Practice Questions for Topic 3: Equilibrium, Efficiency, and Externalities

1. Suppose hot dogs and hamburgers are substitutes. If the demand for hamburgers increases, then

   (a) the equilibrium quantity of hot dogs will increase.

   (b) the equilibrium price of hot dogs will decrease.

   (c) the equilibrium quantity of hamburgers will decrease.

   (d) the equilibrium quantity of hot dogs will decrease.

   (e) the equilibrium price of hamburgers will decrease.

2. Assume the demand for bananas decreases while the supply increases. Which of the following outcomes is certain to occur?

   (a) The equilibrium price of bananas will rise.

   (b) The equilibrium quantity of bananas will rise.

   (c) The equilibrium price of bananas will fall.

   (d) The equilibrium quantity of bananas will fall.

   (e) Neither the effect on the equilibrium price nor the effect on the equilibrium quantity of bananas can be predicted.

3. Suppose that, in some market, the demand function is given by $q = 40 - 2p$, and the supply function is given by $q = -20 + 4p$. The equilibrium quantity in this market is

   (a) 10.

   (b) 6.

   (c) 20.

   (d) 5.

   (e) 14.

4. Refer to the previous question. The equilibrium price in this market is

   (a) \$5.

   (b) \$2.

   (c) \$6.

   (d) \$10.

   (e) \$8.

Use the following table to answer questions 5-8:

	Quantity Demanded	Quantity Supplied
\$20.00	0	100
\$15.00	20	80
\$10.00	40	60
\$7.50	50	50
\$5.00	60	40
\$0.00	80	20

5. At a price of \$5.00, this market experiences

   (a) a shortage.
   (b) excess supply.
   (c) efficiency.
   (d) a surplus.
   (e) an equilibrium.

6. The equilibrium quantity in this market is

   (a) 30.
   (b) 40.
   (c) 50.
   (d) 60.
   (e) 70.

7. At the market equilibrium, the sum of consumer surplus and producer surplus is

   (a) \$462.50.
   (b) \$575.00.
   (c) \$500.00.
   (d) \$312.50.
   (e) \$112.50.

8. If the government were to fix the price at \$15, how large would the dead-weight loss be?

   (a) \$225.
   (b) \$375.
   (c) \$50.
   (d) \$300.
   (e) \$150.

9. Apple Inc. would best be classified as a(n)

   (a) perfectly competitive firm.
   (b) leviathan.
   (c) monopoly.
   (d) monopsony.
   (e) price-taker.

10. When a negative externality is present, we could say that the equilibrium

   (a) price is "too low".
   (b) price is "too high".
   (c) quantity is "just right".
   (d) price is "just right".
   (e) quantity is "too low".

11. Suppose that, in some market, the demand function is given by $q = 40 - 2p$, and the supply function is given by $q = -20 + 4p$. At a price of \$12, there is

   (a) a shortage.
   (b) efficiency.
   (c) a surplus.
   (d) an equilibrium.
   (e) excess demand.

12. All else equal, an increase in demand will cause

   (a) an increase in equilibrium price.
   (b) a decrease in equilibrium quantity.
   (c) a decrease in quantity supplied.
   (d) a decrease in equilibrium price.
   (e) none of the above.

13. A clothing retailer such as H&M would best be classified as a(n)

   (a) perfectly competitive firm.
   (b) monopoly.
   (c) monopsony.
   (d) monopolistically competitive firm.
   (e) price-taker.

14. Suppose that the inverse demand function for oil is given by $p = 20 - 2q$, and that the supply function for oil is given by $q = -4 + 0.5p$. If a \$2 per unit tax is charged to sellers of oil, the equilibrium price paid by buyers will be

    (a) \$15.
    (b) \$24.
    (c) \$14.
    (d) \$10.
    (e) \$16.

15. Refer to the previous question. What is the deadweight loss created by this tax?

    (a) \$2.00.
    (b) \$2.50.
    (c) \$5.00.
    (d) \$0.50.
    (e) \$7.50.

16. Suppose that a monopolist faces a demand function given by $q = 4 - 0.2p$, and has a MCPU function given by MCPU $= 5 + 10q$. Compared to a situation of perfect competition, the *loss* in consumer surplus created by this monopolist is approximately

    (a) \$1.09.
    (b) \$1.88.
    (c) \$2.50.
    (d) \$1.41.
    (e) \$2.81.

17. Refer to the previous question. The deadweight loss created by this monopoly is approximately

    (a) \$0.47.
    (b) \$1.25.
    (c) \$0.75.
    (d) \$1.41.
    (e) \$2.50.

18. Assume that pharmaceutical research produces a positive externality. It will be the case that the equilibrium quantity will be _____ than the socially optimal amount. Accordingly, by _____, the government could help to achieve the socially optimal quantity.

    (a) greater; subsidizing it
    (b) less; subsidizing it
    (c) greater; taxing it
    (d) less; taxing it
    (e) greater; issuing longer patents on new drugs

19. Suppose a teacher brings 30 cookies into a class with 30 students. Which of the following situations is Pareto efficient?

    (a) Giving one cookie to each student.
    (b) Giving all 30 cookies to one student.
    (c) Dividing all of the cookies equally among the dark-haired students.
    (d) Letting the best 15 students have 2 cookies each.
    (e) All of the above.

20. Adam Smith's theory of the "invisible hand" argued that the greatest good for society was achieved through the

    (a) selfish interests of producers exclusively.
    (b) benevolent interests of consumers.
    (c) interaction between selfish producers and selfish consumers.
    (d) selfish interests of consumers exclusively.
    (e) formal coordination by government.

21. All else equal, a decrease in supply will cause

    (a) an increase in equilibrium price.
    (b) an increase in quantity demanded.
    (c) an increase in demand.
    (d) an increase in equilibrium quantity.
    (e) none of the above.

22. Assume the market for rental apartments in Toronto is perfectly competitive. If a "rent control" policy is imposed, we could expect a(n)

    (a) increase in the supply of apartments.
    (b) increase in the level of homelessness.
    (c) increase in the price of apartment rentals.
    (d) Pareto improvement.
    (e) surplus of apartments.

23. Suppose that the demand function for oranges is given by $q = 10 - 0.5p$, while the inverse supply function for oranges is given by $p = 4 + 2q$. If the government imposes a price floor for oranges at \$14, consumer surplus will be *reduced* by

    (a) \$7.
    (b) \$12.
    (c) \$9.
    (d) \$10.
    (e) \$6.

24. Currently, the government has imposed a price floor price in the market for milk. If the government removes this price floor, which of the following is guaranteed to occur?

    (a) A Pareto improvement.
    (b) An increase in the price of milk.
    (c) A decrease in the supply of milk.
    (d) An increase in the demand for milk.
    (e) The attainment of a Pareto efficient situation.

25. When additional sellers enter into a perfectly competitive market, we would expect

    (a) the equilibrium price to increase.
    (b) the level profits made by existing firms to increase.
    (c) the equilibrium quantity to fall.
    (d) demand to increase.
    (e) the quantity demanded to increase.

26. All else equal, a decrease in demand will cause

    (a) an increase in equilibrium price.

    (b) an increase in quantity supplied.

    (c) an increase in equilibrium quantity.

    (d) a decrease in supply.

    (e) none of the above.

27. Suppose that the demand function for a certain good is given by $q = 22.75 - 2p$, and that the supply function for this good is given by $q = 2 + 8p$. If a \$1 per unit tax is charged to sellers of oil, the government revenue raised from this tax would be approximately

    (a) \$10.38.

    (b) \$11.38.

    (c) \$8.50.

    (d) \$10.63.

    (e) \$17.00.

28. Which of the following situations renders Adam Smith's "invisible hand" argument invalid?

    (a) the existence of positive externalities.

    (b) the existence of monopoly.

    (c) the existence of negative externalities.

    (d) all of the above.

    (e) only (b) and (c).

29. All else equal, the less similar are the goods produced by monopolistic competitors,

    (a) the smaller the deadweight losses created.

    (b) the smaller are their profits.

    (c) the more elastic demand is for their goods.

    (d) the larger the deadweight losses created.

    (e) none of the above.

30. All else equal, an increase in supply will cause

    (a) an increase in equilibrium price.
    (b) a decrease in equilibrium quantity.
    (c) a decrease in quantity demanded.
    (d) a decrease in equilibrium price.
    (e) an increase in demand.

31. Suppose that, in some market, the demand function is given by $q = 65 - 5p$, and the supply function is given by $q = -15 + 3p$. At the market equilibrium, price elasticity of demand is

    (a) -10/3.
    (b) -3.
    (c) -5.
    (d) 1/3.
    (e) -4/3.

32. Refer to the previous question. At the market equilibrium, price elasticity of supply is

    (a) 2.
    (b) 3.
    (c) 2/3.
    (d) 5/3.
    (e) 5.

33. All else equal, when there is an increase in demand, there will be a(n)

    (a) rightward movement along the line representing the supply function.
    (b) leftward movement along the line representing the supply function.
    (c) rightward shift of the line representing the supply function.
    (d) leftward shift of the line representing the demand function.
    (e) none of the above.

34. Suppose that the consumption of a certain good produces a positive externality. If this market is served by a single firm, the outcome will _____ efficient than if this market is served by a large number of firms.

    (a) definitely be more
    (b) possibly be more
    (c) definitely be less
    (d) possibly be less
    (e) definitely be as

35. If, after an externality is "corrected", the price rises and the quantity falls, the externality must have been a(n)

    (a) external benefit.
    (b) external cost.
    (c) positive externality.
    (d) positional externality.
    (e) not enough information to tell.

Answer Key

1. a
2. c
3. c
4. d
5. a
6. c
7. b
8. a
9. c
10. a
11. c
12. a
13. d
14. a
15. d
16. a
17. a
18. b
19. e
20. c
21. e
22. b
23. a
24. e
25. e
26. e
27. e

28. d
29. d
30. d
31. a
32. a
33. a
34. c
35. b