

ECNS 101-3 FINAL EXAM

Instructions: Answer each of the questions. Print your name and student number clearly on the answer sheet. Fill in the bubbles corresponding to your student number, leaving the top box blank (or inserting a dash there) and filling in the "0" bubble in the top row. **NO CALCULATORS!!! USE PENCIL ONLY!**

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 satellite radio increases, the equilibrium price
  - a. increases and the equilibrium quantity increases.
  - b. decreases and the equilibrium quantity increases.
  - c. decreases and the equilibrium quantity decreases.
  - d. increases and the equilibrium quantity decreases.
  
3. A decrease in the price of butter, an ingredient in chocolate chip cookies, will \_\_\_\_\_ chocolate chip cookies and as a result the equilibrium quantity of chocolate chip cookies will \_\_\_\_\_.
  - a. decrease the supply of; decrease
  - b. decrease the supply of; increase
  - c. cause no change in the market for; not change
  - d. decrease the demand for; decrease
  
4. An increase in consumers' incomes has increased the demand for computers. At the same time, computer makers have enjoyed unprecedented increases in technology growth and decreases in costs of raw materials. What can we say about the equilibrium price and quantity in the computer market as a result of these two changes?
  - a. price will rise and quantity will fall
  - b. quantity will fall, but the effect on equilibrium price is unknown
  - c. price will fall and quantity will fall
  - d. quantity will rise, but the effect on equilibrium price is unknown
  
5. You observe that the price of coffee has increased and the quantity has also increased. Ceteris paribus, this could result from
  - a. A decrease in the demand for coffee.
  - b. An increase in the supply of coffee.
  - c. A decrease in the supply of coffee.
  - d. An increase in the demand for coffee.

6. Suppose that when the price of salads increases, the demand for soup decreases. This indicates that these two goods are:
- unrelated goods.
  - inferior goods.
  - substitute goods.
  - complement goods.
7. Ceteris paribus, if during an unusually hot summer the demand for soft drinks increases, the price of a soft drink
- increases and the quantity supplied decreases.
  - increases and the supply of soft drinks increases.
  - increases and the quantity supplied increases.
  - decreases and the supply of soft drinks decreases.
8. "The quantity demanded of Pepsi has decreased," Mary correctly tells John. The best explanation for this is
- the price of Coca Cola has increased.
  - Pepsi's costs have increased.
  - the price of Pepsi increased.
  - both a and b are possible.
9. The market for tires is unregulated and is presently characterized by excess supply. To return to equilibrium, you accurately predict that
- price will increase, the quantity demanded will fall and the quantity supplied will rise.
  - price will increase, the quantity demanded will rise and the quantity supplied will fall.
  - price will decrease, the quantity demanded will rise and the quantity supplied will fall.
  - price will decrease, the quantity demanded will fall and the quantity supplied will rise.
10. Your friend Jeannie is going to Pizza Hut's All-You-Can-Eat lunch buffet for the first time. The buffet costs \$12. Using your Economic knowledge, you give her the following rule of thumb for how much to eat:
- Eat until you have consumed \$12 worth of food.
  - Eat until you have consumed more than \$12 worth of food.
  - Eat as long as the marginal cost of the last bite exceeds the marginal benefit of that bite.
  - Eat as long as the marginal benefit of the last bite exceeds the marginal cost of that bite.

11.

Country	Production per Year	
U.S.	12 Computers	30 Printers
China	8 Computers	24 Printers

The table above shows the production possibilities frontier for U.S. and China, which each produce computers and printers. Ceteris paribus, \_\_\_\_\_ has absolute advantage in computers; \_\_\_\_\_ has comparative advantage in printers.

- a. U.S.; China.
- b. China; U.S.
- c. U.S.; U.S.
- d. China; China.

12.

Country	Production per Year	
Mexico	10 Maple Syrup (gallons)	20 Sombreros
Canada	2 Maple Syrup (gallons)	22 Sombreros

The above table shows the production possibilities frontier for two countries, Canada and Mexico, which produce maple syrup and sombreros. If each country specializes according to its comparative advantage, \_\_\_\_\_ will export maple syrup, and \_\_\_\_\_ will export sombreros.

- a. Mexico; Mexico.
- b. Canada; Canada.
- c. Canada; Mexico.
- d. Mexico; Canada.

13.

Country	To produce 1 barrel of tobacco	To produce 1 barrel of coffee
Zimbabwe	Labor of 100 workers	Labor of 90 workers
Tanzania	Labor of 120 workers	Labor of 80 workers

The above table shows how many workers it takes to produce one barrel of tobacco and one barrel of coffee in Zimbabwe and Tanzania, respectively. From this table, we can conclude that \_\_\_\_\_ has the comparative advantage in tobacco, and \_\_\_\_\_ has an absolute advantage in coffee production.

- a. Zimbabwe; Tanzania.
- b. Tanzania; Zimbabwe.
- c. Tanzania; Tanzania.
- d. Zimbabwe; Zimbabwe.

14.

<b>Maximum annual output options</b>	<b>Pounds of Fish</b>	<b>Pounds of Potatoes</b>
<b>A</b>	100	0
<b>B</b>	80	30
<b>C</b>	60	50
<b>D</b>	40	60
<b>E</b>	20	65
<b>F</b>	0	67

Atlantis is a small, isolated island in the South Atlantic. The inhabitants grow potatoes and catch fish according to the production possibilities frontier above. Using the above PPF, you can determine that the production pair of 70 pounds of fish and 20 pounds of potatoes is:

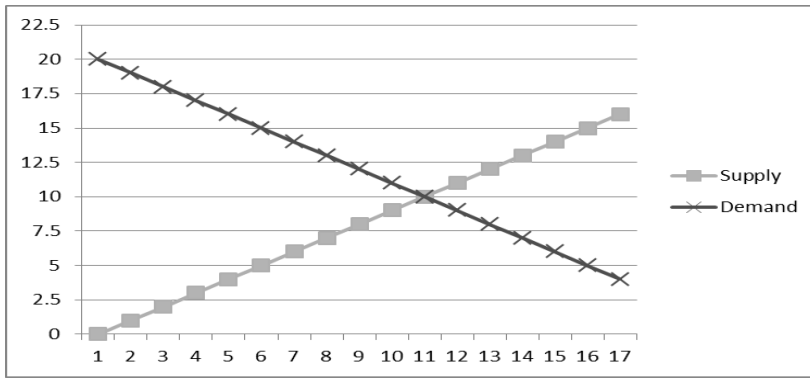
- a. Efficient and attainable.
- b. Inefficient and attainable.
- c. Unattainable.
- d. Maximizing the opportunity cost.

15. A Bozeman Daily Chronicle reporter made the following statement:

“Bridger Bowl had over 1 million lift tickets purchased in 2010-2011. They should now become a for-profit enterprise, instead of a non-profit venture.”

Which of the following statements correctly points out the normative and positive statements in the quote?

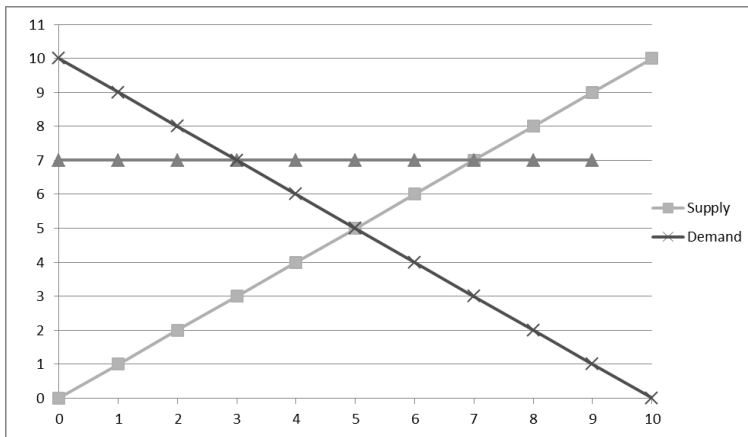
- a. Sentence 1 is normative. Sentence 2 is positive.
- b. Sentence 1 is positive. Sentence 2 is normative.
- c. Both sentences 1 and 2 are normative.
- d. Both sentences 1 and 2 are positive.



16.

The above diagram depicts the equilibrium in the market for sweaters. Assume there is a price floor set at \$5/sweater. Which of the following would result from the floor?

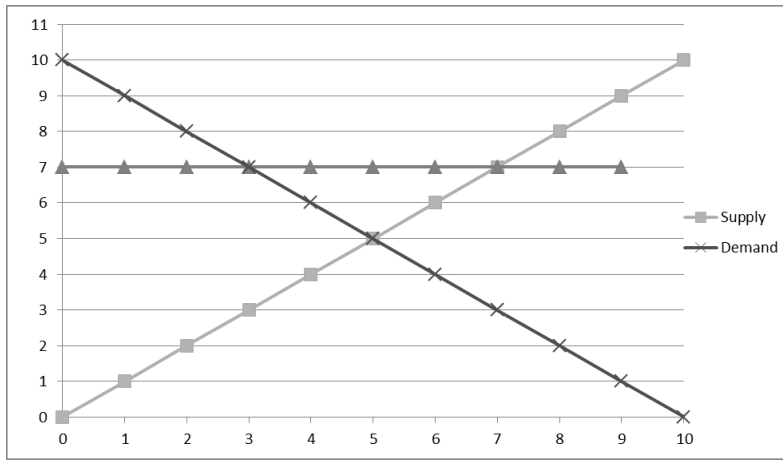
- a. There will be a shortage of sweaters.
- b. There will be a surplus of sweaters.
- c. Demand for sweaters will shift inward.
- d. The price floor will not affect the equilibrium price and quantity of sweaters.



17.

The above diagram depicts equilibrium in the market for olives in Port Orange, FL. Now, the government sets a price floor at \$7/lb. This will result in a

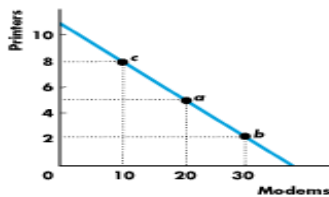
- a. Decrease in consumer surplus.
- b. Decrease in producer surplus.
- c. Increase in consumer surplus.
- d. Increase in total surplus.



18.

The above diagram depicts the equilibrium in the market for olives in Port Orange, FL. The government now puts a price support in place, where the price is set at \$7/lb. If the government purchases the excess olives and there is a storage cost of \$1/lb, how much, in total, does this price support cost the government of Port Orange?

- a. \$35
- b. \$32
- c. \$28
- d. \$7



19.

Above is a production possibilities frontier for an Office Store's production of Printers and Modems. If they move from point a to point b, the opportunity cost per modem:

- a. Increases
- b. Decreases
- c. Stays the same
- d. Is zero.

20.

Price	Quantity Demanded	Quantity Supplied
\$12	10,000	0
\$24	8,000	3,000
\$36	6,000	6,000
\$48	4,000	9,000
\$60	2,000	12,000
\$72	0	15,000

The table above shows information on demand and supply for boxes of 1 dozen water glasses. The lobbyists for the water glass producers persuade the government to establish a price floor of \$48 per box. Before the price floor the equilibrium price was \_\_\_\_\_ per box and after the price floor, there is a \_\_\_\_\_ of 5,000 boxes.

- a. \$36; shortage.
- b. \$36; surplus.
- c. \$48; shortage.
- d. \$48; surplus.

21. Larry has a comparative advantage in writing a term paper when compared to his classmates if he

- a. can write a paper faster than the other students in class.
- b. has an absolute advantage in writing a term paper.
- c. always earns an A on his papers.
- d. has a lower opportunity cost for writing a term paper than his classmates.

22. If I want to compare \$X today to \$Y tomorrow, I could do which of the following?

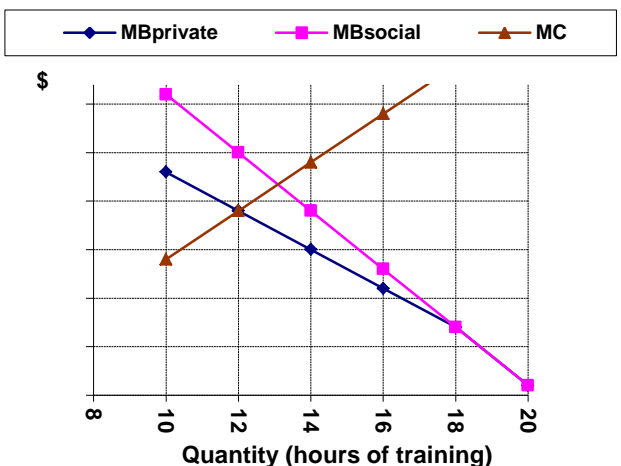
- a. Calculate the present value of \$Y and compare it with \$X
- b. Calculate the future value of \$X and compare this with \$Y
- c. Calculate the future value of \$Y and compare it with \$X
- d. a and b are both correct.

23. \$300 today is worth how much in 20 years? Assume the interest rate is 5%.

- a.  $300(1.05)^{20}$
- b.  $\frac{300}{(1.05)^{20}}$
- c.  $300(6)^{20}$
- d.  $\frac{300}{1.05}$

24. Jim is a wealthy entrepreneur trying to teach his daughter, Valerie the value of savings. He first offers her \$50,000 today. He then gives her a second option. If Valerie waits 4 years, her dad will give her \$100,000 instead. She asks for your advice, and you tell her to take the \$50,000 today if:

- a.  $50,000(1 + r)^4 \geq 100,000$
- b.  $\frac{50,000}{(1+r)^4} \geq 100,000$
- c.  $50,000 \geq 100,000(1 + r)^4$
- d.  $50,000(1+r) \geq 100,000$



25. The above graph displays the market for a dental hygienist training program in the U.S., where all current dental hygienists go to update their skills. MC represents the marginal cost of the training program.  $MB_{private}$  is the private marginal benefits of the training program, and  $MB_{social}$  is the social demand curve and represents the social marginal benefits of the training program. Given the situation depicted the in graph, the private optimum quantity is \_\_\_\_\_ hours of training, and the social optimum quantity is \_\_\_\_\_ hours of training?

- a. 12; 13.
- b. 13; 12.
- c. 12; 12.
- d. 13; 13.

26. In order to produce the socially optimal level of a good when there is a positive externality, the government should:

- a. subsidize the good.
- b. tax the good.
- c. not interfere.
- d. put a price floor on the good.



27. Which of the following systems best fits with the “equality of outcomes” principle?

- a. Market Capitalist
- b. Market Socialist
- c. Command Capitalist
- d. Command Socialist

28. Which of the following is **NOT** an example of a public good?

- a. A lighthouse
- b. Tornado sirens
- c. K-12 Education
- d. A movie ticket

29.

	<i>SO<sub>2</sub> Emissions: Tons/Day</i>	<i>Marginal Cost of SO<sub>2</sub> Reduction (per ton)</i>
Smokestack 1	350	\$100
Smokestack 2	450	\$200
Smokestack 3	200	\$300

Suppose Leroy owns three smokestacks (shown in the table above), and the EPA imposes a regulation requiring him to cut his emissions in half. He comes to you for advice, and you tell him the most cost-effective way to cut down his emissions. How much will this cost him? Hint: Assume that it is feasible to reduce emissions to 0 at any given smokestack.

- a. \$115,000
- b. \$65,000
- c. \$145,000
- d. \$135,000

30.

	<i>SO2 Emissions: Tons/Day</i>	<i>Marginal Cost of SO2 Reduction (per ton)</i>
Firm 1	200	\$100
Firm 2	200	\$200
Firm 3	200	\$400

Assume there are 3 Firms in the electricity business and the EPA imposes a regulation to reduce industry-level emissions by a half (see Table above). If each firm were given a tradable permit for 100 tons/day of SO<sub>2</sub> emissions, firm \_\_\_ would be most likely to buy Firm \_\_\_'s permit for at least \_\_\_\_\_.

- a. 3; 1; \$100.
- b. 1; 3; \$100.
- c. 3;1; \$400.
- d. 1; 3; \$400.

31.

Cocaine Use (per gram)	Private Marginal Costs (MC <sub>private</sub> )	Social Marginal Costs (MC <sub>social</sub> )	Marginal Benefits (MB)
0	1000	1050	5000
10	2000	2050	4000
20	3000	3050	3000
30	4000	4050	2000
40	5000	5050	1000
50	6000	6050	0

The above table depicts the market for cocaine, an illegal substance. The second column shows the Private Marginal Costs, followed by the Social Marginal Costs associated with the drug production and consumption. The final column depicts the Marginal Benefits, or the demand curve for cocaine. Given the information above, what is the per gram amount of the externality (the external costs to society from the drug production and consumption)?

- a. \$3,000
- b. \$50
- c. \$1,000
- d. \$100

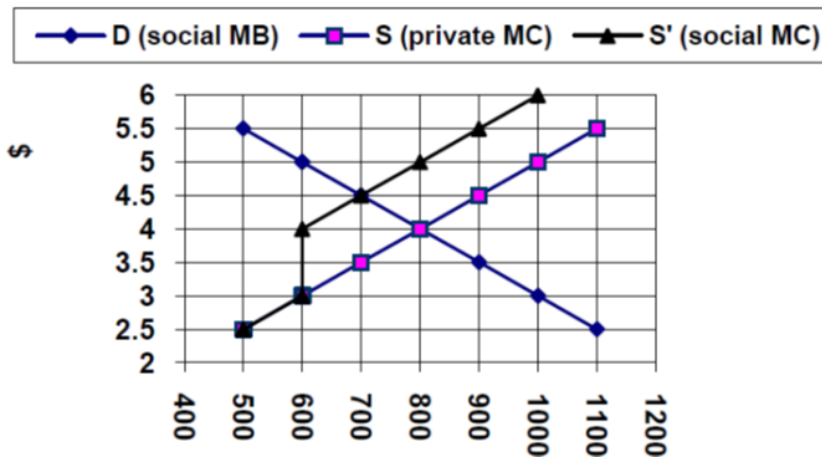
32. Rachael's coffee shop maximizes its total revenue by selling cappuccinos at \$3.00/cup. At a price of \$2.00/cup, you predict that.

- a. the demand for cappuccinos is elastic.
- b. the demand for cappuccinos is inelastic.
- c. the demand for cappuccinos is unit elastic.
- d. there is excess demand for cappuccinos.

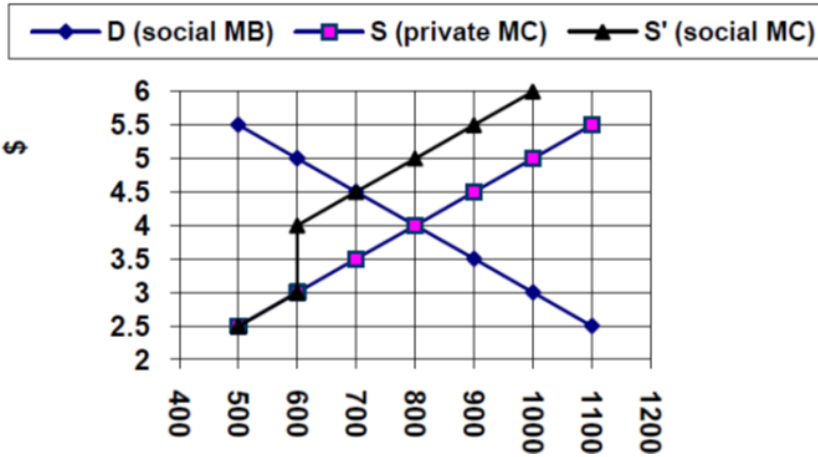
33. A researcher tells you that the elasticity of demand for televisions is  $-2$ . You notice that this month, the price of televisions has increased by 10%, you accurately predict that the quantity of televisions will:
- fall by 20%
  - rise by 20 %
  - fall by 5 %
  - rise by 5%
34. Which of the following is a reason that employment in the agricultural industry has declined over time?
- there has been a substitution from labor to capital.
  - output/worker has decreased over time.
  - decrease in technological advances.
  - all of the above are explanations.
35. Which of the following is a rationale for intervention in the agricultural market?
- highly inelastic demand creates volatile prices.
  - farmers have low income.
  - demand for food has decreased over time.
  - the decline in employment in the agricultural industry over time.
36. Which of the following is most likely to describe the demand for methamphetamines for addicts?
- perfectly elastic
  - flat.
  - perfectly inelastic.
  - zero.
37. If the price of heroin increases, which of the following could result? Use your knowledge of economics to answer this.
- the demand for methamphetamines will increase if the two are complements.
  - the quantity demanded of heroin will increase.
  - the quantity supplied of heroin will decrease.
  - the demand for marijuana will increase if the two are substitutes.
38. The demand for cocaine has decreased over time in the U.S. Which of the following explanations best explains why this has happened?
- incomes have increased over time and cocaine is a normal good.
  - the availability of cheaper substitutes has increased over time.
  - the risks involved in using cocaine have decreased over time
  - both b and c are correct.

39. If marijuana were to become legalized in all 50 states tomorrow, this would:
- increase demand and increase supply.
  - increase demand and decrease supply.
  - decrease demand and decrease supply.
  - decrease demand and increase supply.

40. What market failures cause legislatures to label a good illegal?
- Imperfect information
  - Positive externalities
  - Monopoly Power
  - a and b are correct.



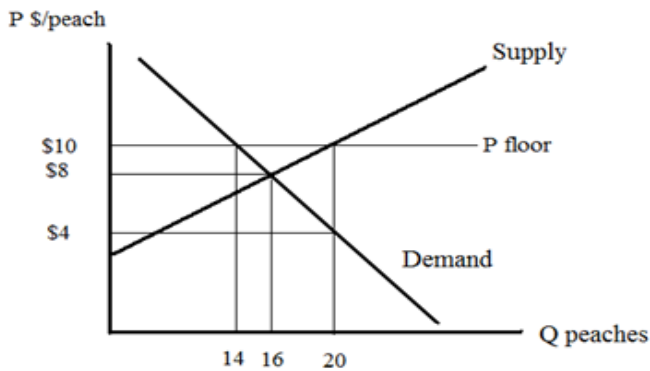
41. The above graph shows the market for methamphetamines (meth) in Alva, Oklahoma. The production process is extremely dangerous and results in many household fires and explosions. Therefore, the perfectly competitive market's Marginal Costs (S, private MC) does not internalize the entire costs of producing meth. Instead, S' shows the additional social costs associated with this production. Based on the graph, the private equilibrium price of meth is \_\_\_\_\_, whereas the socially efficient price of meth in Alva, OK is \_\_\_\_\_.
- \$4.00; \$4.50.
  - \$3.50; \$3.50.
  - \$4.50; \$4.00.
  - \$3.50; \$4.00.



42.

The above graph shows the market for methamphetamines (meth) in Alva, Oklahoma. The production process is extremely dangerous and results in many household fires and explosions. Therefore, the perfectly competitive market's Marginal Costs (S, private MC) does not internalize the entire costs of producing meth. Instead, S' shows the additional social costs associated with this production. What is the amount of the externality at the socially optimal level?

- a. \$1/unit
- b. \$0.50/unit
- c. \$2/unit
- d. \$700/unit



43.

In the market for peaches, the government sets a price floor of \$10/peach. Assuming that the government purchases the excess supply under the price floor, how much does it cost the government to impose the price support program? Assume there is no storage cost to this price floor program.

- a. \$60
- b. \$600
- c. \$140
- d. \$10

44. The biggest difference between a price support and a price floor program is that

- a. a price support is not a government intervention and a price floor is.
- b. a price support manipulates demand and a price floor does not.
- c. in a price support, the government buys up excess supply and in a price floor it does not.
- d. consumer surplus is higher with a price support than a price floor.

45. There are 6 consumers in a market. The following table shows each of their reservation prices (or their willingness to pay).

Andy	\$9
Bob	\$11
Carl	\$12
Denny	\$6
Edy	\$20
Frank	\$8

Suppose that this is a competitive market and the market price is \$10. What is the consumer surplus in equilibrium?

- a. \$66
- b. \$13
- c. \$43
- d. \$28

46.

Quantity of Labor (scouts per hour)	Quantity of Output (Total Seashells/hour)
1	9
2	19
3	28
4	36
5	43
6	49
7	54
8	58
9	61
10	63

Sandy has a seashell store, and hires scouts to collect seashells on her private beach according to the production function above. The market price for seashells is \$2 each. Based on this information, what is the marginal product of labor of the 5<sup>th</sup> scout per hour?

- a. 43 shells per hour
- b. \$35 per hour
- c. 6 shells per hour
- d. 7 shells per hour

47.

Quantity of Labor (scouts per hour)	Quantity of Output (Total Seashells/hour)
1	9
2	19
3	28
4	36
5	43
6	49
7	54
8	58
9	61
10	63

Sandy has a seashell store, and hires scouts to collect seashells on her private beach according to the production function above. The market price for seashells is \$2 each. Based on this information, what is the maximum wage Sandy is willing to pay the 5<sup>th</sup> scout per hour?

- a. \$43 per hour
- b. \$35 per hour
- c. \$14 per hour
- d. \$12 per hour

48.

Quantity of Labor (scouts per hour)	Quantity of Output (Total Seashells/hour)
1	9
2	19
3	28
4	36
5	43
6	49
7	54
8	58
9	61
10	63

Sandy has a seashell store, and hires scouts to collect seashells on her private beach according to the production function above. The market price for seashells is \$2 each. Based on this information, what is the total revenue Sandy will generate if she hires 10 workers?

- a. \$126 per hour
- b. \$63 per hour
- c. \$20 per hour
- d. \$40 per hour

49. The income distribution shows:

- a. how much money the U.S. makes as a whole.
- b. a new measure of GDP.
- c. the levels of income in an economy, as well as the percentage of households earning those income levels.
- d. both b and c

50. The poverty threshold:

- a. shows the specific level of income, below which a person is in poverty.
- b. varies over time.
- c. varies by family size.
- d. all of the above.



## ANSWERS

- |    |   |    |   |
|----|---|----|---|
| 1  | a | 26 | a |
| 2  | a | 27 | d |
| 3  | a | 28 | d |
| 4  | d | 29 | b |
| 5  | d | 30 | a |
| 6  | d | 31 | b |
| 7  | c | 32 | b |
| 8  | c | 33 | a |
| 9  | c | 34 | a |
| 10 | d | 35 | a |
| 11 | a | 36 | c |
| 12 | d | 37 | d |
| 13 | a | 38 | b |
| 14 | b | 39 | a |
| 15 | b | 40 | a |
| 16 | d | 41 | a |
| 17 | a | 42 | a |
| 18 | b | 43 | a |
| 19 | c | 44 | c |
| 20 | b | 45 | b |
| 21 | d | 46 | d |
| 22 | d | 47 | c |
| 23 | a | 48 | a |
| 24 | a | 49 | c |
| 25 | a | 50 | d |