ENCS 101-3 Final Exam Fall 2013

Instructions: Answer each of the questions. Print your name and student id number clearly on the answer sheet. Fill in the bubbles corresponding to your student number, leaving the first two boxes blank and filling in the "0" bubble in the top rows. **NO CALCULATORS!!! USE PENCIL ONLY!**

Good Luck! "Here we go!"

1. My version of the exam is:
    a. Version 1-Yellow
    b. Version 2-Purple
    c. Version 3-Green
    d. Version 4-Pink
    e. Version 5-White

2. If the demand for Super Mario Bros. 3, a vintage video game increases and the supply for Super Mario Bros 3 increases:
    a. the equilibrium price will increase and the equilibrium quantity will decrease.
    b. the equilibrium price will decrease and the equilibrium quantity will decrease.
    c. the equilibrium price will decrease and the equilibrium quantity may increase or decrease.
    d. the equilibrium price may increase or decrease and the equilibrium quantity will increase.

3. A decrease in the price of televisions, a complement to video games, will result in:
    a. an increase in the demand for video games, increasing the equilibrium price of video games.
    b. an increase in the demand for video games, decreasing the equilibrium price of video games.
    c. a decrease in the demand for video games, increasing the equilibrium price of video games.
    d. a decrease in the demand for video games, decreasing the equilibrium price of video games.

4. Mario consumes stars and flowers. Stars are inferior goods and flowers are normal goods. This means, if Mario's income doubles,
    a. his demand for stars will increase.
    b. his demand for flowers will increase.
    c. his demand for stars will decrease.
    d. both b and c are true.

5. Princess Peach observes that the price of rescue missions has increased. If rescue missions are provided in a perfectly competitive market, this increase in price could come from:

a. an increase in the demand for rescue missions.

b. an increase in the supply for rescue missions.

c. a decrease in the price of helicopters, an input to rescue missions.

d. a decrease in the number of princesses needing to be rescued.

6. Mario has spent 10 days trying to rescue Princess Peach. He is trying to decide if he wants to spend one more day trying to rescue her. If he is thinking like an economist, he will:

a. continue his rescue mission since he has already spent 10 days on his rescue.

b. continue his rescue mission only if the marginal cost of rescuing the princess is less than the marginal benefit of continuing the rescue mission for one more day.

c. continue his rescue mission only if the total cost of rescuing the princess is less than the total benefit of rescuing her.

d. never continue the mission.

7. The quantity demanded of red hats has decreased. This could be explained by:

a. an increase in the price of red hats.

b. an increase in the price of green hats, a substitute for red hats.

c. a decrease in the price of red jumpsuits, a complement to red hats.

d. an increase in the supply of red hats.

8. The market for tall flag poles is regulated and currently characterized by excess demand. The regulation is now lifted. This will result in:

a. an increase in price, a decrease in quantity demanded and an increase in quantity supplied.

b. an increase in price, an increase in quantity demanded, and a decrease in quantity supplied.

c. a decrease in price, a decrease in quantity demanded, and an increase in quantity supplied.

d. a decrease in price, an increase in quantity demanded, and a decrease in quantity supplied.

9. Pipes are the preferred form of transportation in Super Mario Bros. World. The company that installs the pipes finds that the price of green aluminum, an input required to produce pipes, has increased. This will:

a. increase the supply for pipes and decrease the equilibrium price of pipes.
b. increase the supply for pipes and increase the equilibrium price of pipes.
c. decrease the supply for pipes and increase the equilibrium price of pipes.
d. decrease the supply for pipes and decrease the equilibrium price of pipes.

10. Mario and Luigi are plumbers by training but often are called to rescue princesses. If Mario saves no princesses, he can service 20 toilets in a day. If he spends all of his time saving princesses, Mario can save 2 in one day. If Luigi saves no princesses, he can service 25 toilets in a day. If he spends all of his time saving princesses, Luigi can save 1 princess in a day. According to this information and the law of comparative advantages:

a. Mario should specialize in plumbing and Luigi should specialize in saving princesses.
b. Luigi should specialize in plumbing and Mario should specialize in saving princesses.
c. Mario and Luigi should each spend half of their time on each occupation.
d. Both Mario and Luigi should specialize in saving princesses.

11. After Bowser kidnaps Princess Peach, he realizes that she can help him with chores around his lair. Their production possibilities are defined in the following table. They spend their time cooking steaks and making spikey bracelets.

	Production Per Day	
Bowser	10 Bracelets	20 Steaks
Peach	2 Bracelets	22 Steaks

If each person specializes according to its comparative advantage, _____ will produce bracelets and ____ will produce steaks.

a. Bowser; Peach
b. Peach; Bowser
c. Bowser; Bowser
d. Peach; Peach

12. After Bowser kidnaps Princess Peach, he realizes that she can help him with chores around his lair. Their production possibilities are defined in the following table. They spend their time cooking steaks and making spikey bracelets.

	Production Per Day	
Bowser	10 Bracelets	20 Steaks
Peach	2 Bracelets	22 Steaks

According to the table, ___ has absolute advantage in producing bracelets and _____ has absolute advantage in producing steaks.

a. Bowser; Peach
b. Peach; Bowser
c. Bowser; Bowser
d. Peach; Peach

13. Mario and Luigi are on an important mission to rescue a princess. In order to do this, they must finish two different games. They can start these stages simultaneously and their goal is to finish the mission as quickly as possible. The table below denotes how long it takes each individual to complete each Stage if he spends no time on the other stage.

	To Beat Stage 1	**To Beat Stage 2**
Mario	10 hours	9 hours
Luigi	12 hours	8 hours

According to the table, ___ has comparative advantage in and should specialize in Stage 1 and _____ has comparative advantage and should specialize in Stage 2.

a. Mario; Luigi
b. Luigi; Mario
c. Mario; Mario
d. Luigi; Luigi

14. Luigi splits his time between two activities: collecting coins and sliding down flagpoles. The following is his production possibilities frontier.

Maximum Annual Output	Collecting Coins	Sliding Down Flagpoles
A	50	0
B	40	20
C	30	40
D	20	50
E	10	55
F	0	57

Based on the PPF, Luigi has ____ opportunity costs in coins:

a. increasing
b. decreasing
c. constant
d. zero

15. Luigi splits his time between two activities: collecting coins and sliding down flagpoles. The following is his production possibilities frontier.

Maximum Annual Output	Collecting Coins	Sliding Down Flagpoles
A	50	0
B	40	20
C	30	40
D	20	50
E	10	55
F	0	57

Based on the PPF, the production pair of 25 coins and 55 flagpoles is:

a. inefficient but attainable.
b. unattainable.
c. efficient and attainable.
d. a point on the PPF.

16. Mario enters "Big World," a new community where everything has grown exponentially in size. He makes the following two statements about the new community:
(1) "In Big World, hormones are used to grow the radishes to nearly four times the size of regular radishes."
(2) "This is detrimental to the health of the radishes and should be banned."

a. Statement 1 is normative and Statement 2 is positive.
b. Statement 1 is positive and Statement 2 is normative.
c. Both statements are positive.
d. Both statements are normative.

17. The price of green jumpsuits is currently in equilibrium, and the price is set at $15/jumpsuit. Now there is a price floor set at $12/jumpsuit. This will result in:

a. A shortage in jumpsuits.
b. A surplus of jumpsuits.
c. No change in the equilibrium quantity.
d. A shift in the demand for jumpsuits.

18. Luigi is contemplating a career change. He can become a coach and train other people to jump over flag poles. To become a coach he has to attend a $500 class. He should become a coach if:

a. the net present value of becoming a coach is positive.
b. the total benefit of becoming a coach is positive.
c. the opportunity cost of becoming a coach is sufficiently low.
d. The $500 is a sunk cost, so he should become a coach no matter what.

19. Mario is getting paid for his latest rescue. He has a choice between 1,000 coins today, or a 1,500 coins in one year. He will choose the 1,000 coins today if:

a. 1,000(1+r)> 1,500
b. 1,500(1+r)>1,000
c. 1,000/(1+r)>1,500
d. 1,000(r)>1,500

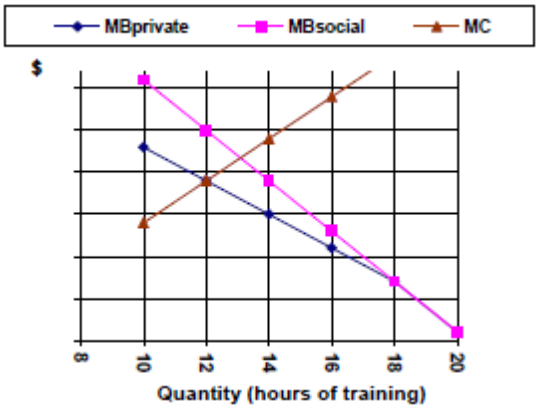
20. Koopa Troopa is deciding what he would like his first job to be. He has the following options:

JOB	AVERAGE SALARY
BOWSER'S FOOT SOLDIER	20,000 coins
PIPE MECHANIC	10,000 coins
COIN PLACER	15,000 coins

Koopa Troopa decides to take the job as Bowser's Foot Solder. What is his opportunity cost? Assume that Koopa only cares about money (coins).

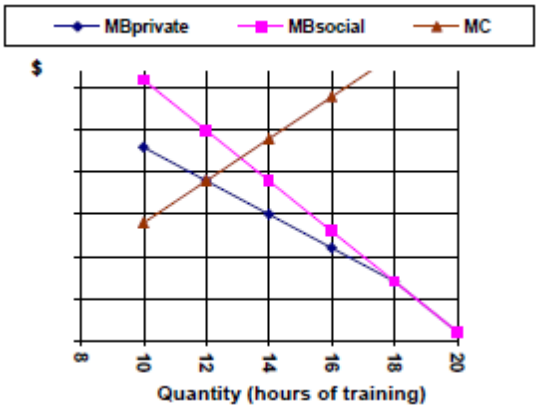
a. 10,000 coins
b. 20,000 coins
c. 15,000 coins
d. 5,000 coins

21. Yoshi species are bred to help aid rescuers on their missions. They have the option to go to training prior to embarking on rescue missions with their guides. The following depicts the Private Marginal Benefit, the Social Marginal Benefit, and the Marginal Cost associated with the training program. Without any intervention, Yoshis will get how many hours of training?



a. 13
b. 12
c. 14
d. 0

22. Yoshi species are bred to help aid rescuers on their missions. They have the option to go to training prior to embarking on rescue missions with their guide. The following depicts the Private Marginal Benefit, the Social Marginal Benefit, and the Marginal Cost associated with the training program. Which of the following accurately characterizes the problem and solution displayed in the graph.



a. The socially optimal level of training is lower than the private optimal level of training; it should be taxed.
b. The socially optimal level of training is greater than the private optimal level of training; it should be taxed.
c. The socially optimal level of training is lower than the private optimal level of training; it should be subsidized.
d. The socially optimal level of training is greater than the private optimal level of training; it should be subsidized.

23. Bowser's fire-breathing activities have begun starting forest fires—generating a negative externality to society. As is true with any negative externality:

a. the marginal social cost exceeds the marginal private cost.
b. the activity should be taxed or regulated in some way.
c. an individual's private decisions have spillover effects on the rest of society.
d. all of the above are correct.

24. There are three race car drivers: Toad, Donkey Kong, and Yoshi. Each pollutes according to the table. The owner of the race track comes to you for advice, as the government is requiring him to reduce emissions by a half. Assume that each driver can reduce his emissions to zero (by not driving). You tell the owner how to reduce emissions in the most cost effective way. When doing this, you tell him the total cost is:

	Emissions: Tons/Day	**Marginal Cost of Reduction (Per Ton)**
Toad	10	$10
Donkey Kong	20	$20
Yoshi	10	$40

a. $100.
b. $300.
c. $500.
d. $400.

25. There are three race car drivers: Toad, Donkey Kong, and Yoshi. Each pollutes according to the table. The owner of the race track comes to you for advice, as the government is requiring him to reduce emissions by a half. Assume that each driver can reduce his emissions to zero (by not driving). He insists that it is better to reduce emissions of each driver by a half. When doing this, you tell him the total cost is:

	Emissions: Tons/Day	**Marginal Cost of Reduction (Per Ton)**
Toad	10	$10
Donkey Kong	20	$20
Yoshi	10	$40

a. $450.
b. $250.
c. $500.
d. $400.

26. The below table depicts the market for "Magic Mushrooms"—which are an illegal substance. The second column shows the private marginal cost, followed by the social marginal cost associated with each unit of consumption and production of the good. The final column depicts the marginal benefit, or the demand curve for magic mushrooms. What is the per unit tax the government should institute in order to reduce consumption and production to the socially optimal level?

Magic Mushroom Use	Private Marginal Cost	Social Marginal Cost	Marginal Benefit
0	1000	1500	5000
10	2000	3500	4000
20	3000	3500	3000
30	4000	4500	2000
40	5000	5500	1000
50	6000	6500	0

a. $50
b. $100
c. $500
d. No tax is needed, as the market is already producing at the socially optimal level.

27. Treasure Chest, Inc. produces "super leaves" which serve as raccoon suits that allow people to fly. Treasure Chest, Inc. maximizes the total revenue of super leaves by selling them at price of $100 each. Ceteris paribus, at a price of $150 per hour, you predict that:

a. the demand for super leaves is inelastic.
b. the demand for super leaves is elastic.
c. the demand for super leaves is unit elastic.
d. there is excess supply for super leaves.

28. Mario notices that the price of a frog suit, which helps him swim faster, has decreased by 5%. At the same time, he notices that the quantity demanded increases by 4%. This means the elasticity of demand for frog suits is:

a. 5/4; inelastic.
b. 4/5; inelastic.
c. 5/4; elastic.
d. 4/5; elastic

29. Hammer Brothers will purchase the same number of hammers regardless of changes in price. This means their demand for hammers is:

a. perfectly elastic.
b. unit elastic.
c. perfectly inelastic.
d. infinite.

30. Farmers growing magic flower plants have similar issues regarding price volatility in the U.S. agricultural market. Which of the following policies would not aid farmers?

a. price supports
b. price floors
c. demand manipulations
d. taxing magic flowers.

31. If the government imposes a price support program for magic flower producers, this means:

a. the government sets a minimum price that can be charged for the good.
b. the government buys the surplus magic flowers, generated from the higher price.
c. the government sets a maximum price that can be charged for the good.
d. both a and b are required for price supports.

32. There are 6 consumers in a market. The following table shows each of their reservation prices (or their willingness to pay). Suppose that the market price is $7. What is the equilibrium level of consumer surplus?

Mario	$15
Luigi	$12
Bowser	$13
Peach	$2
Koopa	$7
Yoshi	$6

a. $40
b. $19
c. $55
d. $21

33. Magic mushrooms are an illegal substance that is comparable to marijuana in the United States. The government is considering legalizing magic mushrooms in Super Mario Brothers World. Which of the following most accurately depicts what would happen if the government legalizes magic mushrooms?

a. the price of magic mushrooms would decrease if the shift in supply after legalization was smaller than the shift in demand.

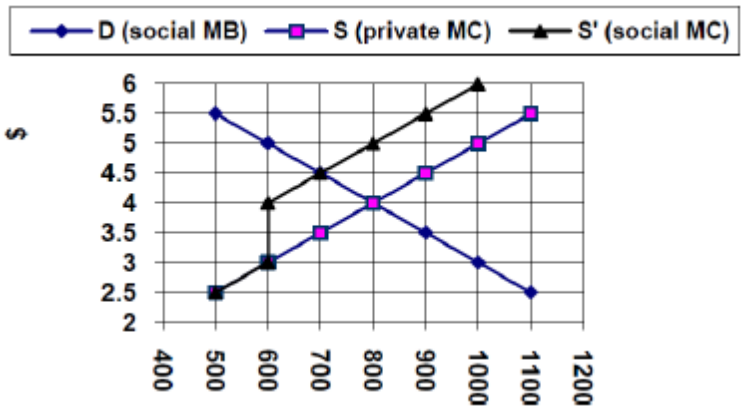
b. the government would tax magic mushrooms, bringing in more than the amount of any negative externality associated with consumption and production of magic mushrooms.

c. demand for alcohol would decrease if the two goods are complements.

d. the government could alleviate some of the imperfect information issues by disclaiming all side effects of the drug.

34. Citizens of Super Mario Brothers World are debating whether or not to legalize all illegal drugs. They ask for your advice. You turn to the example of _____, where almost all illegal drugs were legalized in 2001.

a. Mexico
b. Portugal
c. Panama
d. Spain



35. The above graph shows the market for magic mushrooms, an illegal substance. The production process creates negative externalities as demonstrated in the graph. Therefore, S' displays the additional costs to society from consumption and production of magic mushrooms. Based on the graph, the private equilibrium consumption level is _____ magic mushrooms, and the socially efficient level is _____ magic mushrooms.

a. 700; 800
b. 800; 700
c. 700; 700
d. 800; 800

36. The economy was previously characterized by a market capitalist system. Now, Bowser overthrows the government and acts as a dictator. Which of the following would never result of the switch from market capitalism to command socialism?

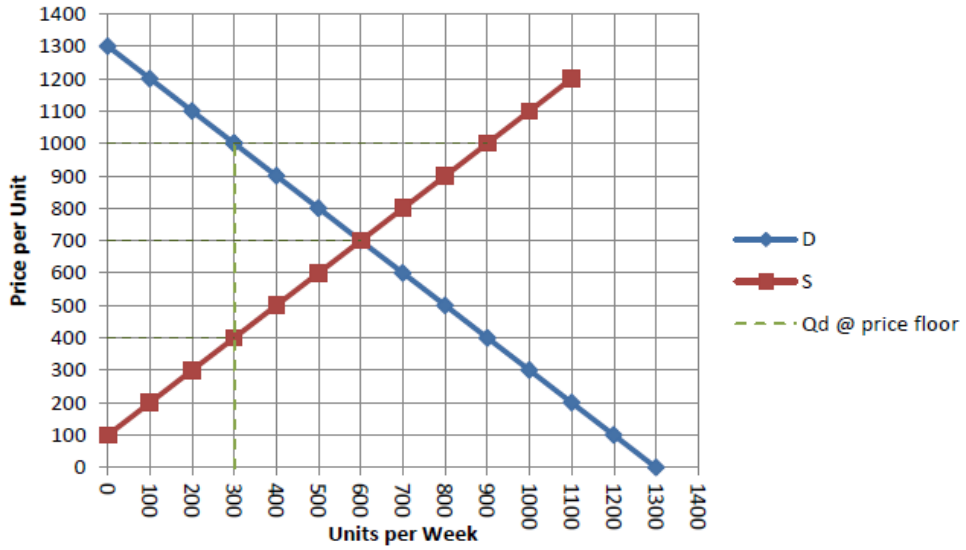
a. Setting a price ceiling on frog suits, outfits used to improve swim capabilities.
b. Restricting the number of workers that can travel in pipes, the best but most congested mode of transportation.
c. Tax flowers, a popular good in the economy.
d. Allow the most productive workers to earn the highest salary.

37. Bowser has many children, called Koopalings. He can only allow some of them to work for him, and he decides which ones to employ based on a meritocracy. This means:

a. only those who would not be employed without his help will work for him.
b. those with the most skills will work for him.
c. those who cost the least will work for him.
d. everyone will be hired, but for less hours.

38. Magic mushrooms are a banned substance in Super Mario Brothers World. What market failure could cause magic mushrooms to be labeled as illegal?

a. monopoly power.
b. taxation.
c. subsidies.
d. imperfect information.



39.

The market for "flower power," or flowers, is characterized by the graph above. The government has currently set a price floor at $1000/unit. Now, the government changes the policy to a price support. What is the producer surplus associated with the price support?

a. (1000-100)*(1/2)*900
b. (1300-1000)*(1/2)*300
c. (1000-400)*300 + (400-100)*300*(1/2)
d. (700-100)*(1/2)*600

40. Mario and Luigi have their initial training as plumbers. Thus, they consider opening up their own plumbing company, Brothers, Inc. They are considering how many people to hire. You know the equilibrium wage for plumbers is $30/hour. You also know that the price per house serviced is $10/house. Based on their production function, shown below, how many workers should Mario and Luigi hire? (HINT: you will need to calculate a Marginal Product of Labor and Value of Marginal Product of Labor Column to determine this.)

Quantity of Labor (workers per hour)	**Quantity of Output (Houses Serviced/hour)**
1	10
2	17
3	22
4	25
5	26

a. 1
b. 2
c. 4
d. 5

41. Mario and Luigi have their initial training as plumbers. Thus, they consider opening up their own plumbing company, Brothers, Inc. They are considering how many people to hire. You know the equilibrium wage for plumbers is $30/hour. You also know that the price per house serviced is $10/house. Based on their production function, shown below, what is the **total revenue** Mario and Luigi earn when they hire 2 workers?

Quantity of Labor (workers per hour)	**Quantity of Output (Houses Serviced/hour)**
1	10
2	17
3	22
4	25
5	26

a. $100
b. $170
c. $110
d. $510

42. Mario and Luigi have their initial training as plumbers. Thus, they consider opening up their own plumbing company, Brothers, Inc. They are considering how many people to hire. You know the equilibrium wage for plumbers is $30/hour. You also know that the price per house serviced is $10/house. Based on their production function, shown below, what is the **value of the marginal product of labor** of the 5^{th} worker?

Quantity of Labor (workers per hour)	**Quantity of Output (Houses Serviced/hour)**
1	10
2	17
3	22
4	25
5	26

a. 26
b. $10
c. $30
d. 1

43. Mario and Luigi have their initial training as plumbers. Thus, they consider opening up their own plumbing company, Brothers, Inc. They are considering how many people to hire. You know the equilibrium wage for plumbers is $30/hour. You also know that the price per house serviced is $10/house. Based on their production function, shown below, what is the **maximum profit** the brothers can earn?

Quantity of Labor (workers per hour)	**Quantity of Output (Houses Serviced/hour)**
1	10
2	17
3	22
4	25
5	26

a. $250
b. $220
c. $110
d. $130

44. The equilibrium wage in the market for plumbers is $30/hour. Now, the government imposes a minimum wage of $35/hour. This will:

a. increase in the demand for plumbers.
b. increase the supply of plumbers.
c. create a shortage of plumbers.
d. create a surplus of plumbers.

45. Toad and Yoshi are both race car drivers, but Toad's salary is $35,000 per year, while Yoshi earns $150,000/year. The economics interpretation of the salary difference would be that:

a. Yoshi's value of marginal product of labor is higher, meaning that he brings more total revenue and is a more valuable employee.
b. Toad is a more productive driver but has a cap on his wage.
c. There is a sunk cost associated with hiring Toad, but not with hiring Yoshi.
d. The supply of drivers is perfectly elastic.

46. If there is an increase in the number of plumbers in the labor market, this will:

a. increase the demand for plumbers.
b. increase the supply of plumbers.
c. increase neither the demand nor the supply for plumbers.
d. both a and b are correct.

47. The following figure plots the Value of the Marginal Product of Labor on the Y axis and the number of workers hired per hour on the x-axis. If the market wage was $20/hour, how many workers would be hired per hour in equilibrium?

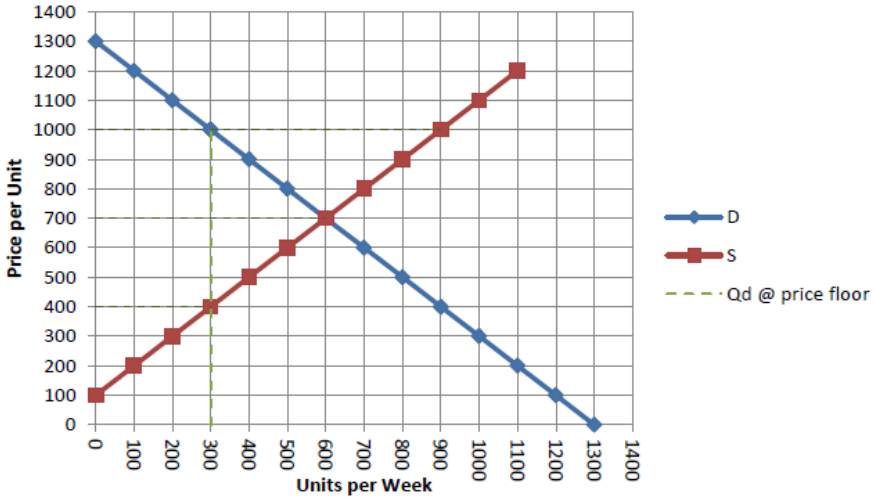
a. 2
b. 3
c. 4
d. 5

48. In Super Mario Brothers World, the top 20% of individuals hold 30% of the wealth and the bottom 20% of individuals hold 10% of the wealth. This differs from the U.S. in that, in the U.S. the top 20% of the income distribution have _____ of the country's total wealth, and the bottom 20% of the income distribution have _____ of the country's total wealth.

a. less than 30% ; less than 10%
b. more than 30%; more than 10%.
c. more than 30%; less than 10%.
d. less than 30%; more than 10%.

49. The market for "flower power," or flowers is depicted in the graph below. There is currently a price floor of $1000 per flower (as these are magical flowers that allow you to spit firey bullets). With the price floor, the consumer surplus in the market is:

a. (1/2)*(1300-1000)*300
b. (1/2)*(1300-700)*600
c. (1/2)*(1000-100)*900
d. (1000-400)*300+ (1/2)*(400-100)*300



50. At the current level of production, the marginal social cost of producing magic carpets is $15, and the marginal private cost is $10. This means that:

a. the social optimum number of magic carpets is lower than the private optimum number of magic carpets.
b. there is a negative externality associated with production and consumption of magic carpets.
c. magic carpets are currently subsidized.
d. magic carpets suffer from an imperfect information problem.

51. Mario and Peach are married and currently make $25,000/year. If they have a child, this makes them _____ fall below the federal poverty line.

a. more likely to
b. less likely to
c. equally likely to
d. unlikely to ever

SOLUTIONS

1	a
2	d
3	a
4	d
5	a
6	b
7	a
8	b
9	c
10	b
11	a
12	a
13	a
14	a
15	b
16	b
17	c
18	a
19	a
20	c
21	b
22	d
23	d
24	b
25	a
~~26~~	~~c~~
~~27~~	~~b~~
28	b
29	c
30	d
31	d
32	b
33	d
34	b
35	b
36	d
37	b
38	d
39	a
40	c
41	b

42 b
43 d
44 d
45 a
46 b
47 c
48 c
49 a
50 b
51 a