Micro Q58

The table shows the market price, quantity of a good exchanged, and the resulting deadweight loss in five different market structures.

Market	Price ($)	Quantity Exchanged (units)	Deadweight Loss ($)
1	25	100	50
2	30	750	300
3	45	500	100
4	50	300	0
5	60	20	200

Which market displays outcomes that are consistent with those that result under perfect competition?

(A) Market 1

(B) Market 2

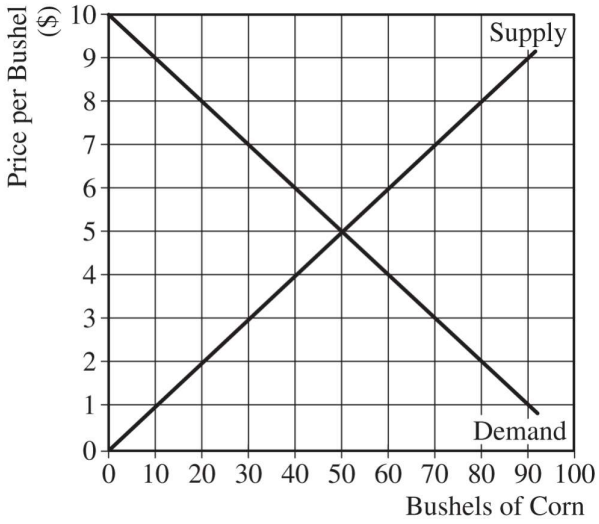
(C) Market 3

(D) Market 4

(E) Market 5

FRQ — Past Exam Questions

17. 2021 AP Micro FRQ, Set 1, Question 3



The diagram above shows the market for corn in the country of Microland. Corn is produced and sold in a constant-cost, perfectly competitive market.

(a) Calculate the total revenue earned by corn farmers at the market equilibrium price. Show your work.

(b) In an attempt to assist corn farmers in Microland, the government sets a $7 price floor on corn.

(i) How many bushels of corn will be exchanged at the price floor?

(ii) Calculate the deadweight loss associated with the price floor. Show your work.

(iii) Assume the government agrees to buy the unsold quantity at $7. Calculate the producer surplus. Show your work.

(iv) Assume the price floor and the government buying program remain in effect. In addition, assume the demand for corn does not change. In the long run, will the quantity of corn purchased by the government increase, decrease, or remain the same? Explain.

18. 2023 AP Micro FRQ, Set 1, Question 1

RKB is a profit-maximizing monopoly that produces a new, patented electronic device. RKB is earning positive economic profit.

(a) Draw a correctly labeled graph for RKB, and show each of the following.

(i) The profit-maximizing quantity, labeled Q_M

(ii) The profit-maximizing price, labeled P_M

(iii) The average total cost curve consistent with RKB earning positive economic profit

(iv) The area representing the deadweight loss, shaded completely

(b) The government wants RKB to produce the allocatively efficient quantity. Would the government impose a binding price ceiling, a binding price floor, a per-unit tax, or a lump-sum tax?

(c) Suppose that the government does not impose the policy you identified in part (b). Consumers now become aware of research that confirms the use of this new device harms users' vision. Given widespread consumer awareness of this research, what will happen to RKB's profit-maximizing quantity in the short run? Explain.

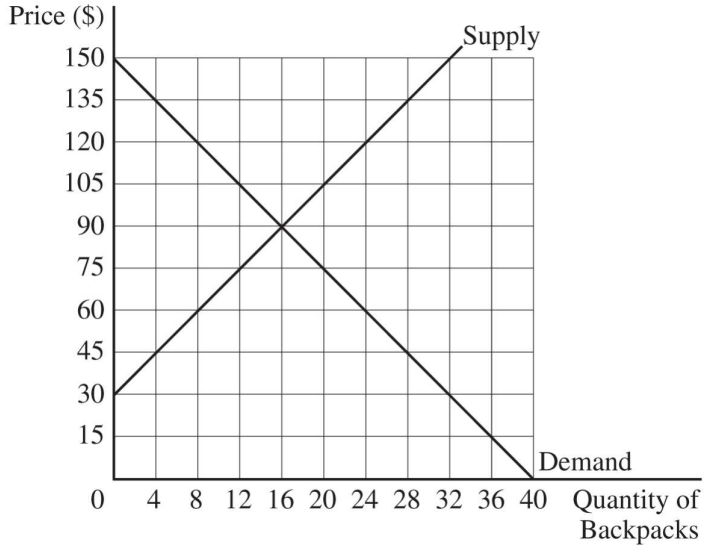
(d) Assume that RKB hires workers in a perfectly competitive labor market.

(i) Draw a correctly labeled graph for the labor market, showing the equilibrium wage and quantity of labor, labeled W_E and Q_E, respectively.

(ii) Suppose immigration increases the number of workers in this labor market. On your graph in part (d)(i), show the new equilibrium wage and quantity of labor, labeled W_2 and Q_2, respectively.

(iii) RKB uses the optimal combination of capital and labor in its production process. The firm rents capital at $500 per unit, and the last unit of capital rented has a marginal product of 2,500 units. If the marginal product of the last unit of labor hired is 1,000 units, calculate the wage rate. Show your work.

19. 2024 AP Micro FRQ, Set 2, Question 3



Backpacks are produced in a perfectly competitive market that has no externalities. The provided graph shows the market supply and demand curves for backpacks in the country of Jambo.

(a) Calculate total economic surplus at the market equilibrium. Show your work.

(b) To decrease the price of backpacks for students, the government of Jambo has decided to set a price ceiling of $60 per backpack. Compared to the market equilibrium, will the quantity of backpacks purchased increase, decrease, or not change as a result of the price ceiling? Explain.

(c) Suppose instead the government of Jambo provides a per-unit subsidy of $30 to the sellers of backpacks.

(i) Identify the price paid by consumers per backpack after the per-unit subsidy is implemented.

(ii) Calculate the total cost of the subsidy to the government. Show your work.

(iii) Does the per-unit subsidy cause deadweight loss to increase, decrease, or remain the same compared to the market equilibrium in part (a)? Explain.