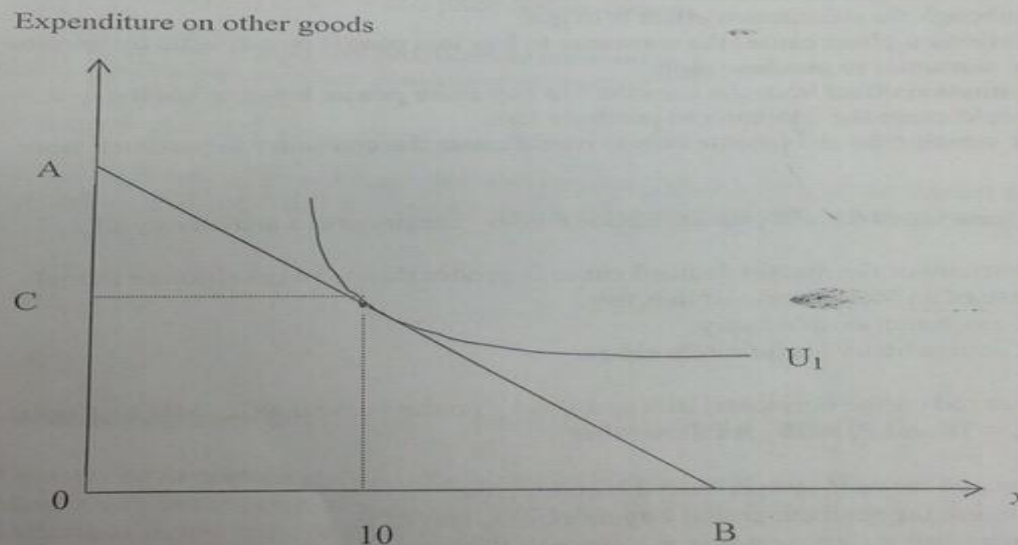


Please answer all of the questions on a SCANTRON 882 form. A No. 2 pencil must be used. Do not erase or otherwise alter your answers on the SCANTRON form. The machine-read score will be final *with absolutely no exceptions*. It is advisable to first mark your choices on the question paper before transferring them to the SCANTRON form. However, in all cases the choices selected on the SCANTRON form will be considered your final answers.

1. Suppose labor is on the horizontal axis and capital is on the vertical axis. The expansion path has shifted down and average cost curves have shifted up. The most likely explanation for what has happened is

- A) the wage rate increased.
- B) the price of capital decreased.
- C) the wage rate decreased.
- ☒ D) the price of capital increased.

Figure 3.1



2. In Figure 3.1, the consumer's weekly income is \$70 and the consumer is currently consuming 10 units of x per week. $P_x = \$3$. The length of line segment AC is

- ☒ A) \$30.
- B) \$23.33.
- C) \$40.
- D) \$13.33.

3. In Figure 3.1 on the previous page, the consumer's weekly income is again \$70 and the consumer is currently consuming 10 units of x per week. $P_x = \$3$. The length of line segment OC is

- A) \$13.33.
- B) \$30.
- ☒ C) \$40.
- D) \$23.33.

4. Suppose a competitive firm is in equilibrium, then the price of one of its inputs falls. What will happen?

- A) The firm's cost curves will shift downward.
- ☒ B) The firm will hire more of the lower priced input.
- C) The firm will produce more output.
- D) All of the above.
- E) Both (B) and (C) of the above.

5. Assume that peanut butter is an inferior good. Which of the following best describes the income and substitution effects as the price of peanut butter rises?

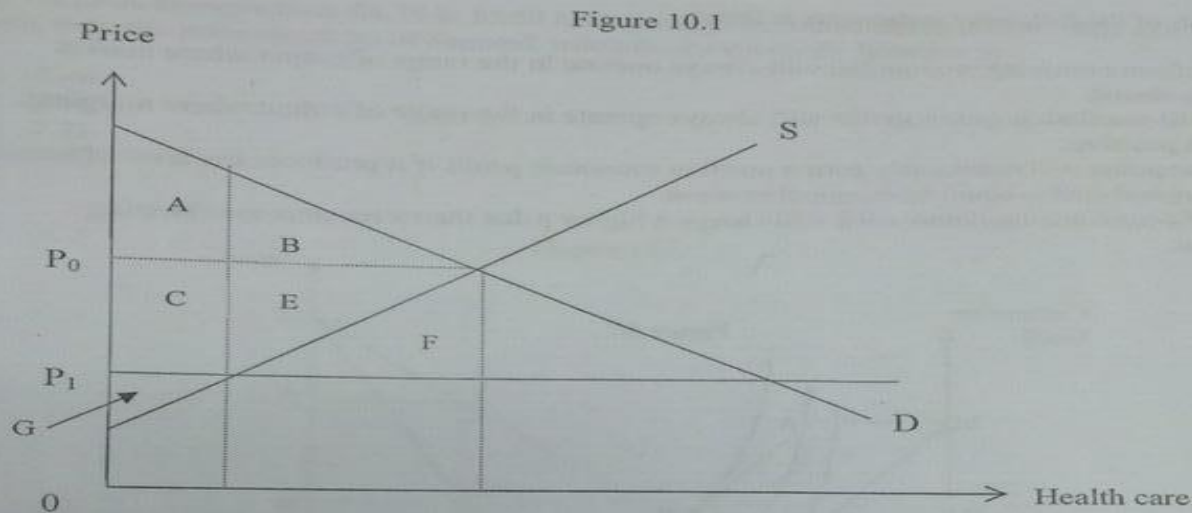
- B
- A) Both the income and substitution effects would cause the consumer to purchase less peanut butter, although the substitution effect is larger.
 - ☒ B) The substitution effect causes the consumer to buy less peanut butter while the income effect causes the consumer to purchase more.
 - C) The substitution effect leads the consumer to buy more peanut butter while the income effect would cause the consumer to purchase less.
 - D) Both the substitution and income effects would cause the consumer to purchase more peanut butter.

6. A per-unit excise tax of \$1 will cause the price paid by consumers to increase by \$1

- A) only if the elasticity of the market demand curve is greater than zero (in absolute terms).
- B) only in the case of an increasing-cost industry.
- ☒ C) in the case of a constant-cost industry.
- D) if the market demand curve is infinitely elastic.

7. Good x is measured on the horizontal axis and good y on the vertical axis. $MU_x = 5$ utils, $MU_y = 10$ utils, $P_x = \$8$ and $P_y = \$6$. It follows that

- D
- A) the indifference curve is steeper than the budget line.
 - B) a utility maximizing consumer will buy more of x , less of y .
 - C) the utility maximizing consumer is at a corner solution, consuming only x and none of y .
 - ☒ D) a utility maximizing consumer will buy more of y , less of x .
 - E) Both (A) and (B) of the above.



8. Figure 10.1 shows the effect of a government-imposed price ceiling in the market for health care. The ceiling price is set at P_1 . The price ceiling causes

- A) area C to be redistributed from producers to consumers.
- B) area F to be redistributed from consumers to producers.
- C) producers to gain area G.
- D) consumers to gain area E.

9. Figure 10.1 shows the effect of a government-imposed price ceiling in the market for health care. The ceiling price is set at P_1 . The price ceiling causes a net change in consumer surplus equal to

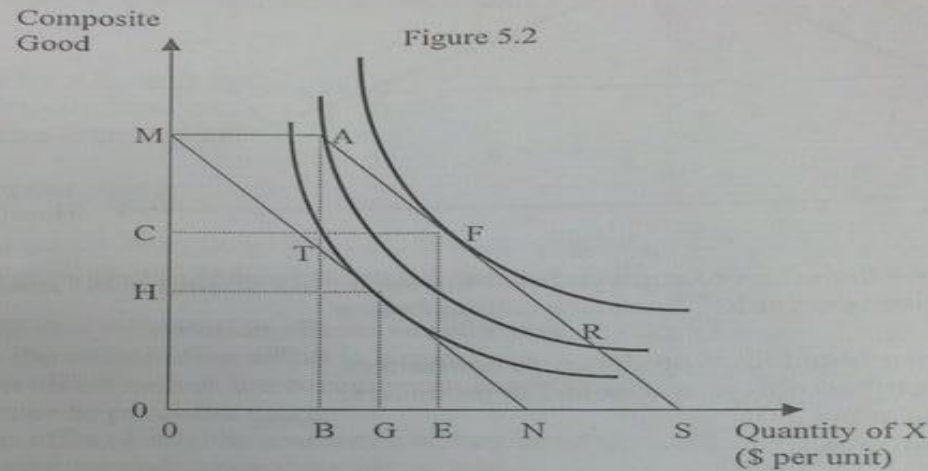
- A) $+C + E$.
- B) $+E - F$.
- C) $+E - A$.
- ☒ D) $+C - B$.

10. Which of the following will *not* cause an increase in demand for apples?

- A) An increase in consumers' income (assuming apples are a normal good).
- B) An increase in the price of oranges (assuming apples and oranges are substitutes).
- ☒ C) A decrease in the price of apples.
- D) A decrease in the price of pie shells (assuming apples and pie shells are complements).

11. Which of the following statements is false?

- A) A profit-maximizing monopolist will always operate in the range of output where market demand is elastic.
- B) A profit-maximizing monopolist will always operate in the range of output where marginal revenue is positive.
- C) A monopolist will necessarily earn a positive economic profit if it produces the level of output where marginal cost is equal to marginal revenue.
- D) A profit-maximizing monopolist will charge a higher price than a revenue-maximizing monopolist.



12. A family's preferences toward schooling are shown in Figure 5.2. Assume that public schooling cannot be supplemented with private tutoring. Then public schooling provided in the amount of B0

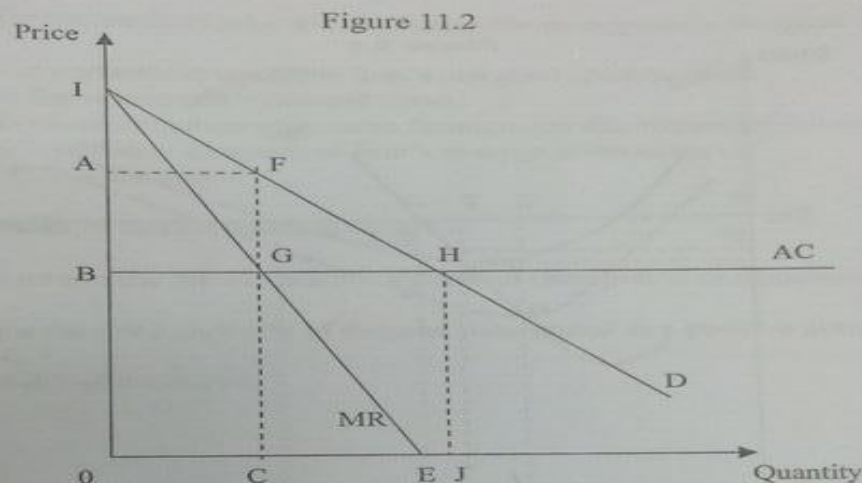
- A) causes the family to consume more schooling than they would in the absence of the publicly provided schooling.
- ~~B) causes the family to consume less schooling than they would in the absence of the publicly provided schooling.~~
- C) produces the budget line MAS.
- D) Both (A) and (C) of the above.

13. In an increasing-cost competitive industry, if firms exit the industry,

- A) the industry short-run supply curve shifts to the left.
- B) the industry long-run supply curve shifts to the left.
- C) the industry moves down the industry long-run supply curve.
- D) Both (A) and (B) of the above.
- E) Both (A) and (C) of the above.

14. If price changes from \$4.75 to \$5.50 and quantity demanded changes from 1025 to 950 units, then the price elasticity of demand, using the arc elasticity formula, is

- A) -0.46.
- B) -2.16.
- C) -1.73.
- D) -0.52.



15. The profit-maximizing single price monopolist in Figure 11.2 will make profit equal to

- A) AFGB.
- B) AFC0.
- C) BGC0.
- D) IHB.

16. The profit-maximizing single price monopolist in Figure 11.2 will create deadweight loss of

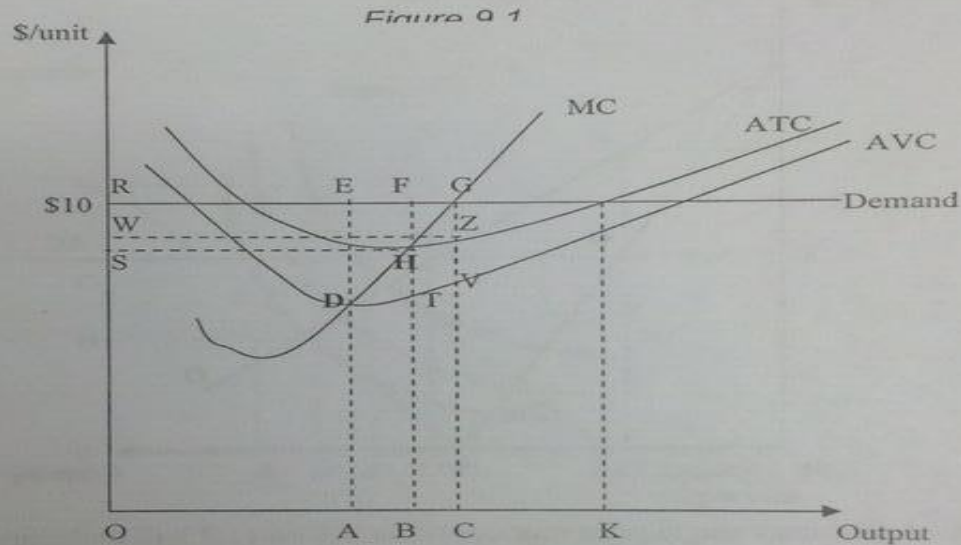
- A) AFGB.
- B) IHB.
- C) IFA.
- D) FHG.

17. Suppose that at a point on an isoquant, the following information is true: labor increases by 5 units; capital falls by 3 units; the marginal product of labor = 4 units of output, then the marginal product of capital must be

- A) 0.6 units of output.
- B) 1.67 units of output.
- C) 2.4 units of output.
- D) 6.67 units of output.

18. A competitive firm's short-run supply curve is

- A) its marginal cost curve above minimum average total cost.
- B) only the upward-sloping portion of its marginal cost curve.
- C) its marginal cost curve above minimum average variable cost.
- D) always horizontal because the firm is a price taker.



19. If the price per unit is \$10 in Figure 9.1, the profit-maximizing firm's average variable cost is

- A) DA.
- B) VC.
- C) ZV.
- D) TB.
- E) ZC.

20. If the price per unit is \$10 in Figure 9.1, the profit-maximizing firm's average profit (profit per unit of output) is

- A) GZ.
- B) WZ.
- C) RS.
- D) GV.

21. If the price per unit is \$10 in Figure 9.1 on the previous page, the profit-maximizing firm's average fixed cost is

- A) ED.
- B) HT.
- C) ZV.
- D) GZ.
- E) ZC.

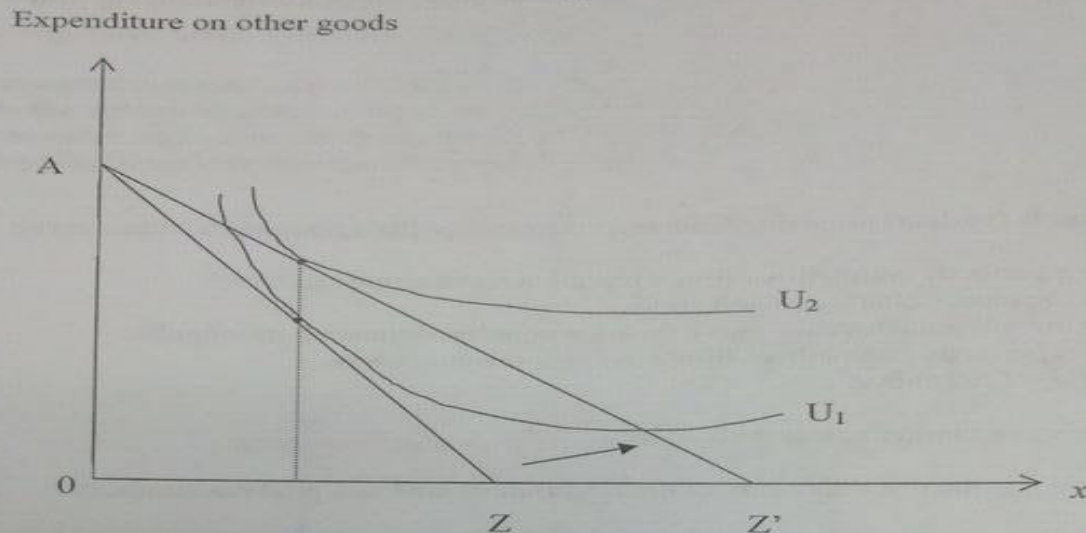
22. Under first-degree (perfect) price discrimination the monopolist's marginal revenue curve

- A) is the same as a perfectly competitive firm's marginal revenue curve.
- B) is the same as the monopolist's demand curve.
- C) is the same as the marginal revenue curve facing a non-discriminating monopolist.
- D) is the same as a perfectly competitive firm's average revenue curve.
- E) Both (A) and (D) of the above.

23. The Lerner index of market power is equal to

- A) $1/(1 - \eta)$, where η is the price elasticity of demand (interpreted as a positive number).
- B) $(P - MC)/P$.
- C) $1/\eta$, where η is the price elasticity of demand (interpreted as a positive number).
- D) $(MC - P)/MC$.
- E) Both (B) and (C) of the above.

Figure 4.1



24. Figure 4.1 shows the effect of a decrease in the price of x . The demand curve for x is

- A) horizontal.
- B) infinitely elastic.
- ☒ C) perfectly inelastic.
- D) Both (A) and (B) of the above.

25. A firm's markup price will be higher

- A) the more elastic the supply curve of all of its rival firms in the market.
- B) the fewer rival firms it faces in the market.
- C) the closer the firm's price is to its marginal cost.
- D) the more elastic the market demand curve.
- E) Both (A) and (D) of the above.

Table 1.1

	A	B	C	D	E	F
x	135	130	120	100	60	0
y	0	10	20	30	40	50

26. Table 1.1 represents points on a production possibility frontier. This production possibility frontier displays

- A) decreasing opportunity cost.
- B) implicit costs only.
- C) constant opportunity cost.
- D) increasing opportunity cost.

27. In Table 1.1 on the previous page, the opportunity cost per unit of x of increasing production of x from point D to point C is

- A) 2 units of y .
- B) 10 units of y .
- C) 0.5 units of x .
- D) 2 units of x .
- E) 0.5 units of y .

28. A competitive industry will be in long-run equilibrium when

- A) no entry or exit occurs.
- B) each firm in the industry is maximizing its revenue.
- C) each firm in the industry is earning positive economic profit.
- D) All of the above.

29. Which of the following will cause a decrease in the quantity of apples supplied?

- A) An increase in the cost of transporting apples to the market due to higher gasoline prices.
- B) A decrease in the price of apples.
- C) An increase in the wages of apple pickers.
- D) An expectation of higher apple prices next year.
- E) All of (A), (C) and (D) of the above.

30. A single price monopolist's demand curve is

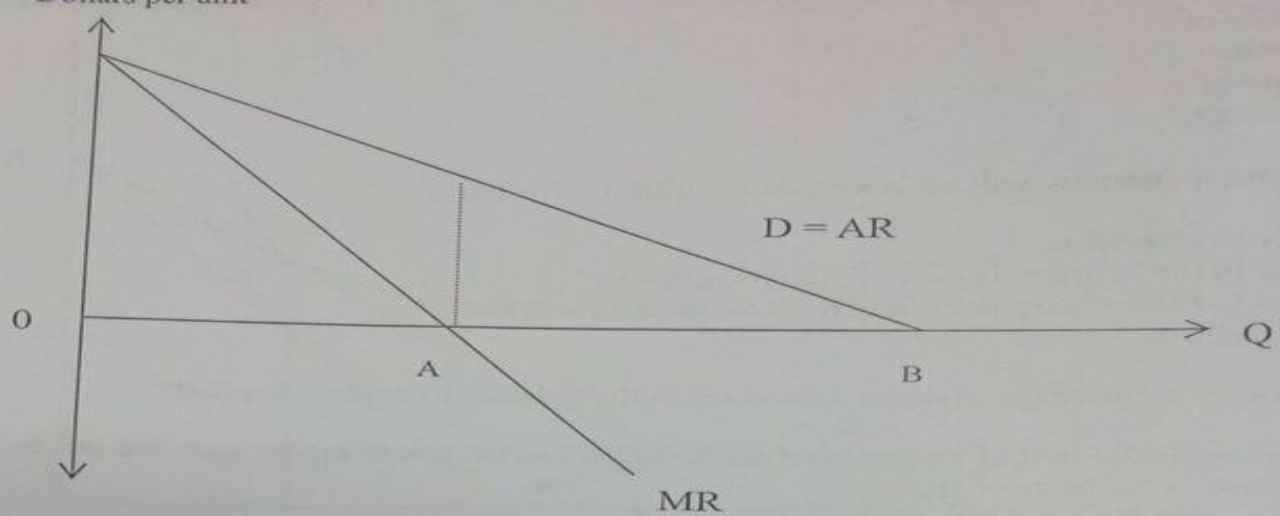
- A) infinitely elastic.
- B) the same as its average revenue curve.
- C) the same as its marginal revenue curve.
- D) the same as the industry supply curve.

31. If diminishing marginal returns holds, then it must necessarily be true that

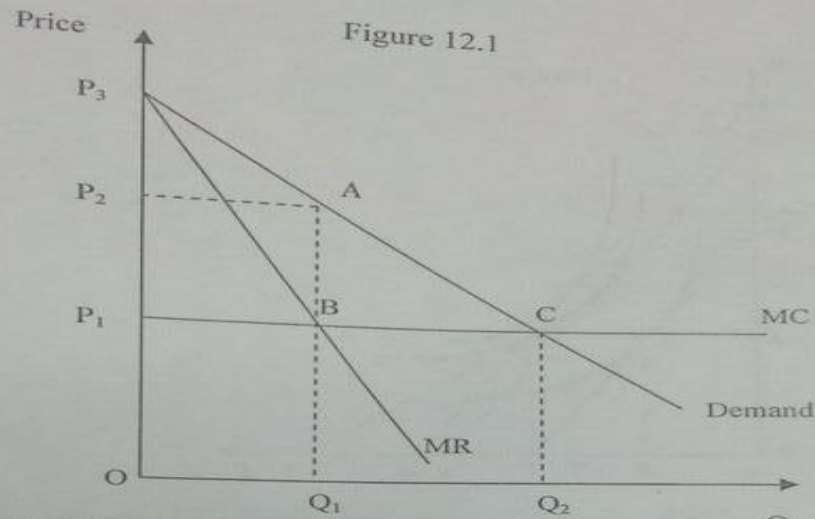
- A) the marginal product of the variable input is negative.
- B) the marginal product of the variable input is less than the average product.
- C) the average product of the variable input is decreasing.
- D) the marginal product of the variable input is decreasing.
- E) Both (B) and (C) of the above.

32. The competitive industry's short-run supply curve

- A) is upward-sloping because firms' marginal cost curves are upward-sloping over the relevant range of output.
- B) reflects zero economic profits at all points on the curve.
- C) is derived by adding up the quantities supplied at alternative prices by new entrants into the industry.
- D) is more elastic than the industry long-run supply curve.
- E) Both (A) and (B) of the above.



33. In Figure 11.1, the monopolist's demand curve is inelastic
- A) at the level of output indicated by point B.
 - B) in the range of output from 0 to A.
 - C) at the level of output indicated by point A.
 - D) in the range of output from A to B.
34. In Figure 11.1, the monopolist's demand curve is unit elastic
- A) at the level of output indicated by point B.
 - B) in the range of output from A to B.
 - C) in the range of output from 0 to A.
 - D) at the level of output indicated by point A.
35. In Figure 11.1, the monopolist's revenue is maximized
- A) at the level of output indicated by point A.
 - B) Indeterminate, because we do not know the firm's marginal cost.
 - C) at a level of output greater than 0 but less than A.
 - D) at the level of output indicated by point B.
36. Good x is measured on the horizontal axis and good y on the vertical axis. $P_x = \$9$ and $P_y = \$6$. At the consumer optimum, the marginal rate of substitution
- A) is equal to -0.67.
 - B) is equal to -1.5.
 - C) is equal to -1.
 - D) cannot be determined because the slope of the indifference curve is different at each point.



37. In Figure 12.1, if the monopolist perfectly price discriminates, consumer surplus will be

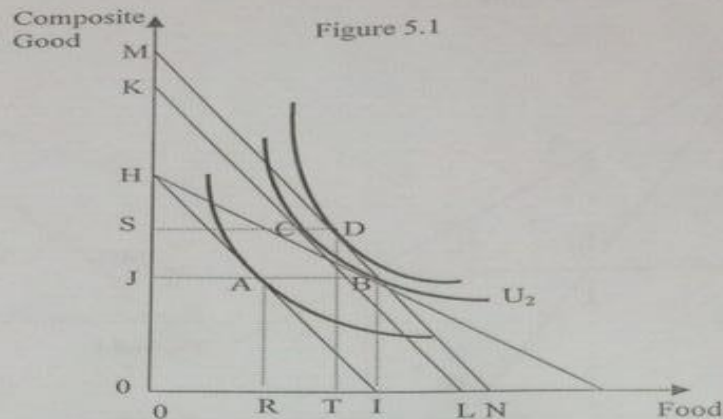
- A) P_3CP_1 .
- B) P_3AP_2 .
- C) zero.
- D) ABC.

38. The fundamental reason why isoquants for two inputs, labor and capital, are convex (bowed inward) is

- A) because of increasing returns to scale.
- B) because it becomes increasingly difficult to replace capital with labor as employment of labor increases.
- C) because it becomes increasingly easy to replace capital with labor as employment of labor increases.
- D) because of diminishing marginal utility.

39. Along the competitive industry long-run supply curve, all of the following can vary except

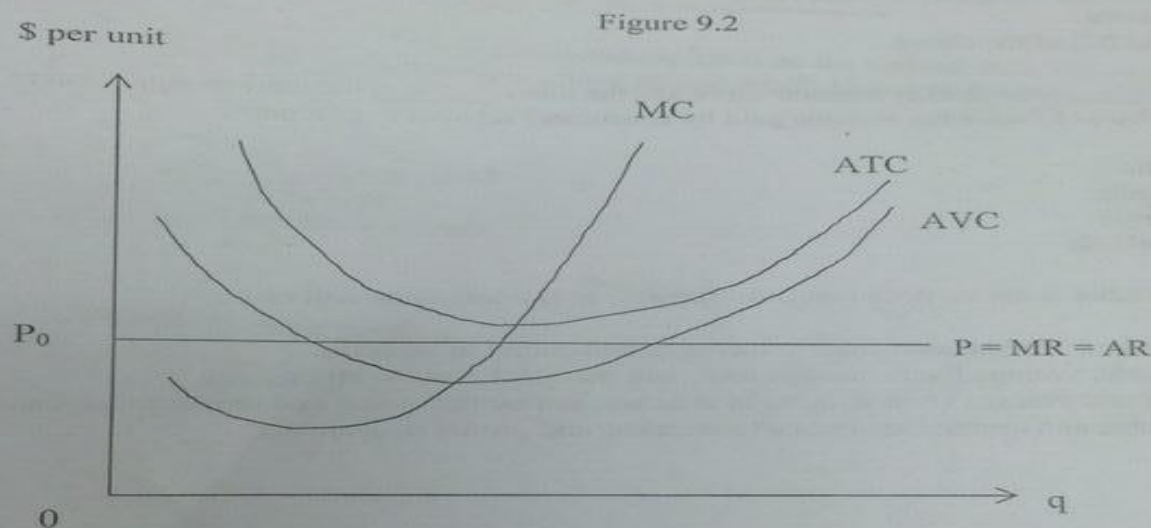
- A) the number of firms in the industry.
- B) the level of economic profits.
- C) the price of output.
- D) input prices.



40. Figure 5.1 shows the effect of a food excise subsidy. Which of the following statements is correct?
- The consumer purchases more food with the excise subsidy than she would with an equivalent lump-sum cash grant, but is better off with the cash grant.
 - The consumer purchases the same amount of food with the excise subsidy as she would with an equivalent lump-sum cash grant.
 - The consumer in this case purchases less of the composite good with the excise subsidy than she would in the absence of a subsidy of any kind.
 - The consumer purchases less food with the excise subsidy than she would with an equivalent lump-sum cash grant, and is better off with the cash grant.
41. In the long run, firms in a competitive industry earn only a normal rate of return because
- entry eliminates economic profit.
 - decreasing returns to scale cause per-unit costs to rise.
 - input prices always rise and eliminate excess profit.
 - All of the above.
42. Assuming that labor is the only variable input, AVC is equal to
- AP_L/w .
 - MP_L/w .
 - w/MP_L .
 - w/AP_L .
43. In an increasing-cost competitive industry, producer surplus is
- earned by the firm's owners.
 - earned by input suppliers.
 - always zero.
 - earned only by new entrants into the industry.

44. Which of the following statements is false?

- A) At each level of output, AFC is equal to the vertical distance between the AVC curve and the ATC curve.
- B) AFC is always decreasing.
- C) The ATC curve reaches its minimum point at a higher level of output than that at which the AVC reaches its minimum point.
- D) The vertical distance between the AVC curve and the ATC curve increases as output increases.



45. In Figure 9.2, if the market price remains at P_0 , the firm will

- A) not operate in the short run or in the long run.
- B) continue to operate in the short run.
- C) minimize its losses by reducing output immediately to the level where average variable cost is at a minimum.
- D) continue to operate in the long run but shut down in the short run.

46. A firm's long-run average cost curve

- A) touches the minimum point on each short-run average total cost (SAC) curve.
- B) is always downward sloping because unit costs always fall as the scale of operation increases.
- C) touches a point on each short-run average total cost (SAC) curve which is not necessarily the minimum point on the SAC curve.
- D) never touches the minimum point of any short-run average total cost (SAC) curve.

47. Which of the following is an example of second-degree price discrimination?

- A) Discounted movie ticket prices for children and seniors.
- B) Cheaper admission to Disneyland for Southern California residents than for out-of-towners.
- C) Frequent-buyer programs such as supermarket club cards.
- D) Higher fares on commuter trains during morning and afternoon rush hours.

48. In the case of a perfectly competitive firm, the demand curve

- A) coincides with the average revenue curve.
- B) is downward-sloping.
- C) coincides with the marginal revenue curve.
- D) All of the above.
- E) Both (A) and (C) of the above.

49. The more _____ the market demand curve and the more _____ the market supply curve, the greater the share of excise tax revenue paid by consumers relative to producers.

- A) elastic; elastic
- B) inelastic; elastic
- C) elastic; inelastic
- D) inelastic; inelastic

50. Assume that labor is the variable input. An increase in the wage rate will cause

- A) marginal cost and average total costs to increase, and output to increase.
- B) average variable, average fixed, average total, and marginal costs to all increase.
- C) marginal cost and average variable costs to increase, and output, price, and profits to increase.
- D) average variable and average total costs to increase, and profits to decrease.