To prepare for Midterm #2 study the lecture notes posted on OWL and the *additional material* covered in the lectures, work the questions covered in the tutorials, and work the homework and quiz questions and this review. Beware that the following review questions cover only a fraction of the material that will be tested on the exam (the questions *do not* cover the additional material covered in the lectures, *do not* cover the tutorial questions, and cover only a *select set* of questions from the homework), so do not focus your studying by working only this review (you will not do well on the exam). Answers are provided on the last page.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.
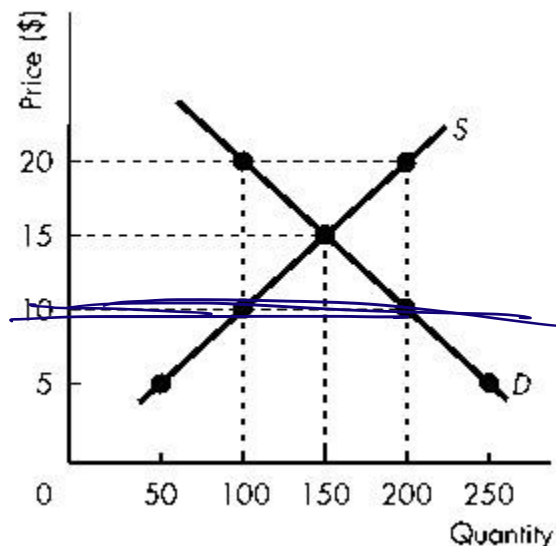
Use the figure below to answer the following question.

Figure 1

1. Refer to Figure 1. If a rigorously enforced price ceiling is set at $10, then
A. 150 units will be sold at a price of $15.
B. 200 units will be sold at a price of $10.
C. 100 units will be sold at a price of $10.
D. 100 units will be sold at a price of $20.
E. 100 units will be sold at a price of $15.

2. Which one of the following is *not* likely to be an outcome of rent ceilings?
A. Increased search activity for rent-controlled housing.
B. A black market for rent-controlled housing.
C. A deadweight loss.
D. An efficient market.
E. Long waiting lists of potential renters for rent-controlled housing.

3. When rent is not permitted to allocate scarce housing, what other mechanisms are available?
A. first-come, first-served
B. discrimination
C. a lottery
D. both A and B are correct
E. A, B and C are correct

4. Suppose a minimum wage law is in force, with a wage of $4 per hour resulting in an excess quantity of labour supplied of 10 million hours. Then the demand for labour increases such that supply and demand intersect at $5 per hour. What will happen to wages and employment?
A. The wage will be $4 and there will be an excess supply of labour.
B. The wage will be $5 and there will be an excess supply of labour.
C. The wage will be $5 and there will be no unemployment.
D. The wage will be $4 and there will be unemployment.
E. The wage will be $4 and there will be no unemployment.

5. Which type of firm would be affected the most by a minimum wage law?
A. A hospital.
B. A management consulting firm.
C. A fast food restaurant.
D. A manufacturing plant
E. A university.

6. Suppose the demand for gasoline is inelastic, but not perfectly inelastic, and the supply is elastic, but not perfectly elastic. A tax on gasoline is paid
A. equally by buyers and sellers.
B. mostly by buyers.
C. totally by buyers.
D. mostly by sellers.
E. totally by sellers.

Use the figure below to answer the following questions.

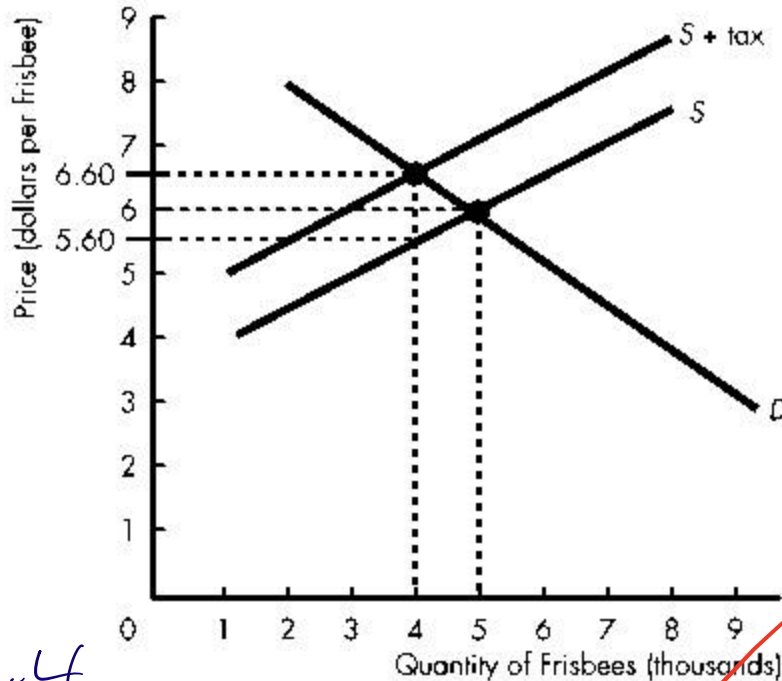**Figure 2**

7. Refer to Figure 2. For each frisbee, the sellers' share of the tax burden is
A. $6.60.
B. $0.40.
C. $1.
D. $0.60.
E. $5.60.

8. Refer to Figure 2. Government revenue from the tax is
A. $22,400.
B. $4,000.
C. $26,400.
D. $30,000.
E. $5,000.

9. Consider Figure 2. The deadweight loss from the sales tax is
A. $1.5.
B. $1.0.
C. $0.50.
D. $2.
E. $0.30.

10. If the equilibrium price of a good is not affected by a sales tax, then
A. elasticity of demand is greater than elasticity of supply.
B. demand is perfectly elastic.
C. elasticity of supply is greater than elasticity of demand.
D. supply is perfectly elastic.
E. none of the above.

11. New York City has the highest cigarette taxes in the United States.   Following a recent tax hike, sales of taxed cigarettes in the city fell by more than 50 percent as consumers turned to the city's bustling black market. Identify the truthfulness of the following statements:
A. The black market is a close substitute for the legal market.
B. The black market decreases the price elasticity in the legal market.
C. If demand in the legal market is elastic, the tax hike will increase tax revenue.
D. All of the above are true.

12. When an effective production quota is applied in the market for wheat, the quantity produced _____ and the price _____ The marginal social benefit _____ marginal social cost.
A. increases; rises; exceeds
B. decreases; rises; is less than
C. decreases; rises; exceeds
D. increases; falls; is less than
E. decreases; falls; is less than
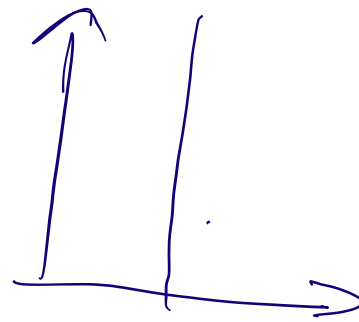
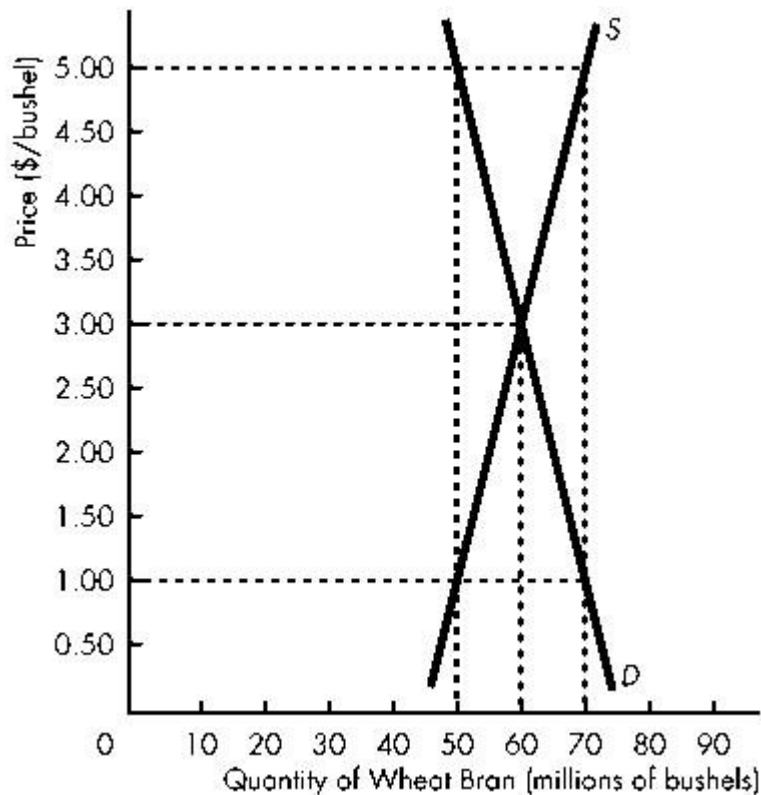*Use the figure below to answer the following question.*

Figure 3

13. Refer to Figure 3. Suppose the marketing board develops a new kind of subsidy called a direct payment plan. Farmers are told, "We will guarantee you $5 per bushel, but everything you produce at this price must be sold on the market for whatever buyers will pay; then we will give you (at taxpayers' expense) the difference between the market price and $5 per bushel." How many bushels of wheat bran will be sold?
A. 60 million.
B. 70 million.
C. 50 million.
D. 20 million.
E. None of the above.

14. John likes to eat apples, oranges, and pears. If John increases his consumption of oranges, *ceteris paribus*, marginal utility theory tell us that John's marginal utility of
A. oranges remains constant.
B. apples decreases.
C. oranges decreases.
D. oranges, apples, and pears all decrease.
E. pears decreases.

Use the table below to answer the following question.

Table 1

Quantity	Total Utility	Marginal Utility
0	0	
		30
1	30	
		12
2	42	
		5
3	47.	
		C.
4	50	

15. Refer to Table 1. The value of *C* is
A. 17.
B. 50.
C. 13.
D. 3.
E. 0.

16. Harold can consume either pens or milkshakes. The price of a pen is $1, and the price of a milkshake is $1. Harold figures that when his income is spent, his marginal utility from pens will be 10 and his marginal utility from milkshakes will be 8. Harold is better off
A. by consuming more pens and more milkshakes.
B. only if he makes more income.
C. by consuming fewer pens and more milkshakes.
D. by consuming more pens and fewer milkshakes.
E. by consuming fewer pens and fewer milkshakes.

17. The value of a good relates to
A. consumer surplus, while price relates to total utility.
B. total utility, while price relates to marginal utility.
C. marginal utility, while price relates to consumer surplus.
D. total utility, while price relates to consumer surplus.
E. marginal utility, while price relates to total utility.

18. David has an income of $30 to buy movie tickets and bus tickets. The price of a movie ticket is $6 and the price of a bus ticket is $2. What is David's real income?
A. $30
B. 5 movie tickets or 15 bus tickets
C. $32
D. $38
E. 15 movie tickets or 5 bus tickets

19. When speaking of the price of the good measured on the horizontal axis relative to the price of the good measured on the vertical axis, which statement is true?
A. The flatter the slope of the budget line, the more expensive the good measured on the horizontal axis.
B. The steeper the slope of the budget line, the less expensive the good measured on the horizontal axis.
C. The steeper the slope of the budget line, the more expensive the good measured on the horizontal axis.
D. The steeper the slope of the budget line, the more expensive the good measured on the vertical axis.
E. The slope of the budget line is independent of relative prices.

20. Martha consumes cake and muffins. Suppose Martha's income doubles and the prices of cake and muffins also double. Martha's budget line
A. remains unchanged.
B. shifts leftward but the slope does not change.
C. shifts rightward but the slope does not change.
D. shifts rightward and becomes flatter.
E. shifts rightward and becomes steeper.

21. Larry consumes only beer (B) and chips (C) and has income of I. The equation of his budget line (with beer measured on the vertical axis) is
A. $Q_B = I/P_C - (P_B/P_C)Q_C$.
B. $Q_B = I/P_B - (P_C/P_B)Q_C$.
C. $Q_C = I/P_C - (P_B/P_C)Q_B$.
D. $Q_B = I - (P_C/P_B)Q_C$.
E. $Q_B = I/P_B - (P_C/P_B)Q_B$.

$$I = P_B Q_B + P_C Q_C = I/P_B - \tfrac{P_C}{P_B}Q_C$$
$$Q_B = \frac{I - P_C Q_C}{P_B}$$

22. Sara's income is $12 a week. The price of popcorn is $3 a bag, and the price of a smoothie is $3. The opportunity cost of a smoothie is _____.
A. 4 bags of popcorn
B. 1.00 smoothie
C. $1
D. $3
E. 1.0 bag of popcorn

23. Junkfood Jill spends all of her income on jellybeans and Jolt cola. Suppose that Jill's income is $30, the price of a bag of jellybeans is $6, and the price of a bottle of Jolt cola is $2. Which of the following combinations of jellybeans and Jolt cola lies inside Jill's budget line?
A. 5 bags of jellybeans and 0 bottles of Jolt
B. 4 bags of jellybeans and 4 bottles of Jolt
C. 3 bags of jellybeans and 6 bottles of Jolt
D. 2 bags of jellybeans and 8 bottles of Jolt
E. 5 bags of jellybeans and 15 bottles of Jolt

$$2 \times 6 + 8 \times 2$$
$$3 \times 6 + 2 \times 12 \quad 12 + 16$$

24. Leah consumes at a point on her budget line where her marginal rate of substitution is less than the magnitude of the slope of her budget line. As Leah moves towards her best affordable point, she will move to
A. a higher indifference curve.
B. a lower budget line.
C. a tangent point on the same indifference curve.
D. a higher budget line.
E. a lower indifference curve.
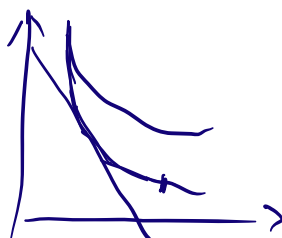
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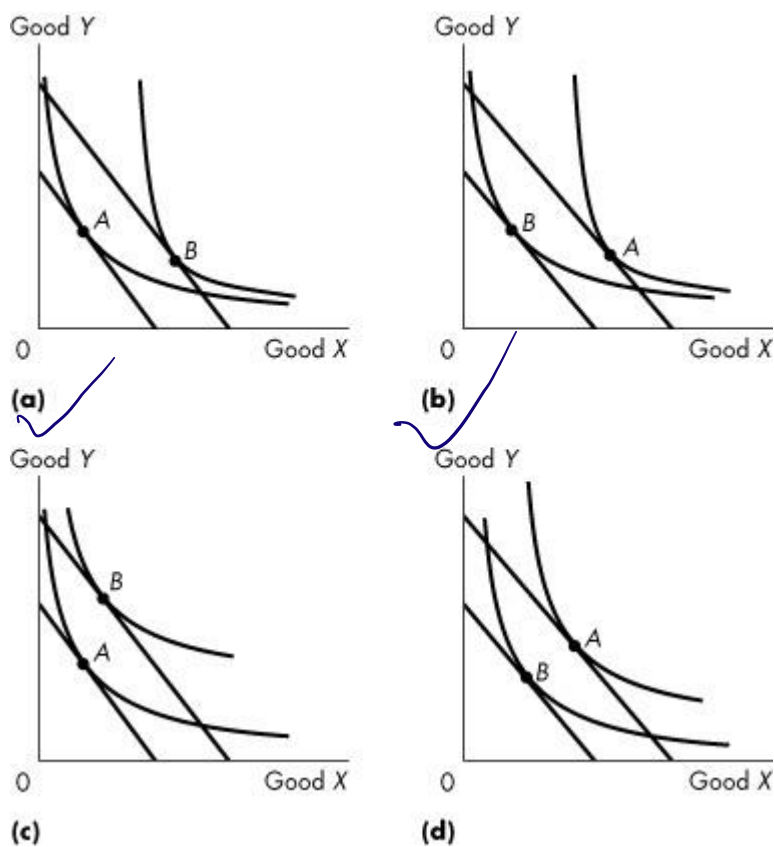

Figure 5

Original equilibrium at A, new equilibrium at B

25. Refer to Figure 5. Which graphs show the case where good Y is an inferior good?
A. (a) and (b)
B. (c) and (d)
C. (a) and (c)
D. (b) and (d)
E. none of the graphs

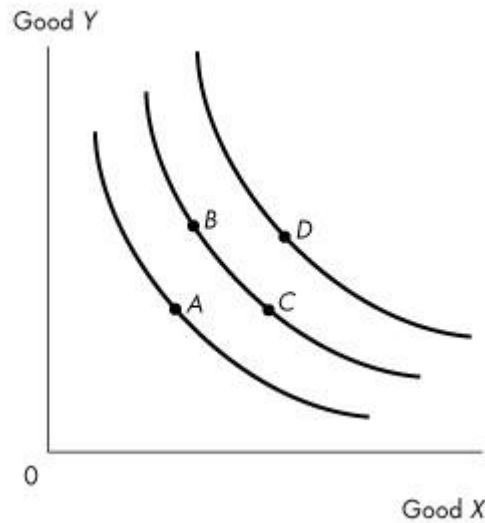*Use the figure below to answer the following question.*

Good Y

Good X

Figure 6

26. Figure 6 shows three indifference curves for Brenda. Which one of the following is *not true?*
A. The marginal rate of substitution is higher at point *C* than at point *B*.
B. Brenda prefers consuming at point *D* to consuming at either point *B* or point *C*.
C. Brenda prefers consuming at point *B* to consuming at point *A*.
D. Brenda prefers consuming at point *D* to consuming at point *A*.
E. Brenda would be equally happy consuming at either point *B* or point *C*.

27. Which of the following is part of a firm's opportunity cost of production?
I. wages
II. utility costs
III. interest on a bank loan
IV. interest forgone on funds used to buy capital equipment
A. I only
B. II only
C. III only
D. IV only
E. I, II, III, and IV

28. If economic profit is equal to zero then the firm is making
A. a normal profit.
B. an amount equal to the implicit rental rate.
C. negative profit as recorded by accountants.
D. zero taxable income.
E. zero profit as recorded by accountants.

Use the table below to answer the following questions.

Table 2
Three methods of performing a surgical procedure

Method	Labour	Capital
1	5	10
2	10	15
3	15	5

29. In Table 2, which method of performing a surgical procedure is *technologically* efficient? .
A. 1 only
B. 2 only
C. 3 only
D. all of the above
E. 1 and 3 only.

30. Refer to Table 2. If the price of labour is $20 per unit and the price of capital is $10 per unit, which method is *economically* efficient?
A. 1 only
B. 2 only
C. 3 only
D. 2 and 3 only
E. 1 and 3 only

31. A firm that is technologically efficient
A. *must* be economically efficient, but a firm that is economically efficient is not always technologically efficient.
B. *must* be economically efficient, and a firm that is economically efficient *must* always be technologically efficient.
C. is not always economically efficient, and a firm that is economically efficient is not always technologically efficient.
D. always makes an economic profit.
E. is not always economically efficient, but a firm that is economically efficient *must* always be technologically efficient.

Use the information below to answer the following question.

Fact 1

January 31, 2008: Starbucks will open 75 more stores abroad than originally predicted, for a total of 975.
February 25, 2008: For three hours on Tuesday, Starbucks will shut down every single one of its 7,100 stores so that baristas can receive a refresher course.
July 18, 2008: Starbucks is closing 616 stores by the end of March.

32. Refer to Fact 1. The decisions made on _____ are short-run decisions because they _____.
A. January 31 and February 25; are the earliest decisions
B. January 31 and July 18; change Starbucks' plant size.
C. February 25; change vairable factors of production while all other factors remain fixed.
D. July 18; are the more recent decisions.
E. None of the above.

Refer to the table below to answer the following questions.

Table 3

Labour (workers per day)	Output (teapots per day)
0	0
1	3
2	12
3	19
4	23
5	25

33. Refer to Table 3 which gives Tania's total product schedule. The marginal product when the firm increases the number of workers from 3 to 4 per day is
A. 6 teapots.
B. 4 teapots.
C. 7 teapots.
D. 2 teapots.
E. 9 teapots.

34. Refer to Table 3 which gives Tania's total product schedule. The average product when the firm hires two workers is
A. 3 teapots per worker.
B. 6 teapots per worker.
C. 9 teapots per worker.
D. 12 teapots per worker.
E. 7 teapots per worker.

35. The law of diminishing marginal returns states:
A. As the size of a plant increases, marginal product eventually decreases.
B. As a firm uses more of a variable factor of production, total product eventually decreases.
C. As a firm uses more of a variable factor of production, its average cost eventually decreases.
D. As the size of a firm's plant increases, average cost eventually decreases.
E. As a firm uses more of a variable factor of production, with a given quantity of the fixed factor of production, the marginal product of the variable factor eventually diminishes.

36. Suppose the marginal product of energy equals the average product of energy. This implies that
A. the marginal product curve is upward sloping.
B. marginal product is negative.
C. average product is at its minimum value.
D. average product is at its maximum value.
E. marginal product is at its maximum value.

Use the table below to answer the following question.

Table 4

Labour (workers per day)	Output (teapots per day)	TFC (dollars per day)	TVC (dollars per day)	TC (dollars per day)
0	0	30	0	30
1	3	30	20	50
2	8	30	40	70
3	12	30	60	90
4	14	30	80	110
5	15	30	100·	130

37. Refer to Table 4, which gives Tania's total cost schedule. When output increases from 8 to 12 teapots, the marginal cost of one of the 4 teapots is
A. $6.67.
B. $5.
C. $2.
D. $1.
E. $20.

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38. Which one of the following statements is *false*?
A. The gap between the average total cost curve and the average variable cost curve equals marginal cost.
B. The marginal cost curve intersects the average total cost curve at minimum average total cost.
C. The gap between the average total cost curve and the average variable cost curve narrows as output increases.
D. The marginal cost curve intersects the average variable cost curve at minimum average variable cost.
E. The average total cost curve and average variable cost curve are U-shaped.
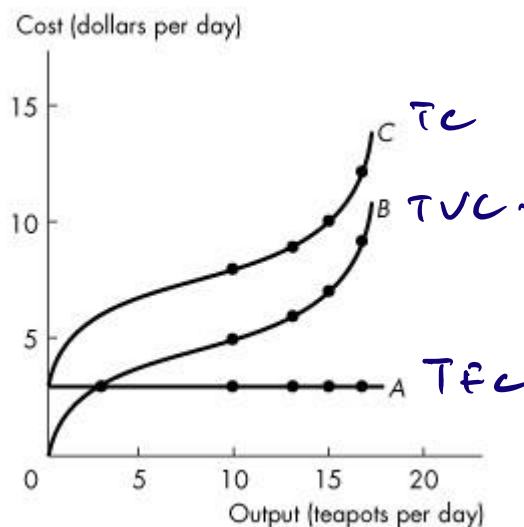
Use the figure below to answer the following question.

Figure 7

39. Refer to Figure 7. Which one of the following statements is *false*?
A. Total variable cost and total cost both increase with output.
B. Marginal cost is equal to the slope of curve C.
C. The total fixed cost curve is A.
D. Total fixed cost is constant.
E. The vertical gap between curves B and C is equal to total variable cost.

40. The range over which average variable cost is decreasing is the same as the range over which
A. average fixed cost is decreasing.
B. average product is increasing.
C. average product is decreasing.
D. marginal product is decreasing.
E. marginal cost is increasing.

41. If the average variable cost of producing 10 units is $18 and the average variable cost of producing 11 units is $20, we know that, between 10 and 11 units of output,
A. average total cost is increasing.
B. average fixed cost is increasing.
C. marginal cost is increasing.
D. total cost is either increasing or decreasing.
E. none of the above.

42. A rise in the price of a fixed input shifts a firm's
A. average total cost curve upward.
B. marginal cost curve downward.
C. marginal cost curve upward.
D. average variable cost curve upward.
E. average total cost curve downward.

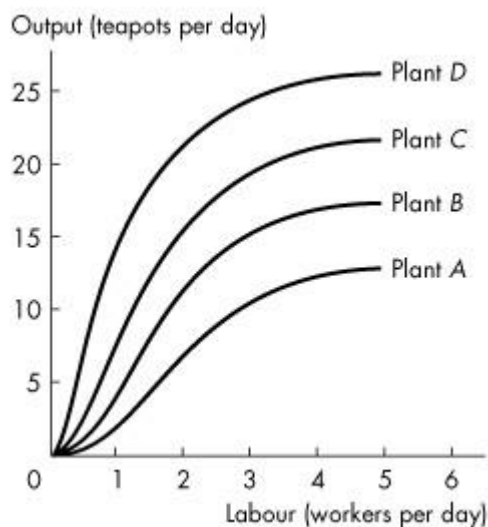*Use the figure below to answer the following question.*

Figure 8

43. Refer to Figure 8 which shows the total product curves for four different plant sizes as Tania varies the quantity of capital and workers. The curve that represents the plant using the largest amount of capital is
A. plant *A*.
B. plant *B*.
C. plant *C*.
D. plant *D*.
E. all curves because each plant uses the same number of machines, just different amounts of labour.

44. Diseconomies of scale are present when
A. total fixed cost increases.
B. average total cost rises as output increases.
C. the *LRAC* curve is horizontal.
D. average total cost falls as input increases.
E. the *LRAC* curve slopes downward.

Use the table below to answer the following question.

Table 5
Swanky's output levels

Labour	Plant Size (knitting machines)		
(workers per day)	1	2	3
1	5	11	14
2	11	16	19
3	14	19	23
4	16	21	25
5	17	22	26

45. Refer to Table 5, which represents Swanky's production possibilities as the firm varies the quantities of knitting machines and workers per day. If Swanky increases the number of knitting machines from 1 to 2 and increases the number of workers employed from 1 to 2, the factory experiences
A. diseconomies of scale.
B. minimum efficient scale.
C. constant returns to scale.
D. economies of scale.
E. constant marginal product.

46. A firm will want to increase its scale of plant if
A. marginal cost is below average total cost.
B. marginal cost is below average variable cost.
C. it is persistently producing on the upward-sloping part of its short-run average total cost curve.
D. it is persistently producing on the downward-sloping part of its short-run average total cost curve.
E. it is producing below minimum efficient scale.

ANSWERS

1. C
2. D
3. E
4. C
5. C
6. B
7. B
8. B
9. C
10. B
11. A
12. C
13. B
14. C
15. D
16. D
17. B
18. B
19. C
20. A
21. B
22. E
23. D
24. A
25. A
26. A
27. E
28. A
29. E
30. A
31. E
32. C
33. B
34. B
35. E
36. D
37. B
38. A
39. E
40. B
41. C
42. A
43. D
44. B
45. D
46. C