

**Exam Cover Page**

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**Queen's University Final examination**

Faculty of Arts and Science

Department of Economics

**ECON 111 section 700 - Professor: Ayman Iqachaden**

**April 15<sup>th</sup> 2025**

**Instructions to students:**

The examination is 3 hours of length

There are 100 multiple-choice questions

Please answer all questions on the scantron

**The following aids are allowed:**

Non-programmable calculators

Scrap papers

**GOOD LUCK!**

**PLEASE NOTE:**

**Proctors are unable to respond to queries about the interpretation of exam questions.**

**Do your best to answer exam questions as written**

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**Question 1:** Which of the following best defines the quantity demanded of a good?

- a) The amount an individual purchases at the good's current price.
- b) The amount an individual purchases at his or her current income.
- c) The amount, per time period, that is desired at the most recent price.
- d) The amount, per time period, an individual desires to purchase at any given price.
- e) The various amounts that all individuals desire at all relevant prices.

**Question 2:** The "law of demand" hypothesizes that, other things being equal,

- a) the lower the price, the greater the demand.
- b) price and demand vary inversely.
- c) the higher the price, the lower the quantity demanded.
- d) the higher the income, the higher the quantity demanded.
- e) price and quantity demanded are positively related.

**Question 3:** A demand curve is a representation of the relationship, *ceteris paribus*, between quantity demanded of a product and

- a) supply.
- b) wealth.
- c) its price.
- d) income.
- e) preferences.

**Question 4:** To say that the demand curve for movies is negatively sloped means that

- a) less quantity will be demanded at lower prices.
- b) less quantity will be demanded as preferences change.
- c) less quantity will be demanded at higher prices.
- d) more quantity will be demanded as consumers' income increases.

e) less quantity will be demanded at the same price.

**Question 5:** A change in demand is said to take place when there is a

- a) ) movement along the demand curve.
- b) shift of the demand curve.
- c) shift of the supply curve.
- d) price change.
- e) quantity change.

**Question 6:** What is a "normal" good?

- a) a good that everyone normally consumes
- b) a good that normal people consume
- c) a good for which demand varies directly with household income
- d) a good for which demand varies inversely with household income
- e) a good for which demand does not vary with household income

**Question 7:** What is an "inferior" good?

- a) a good that everyone normally consumes
- b) a good that inferior people consume
- c) a good for which demand varies directly with household income
- d) a good for which demand varies inversely with household income
- e) a good for which demand does not vary with household income

**Question 8:** Consider butter and margarine, which are substitutes. When the price of butter falls, the demand curve for margarine is likely to

- a) shift to the right.
- b) shift to the left.

- c) remain stationary.
- d) remain stationary, although its price will rise.
- e) remain stationary, although its price will fall

**Question 9:** If the price of tea falls and as a consequence the demand for sugar rises, then tea and sugar are

- a) substitute goods.
- b) complementary goods.
- c) luxury goods.
- d) neutral goods.
- e) independent goods.

**Question 10:** If tastes change so that a particular style of winter boots is now considered more appealing, the likely result is

- a) a shift in the demand curve to the right.
- b) a shift in the demand curve to the left.
- c) a movement down the demand curve.
- d) a movement up the demand curve.
- e) no change in the demand curve.

**Question 11:**

Consider the following equations for the demand for good A, where  $Q_A$  denotes quantity demanded,  $P_A$  denotes price, and M denotes income:

1.  $Q_A = 120 + 3.5 P_A + 14M$

2.  $Q_A = 120 - 3.5 P_A + 14M$

3.  $Q_A = 120 - 3.5 P_A - 14M$

Which of these equations represents a downward-sloping demand curve for an inferior good?

- A) 1 only
- B) 2 only
- C) 3 only
- D) 1 and 2
- E) none of the equations

**Question 12:** Choose the best description of an "equilibrium price."

- a) the price in the middle of supply and demand
- b) the price at which the quantity demanded is equal to the quantity supplied
- c) the price that consumers are willing to pay
- d) the price that producers want to charge
- e) the price at which demand for the commodity is equal to supply

**Question 13:** A surplus exists in the market when

- a) the quantity demanded exceeds the quantity supplied.
- b) supply and demand are equal.
- c) the quantity demanded is less than the quantity supplied.
- d) the equilibrium price is too low.
- e) the supply curve has shifted to the left.

**Question 14:** The price elasticity of demand measures the responsiveness of

- a) the price to changes in quantity demanded.
- b) equilibrium changes.
- c) demand to supply changes.
- d) quantity demanded to changes in the price.
- e) supply to demand changes.

**Question 15:**

Suppose the quantity demanded of paperback novels rises from 80 000 to 120 000 units per month when the price falls from \$11 to \$9 per unit. The price elasticity of demand for this product is

- A)  $1/3$ .
- B) 1.
- C)  $2/3$ .
- D)  $3/2$ .
- E) 2.

Question 16:

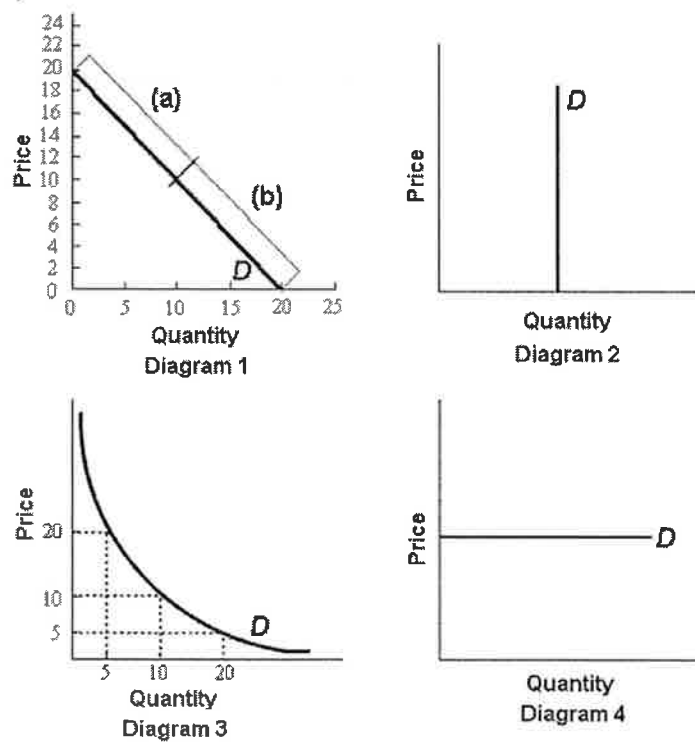


FIGURE 4-2

Refer to Figure 4-2. In diagram 2, the price elasticity of demand is

- A) 0.
- B) less than -1.
- C) exactly 1.
- D) greater than 1.
- E) infinity.

Question 17: If the price elasticity of demand is 0.5, then a 10% increase in price results in a

- a) 50% reduction in quantity demanded.
- b) 5% increase in quantity demanded.
- c) 5% decrease in total revenues.
- d) 5% decrease in quantity demanded.
- e) 0.5% decrease in quantity demanded.

Question 18:

Producers will bear a larger burden of a sales tax if

- A) demand is relatively elastic and supply is relatively inelastic.
- B) demand is relatively inelastic and supply is relatively elastic.
- C) both demand and supply are relatively inelastic.
- D) both demand and supply are relatively elastic.
- E) the tax is collected by firms rather than remitted directly to the government by consumers.

Question 19:

The formula for income elasticity of demand may be written as which of the following?

- A)  $\frac{\text{change in quantity demanded}}{\text{change in income}}$
- B)  $\frac{\text{change in income}}{\text{change in quantity demanded}}$
- C)  $\frac{\text{percentage change in quantity demanded}}{\text{percentage change in income}}$
- D)  $\frac{\text{percentage change in income}}{\text{percentage change in quantity demanded}}$
- E)  $\frac{\text{percentage change in quantity demanded}}{\text{percentage change in price}}$

Question 20:

Suppose the supply curve for breakfast cereals is upward sloping. Suppose also that as average household income increases we observe a fall in the price of breakfast cereal. We can conclude that breakfast cereal is a(n)

- A) luxury good.
- B) substitute good.
- C) inferior good.
- D) normal good.
- E) necessity good.

**Question 21:** At any disequilibrium price, whether government controlled or not, the quantity actually exchanged is determined by

- a) the elasticity of supply
- b) the elasticity of demand.
- c) government decree.
- d) the lesser of quantity demanded and quantity supplied.
- e) the greater of quantity demanded and quantity supplied.

**Question 22:** Government price controls are policies that attempt to maintain the

- a) quantity bought at less than the quantity sold
- b) quantity sold at less than the quantity bought.
- c) price at some disequilibrium value.
- d) market price at equilibrium
- e) price requested by the seller.

**Question 23:**

Consider a market in which there is a government-set price. If there is excess demand at this price,

- A) the market is in its free-market equilibrium.
- B) the market is in disequilibrium.
- C) there are unsuccessful sellers.
- D) the product has not reached the point of saturation.
- E) none of the product will be exchanged.

**Question 24:**

In competitive markets, price floors and price ceilings usually lead to

- A) shortages.
- B) a reduction in quantities exchanged.
- C) surpluses.
- D) production control by the government.
- E) more equitable distributions of commodities.

**Question 25:**

Consider a competitive labour market. The likely consequence of a binding minimum wage in this labour market is

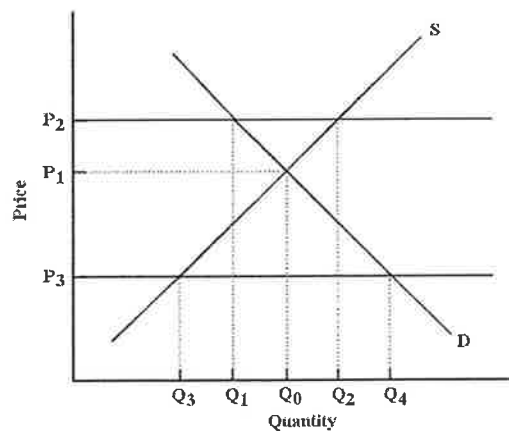
- A) a labour shortage.
- B) a lower wage for all individuals.
- C) a higher wage for all individuals.
- D) excess demand for workers.
- E) unemployment.

**Question 26:**

Which of the following best describes a binding price floor?

- A) a minimum price, below equilibrium, below which price is not allowed to fall
- B) a maximum price, above equilibrium, which price is not allowed to exceed
- C) a minimum price, above equilibrium, below which price is not allowed to fall
- D) a maximum price, below equilibrium, which price is not allowed to exceed
- E) any minimum price below which price is not allowed to fall

**Question 27:**



**FIGURE 5-3**

Refer to Figure 5-3. To be effective, a price floor must lie

- A) above  $P_1$  but below  $P_2$ .
- B) anywhere above  $P_1$ .
- C) below  $P_1$  but above  $P_3$ .
- D) anywhere below  $P_1$ .
- E) within the boundaries of  $P_2$  and  $P_3$ .

Question 28:

Which of the following is the best measure of the extent of market inefficiency?

- A) how far market price deviates from equilibrium
- B) how far quantity exchanged deviates from equilibrium
- C) the size of the economic surplus
- D) the size of the deadweight loss
- E) the difference between total economic surplus and deadweight loss

Question 29:

Suppose a binding output quota is imposed in a previously competitive market with free-market equilibrium price and quantity. The result is

- A) higher price and higher quantity exchanged.
- B) higher price and lower quantity exchanged.
- C) lower price and lower quantity exchanged.
- D) lower price and higher quantity exchanged.
- E) no change in price or quantity exchanged.

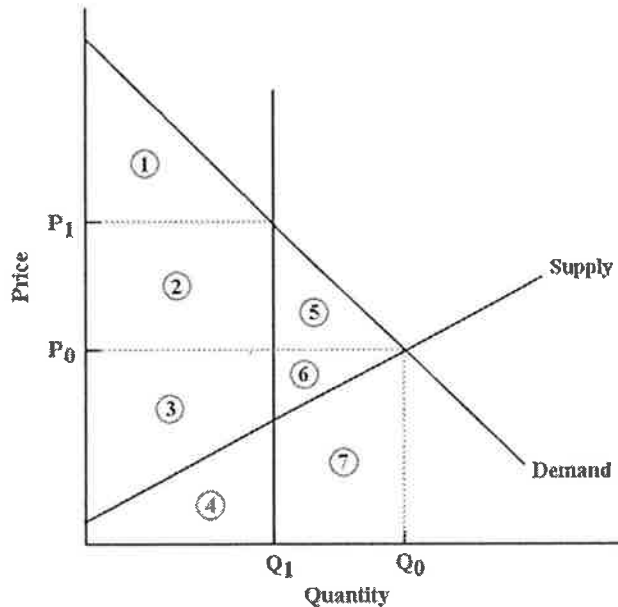
Question 30:

Consider Canada's east coast lobster fishery. Suppose the government sets a production quota which is below the equilibrium quantity. Relative to the free-market equilibrium, we can expect the result to be

- A) an increase in price and a decrease in deadweight loss.
- B) a decrease in price and a decrease in deadweight loss.
- C) the free-market equilibrium price and quantity because the quota is not binding.
- D) an increase in price and the introduction of a deadweight loss.
- E) a decreased price.

**Question 31:**

*The diagram below shows the market for litres of milk.*



**FIGURE 5-9**

Refer to Figure 5-9. After the imposition of a milk quota at quantity  $Q_1$ , the deadweight loss in this market is represented by

- A) area 1.
- B) areas 1 and 4.
- C) areas 1, 2, and 5.
- D) areas 5 and 6.
- E) areas 5, 6, and 7.

**Question 32:**

If a binding price ceiling is in place and if the demand curve for the product shifts rightward, one consequence would be

- A) the quantity exchanged would increase.
- B) the quantity exchanged would remain constant.
- C) the quantity exchanged would decrease.
- D) an increase in the amount of excess supply.
- E) a decrease in the amount of excess demand.

**Question 33:**

Economists use the term "marginal utility" to describe the

- A) change in total satisfaction caused by consumption of an additional unit of a good.
- B) average utility of each unit of a good consumed.
- C) inverse of the measure of total utility.
- D) total satisfaction received from consumption of a good.
- E) price paid for every unit consumed.

**Question 34:**

The idea that the utility a consumer derives from successive units of a good diminishes as total consumption of the good increases is known as

- A) the paradox of value.
- B) the utility theory of demand.
- C) utility maximization.
- D) diminishing marginal utility.
- E) diminishing total utility.

**Question 35:**

If consumption of an extra unit of a product delivers a positive marginal utility, then consumption of that additional unit would mean

- A) that total utility is also zero.
- B) that total utility would not change.
- C) that total utility is increasing.
- D) that total utility is decreasing.
- E) that the consumer would no longer receive any satisfaction from any consumption of this good.

Question 36:

*The table below shows the quantities of good X a consumer could consume over a 1-week period.*

Units	TOTAL Utility of X
0	—
1	31
2	56
3	75
4	91
5	104
6	115
7	123
8	129

TABLE 6-1

Refer to Table 6-1. If this consumer buys 6 units of X per week, the marginal utility of the 6th unit will be

- A) 6.
- B) 11.
- C) 31.
- D) 104.
- E) 115.

Question 37:

If a consumer is faced with a choice of products  $A$ ,  $B$ ,  $C$ , ..., and has a given money income, the consumer's utility will be maximized when

- A)  $MU_A/P_A = MU_B/P_B = MU_C/P_C = \dots$
- B)  $P_A = P_B = P_C = \dots$
- C)  $MU_A = MU_B = MU_C = \dots$
- D)  $TU_A = TU_B = TU_C = \dots$
- E)  $MU_A = P_A; MU_B = P_B; MU_C = P_C; \dots$

**Question 38:**

Consider a consumer who divides his income between spending on good X and good Y. The opportunity cost of good X in terms of good Y is reflected by the

- A) absolute price of good X.
- B) absolute price of good Y.
- C) ratio of the price of X to the price of Y.
- D) ratio of the price of Y to the price of X.
- E) price of good X relative to the prices of all other goods.

**Question 39:**

The Smith family is allocating its monthly household expenditure between only two goods, food and clothing. Suppose the price of food is \$5 per unit, the price of clothing is \$10 per unit, and the marginal utility the family is receiving from its consumption of food is currently 25. What is the family's marginal utility from its consumption of clothing if it is maximizing its utility?

- A) 5
- B) 10
- C) 12.5
- D) 25
- E) 50

**Question 40:**

Bjorn is a student with a monthly budget of \$500, which he allocates between transportation services and "all other goods." Suppose the price of transportation is \$5 per unit, and the price of "all other goods" is \$20 per unit. The marginal utility he currently receives from his consumption of transportation services is 60. What is his marginal utility from the consumption of "all other goods" if he is maximizing his utility?

- A) 5
- B) 20
- C) 25
- D) 200
- E) 240

**Question 41:**

The relationship between factors of production used in the production process and the resulting output is called a(n)

- A) consumption possibilities boundary.
- B) economic function.
- C) production boundary.
- D) cost function.
- E) production function.

**Question 42:**

Economists use the notation  $Q = f(L, K)$  to describe

- A) the flow of labour (L) and capital (K) services that are available when output is (Q).
- B) the financial relationship between the inputs that a firm uses and the outputs that it produces.
- C) the arithmetic relationship between the outputs that a firm uses and the inputs that it produces.
- D) the technological relationship between the inputs that a firm uses and the outputs that it produces.
- E) the level of output (Q) required to fully employ labour (L) and capital (K).

**Question 43:**

Suppose a production function for a firm takes the following algebraic form:  $Q = 2KL - (0.2)L^2$ , where Q is the output of sweaters per day. Now suppose the firm is operating with 8 units of capital ( $K = 8$ ) and 10 units of labour ( $L = 10$ ). What is the output of sweaters?

- A) 30 sweaters per day
- B) 60 sweaters per day
- C) 80 sweaters per day
- D) 140 sweaters per day
- E) 155 sweaters per day

Question 44:

Consider a firm in the short run. Which of the following statements about the firm's product curves is correct?

- A)  $AP$  is at its minimum when  $MP = AP$ .
- B)  $TP$  is at its maximum when  $MP = 0$ .
- C)  $TP$  begins to decrease when  $AP$  begins to decrease.
- D) When  $MP > AP$ ,  $AP$  is decreasing.
- E) When the  $MP$  curve cuts the  $AP$  curve from below, the  $AP$  curve begins to fall.

Question 45:

Consider a basket-producing firm with fixed capital. The firm can produce 36 baskets per day with 3 workers and then increases productivity to 44 baskets per day with 4 workers. Which of the following statements is true?

- A) The marginal product of the fourth worker is 11.
- B) The firm has passed the point of diminishing average productivity.
- C) The marginal product is above the average product.
- D) The firm has not yet reached the point of diminishing marginal productivity.
- E) With 4 workers, the firm's average product of labour is 13.

Question 46:

If increasing quantities of a variable factor are applied to a given quantity of fixed factors, then the law of diminishing returns tells us that

- A) the marginal product and the average product of the variable factor will eventually decrease.
- B) the marginal product will eventually decrease with constant average product.
- C) the average product will eventually decrease with constant marginal product.
- D) the average product will eventually decrease, but only if total product is held constant.
- E) total product will eventually begin to fall.

Question 47:

The figure presents **Total Product** (units of output per day) as a function of **Labour** (workers per day) hired.

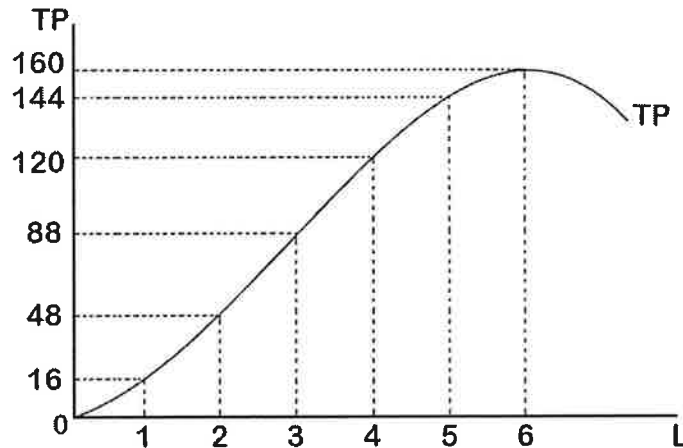


FIGURE 7-2

Refer to Figure 7-2. The maximum output that **two** workers can produce is

- A) less than 16 units.
- B) 16 units.
- C) 48 units.
- D) 88 units.
- E) more than 88 units.

Question 48:

Suppose sport-fishermen on the Campbell River in British Columbia are each catching fewer fish and are having to fish many more hours to catch them. However, the *total* number of fish caught on the river continues to increase. The river is experiencing

- A) diminishing total returns.
- B) constant marginal returns.
- C) increasing marginal returns.
- D) diminishing marginal returns.
- E) increasing average returns.

Question 49:

In the short run time horizon for a firm, total fixed costs

- A) decrease and then increase as output increases.
- B) decrease as output increases.
- C) do not vary with output.
- D) increase and then decrease as output increases.
- E) are equal to total variable costs.

Question 50:

Marginal cost is defined as the

- A) change in total cost resulting from an additional unit of output.
- B) change in fixed cost resulting from an additional unit of output.
- C) difference between average total cost and average variable cost.
- D) cost per unit when the firm is operating at capacity.
- E) cost of an additional unit of a variable factor of production.

Question 51:

Suppose a firm produces 100 units of output, incurring a total cost of \$10 000 and total variable cost of \$6000. It can be concluded that average fixed cost is

- A) \$40.
- B) \$60.
- C) \$100.
- D) \$160.
- E) \$4000.

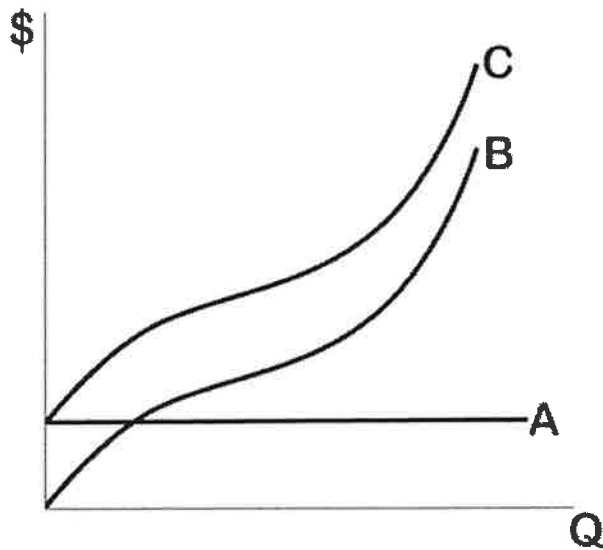
Question 52:

Suppose a firm produces 250 units of output. At this level of output, average fixed costs are \$20 per unit and average variable costs are \$80 per unit. It can be concluded that total cost is

- A) \$100.
- B) \$0.40 per unit.
- C) \$40 per unit.
- D) \$2500.
- E) \$25 000.

Question 53:

*The diagram below shows some short-run cost curves for a firm.*



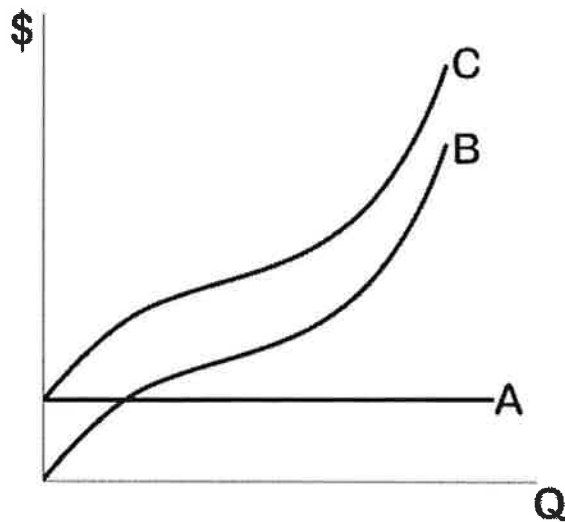
**FIGURE 7-5**

Refer to Figure 7-5. In the figure above, the total variable cost curve is

- A) A
- B) B
- C) C
- D) A + C
- E) B - A

Question 54:

*The diagram below shows some short-run cost curves for a firm.*



**FIGURE 7-5**

Refer to Figure 7-5. In the figure above, the total cost curve is

- A) A
- B) B
- C) C
- D)  $A + C$
- E)  $B - A$

Question 55:

When there is no other way of producing a given level of output with a smaller total value of inputs, the firm is operating at

- A) minimum cost.
- B) maximum output.
- C) maximum profit.
- D) optimal output.
- E) maximum cost.

Question 56:

The table below shows the number of units of labour and capital used in 4 alternative production techniques for producing 1000 widgets per month.

Technique	A	B	C	D
Labour	25	35	50	30
Capital	50	35	25	60

TABLE 8-1

Refer to Table 8-1. If the price of labour is \$5 and the price of capital is \$10, which production technique minimizes the costs of producing 1000 units of output?

- A) A
- B) B
- C) C
- D) D
- E) Any of the techniques have the same cost.

Question 57:

Which of the following conditions indicate cost minimization, assuming two inputs, labour ( $L$ ) and capital ( $K$ )?

- A)  $P_K \cdot MP_K = P_L \cdot MP_L$
- B)  $MP_L = MP_K$
- C)  $MP_K/P_K = MP_L/P_L$
- D)  $MP_K/P_L = MP_L/P_K$
- E)  $P_K = P_L$

Question 58:

By expressing the cost-minimizing condition as  $MP_K/MP_L = P_K/P_L$ , we are able to see

- A) how the firm determines its profit-maximizing output.
- B) how the firm can adjust the marginal products of the factors of production to the prices of the factors given by the market.
- C) that the capital-labour ratio is fixed.
- D) that the ratio of factor prices is constant over time.
- E) that the firm is producing at a lower cost if the left-hand side of the equation is greater than the right-hand side.

**Question 59:**

- A profit-maximizing firm will increase its use of capital and decrease its use of labour when the
- A) marginal product of capital is higher than the marginal product of labour.
  - B) marginal product of capital, per dollar spent on capital, is greater than the marginal product of labour, per dollar spent on labour.
  - C) average product of capital is higher than the average product of labour.
  - D) total product of capital is higher than the total product of labour.
  - E) marginal product of capital, per dollar spent on capital, is less than the marginal product of labour, per dollar spent on labour.

**Question 60:**

When a firm seeks to minimize costs of producing a given level of output, it needs to know

- A) the price of its competitors' output.
- B) the level of output that maximizes its profits.
- C) the cost of the factors of production it uses.
- D) the cost of the factors of production of its competitors.
- E) the price of its output.

**Question 61:**

Assume a firm is using 10 units of labour and 10 units of capital and is producing 10 units of output per hour. Now both inputs are doubled, resulting in output rising to 18 units per hour. The firm is experiencing

- A) constant returns to scale.
- B) increasing returns to scale.
- C) decreasing returns to scale.
- D) economies of scale.
- E) decreasing costs.

Question 62:

Assume a firm is using 6 units of capital and 6 units of labour to produce 6 baskets. Now it doubles both inputs resulting in a new total of 16 baskets being produced. This firm is experiencing

- A) decreasing returns to scale.
- B) increasing returns to scale.
- C) constant returns to scale.
- D) diseconomies of scale.
- E) increasing costs.

Question 63:

The term "perfect competition" refers to

- A) rivalrous behaviour.
- B) ideal economic behaviour.
- C) a type of market structure.
- D) the most prevalent market structure in a capitalist economy.
- E) the most realistic market structure.

Question 64:

In economics, perfect competition refers to a market structure where

- A) firms behave strategically.
- B) all firms are earning profits.
- C) firms co-operate with each other.
- D) each firm has zero market power.
- E) firms can set the price of their product.

Question 65:

Which of the following statements apply to a perfectly competitive market?

1. There is freedom of entry and exit of firms in the industry.
2. Consumers prefer certain brands over others.
3. All firms in the industry are price takers.

- A) 1 only
- B) 2 only
- C) 3 only
- D) 1 and 2 only
- E) 1 and 3 only

Question 66:

If a firm in a perfectly competitive market were to raise its price, its

- A) revenue would decrease only if market demand were elastic.
- B) revenue would increase only if market demand were inelastic.
- C) total costs would increase.
- D) revenue would fall dramatically.
- E) profits would increase as long as costs remained constant.

Question 67:

Which of the following terms would best describe the price elasticity of demand facing a perfectly competitive firm?

- A) perfectly inelastic
- B) inelastic
- C) unit
- D) elastic
- E) perfectly elastic

Question 68:

Average revenue ( $AR$ ) for an individual firm in a perfectly competitive market equals

- A)  $p \times q$ .
- B)  $p$ .
- C)  $\Delta p \times \Delta q$ .
- D)  $\Delta q / \Delta p$ .
- E)  $(p \times q) / \Delta q$ .

Question 69:

Consider the following cost curves for two perfectly competitive firms, Firm A and Firm B.

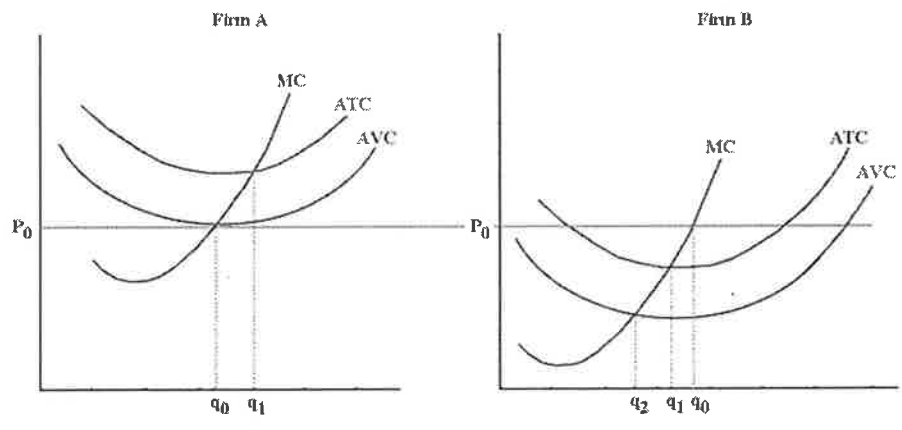


FIGURE 9-4

Refer to Figure 9-4. Firms A and B are in the same industry. Choose the statement that best describes the situation facing the two firms.

- A) Firm A is suffering losses and will be shut down immediately; Firm B will be shut down if the price falls any further.
- B) Firm A is making losses but remains producing as long as price falls no further; Firm B is producing at lower cost and is earning economic profits.
- C) Firm A and Firm B are both earning positive economic profits; new firms will likely enter the industry.
- D) Firm A and Firm B are both suffering economic losses and will soon exit the industry.
- E) Firm A and Firm B have different cost structures and should therefore each charge a different profit-maximizing price.

**Question 70:**

Consider a perfectly competitive firm. Which of the following equalities could hold true in a short-run equilibrium but not in a long-run equilibrium?

- A)  $TC = TFC + TVC$
- B)  $P = MC$
- C)  $P = AR$
- D)  $P = AVC$
- E)  $P = MR$

**Question 71:**

The demand curve facing a single-price monopolist slopes downward because

- A) its average revenue equals its marginal revenue.
- B) its demand curve is the market demand curve, which is generally downward sloping.
- C) demand is perfectly inelastic.
- D) it sells typically to only one consumer.
- E) its supply curve is upward sloping.

**Question 72:**

A monopolistic firm faces a downward-sloping demand curve because

- A) there are a large number of firms in the industry, all selling the same product.
- B) the demand for its product is always inelastic.
- C) the market price is affected by the amount sold by a monopolistic firm.
- D) marginal revenue is negative throughout the feasible range of output.
- E) the monopolistic firm can exploit economies of scale.

Question 73:

*The table below shows the demand schedule for a product produced by a single-price monopolist.*

Price	Quantity Demanded
\$8	5
\$7	6
\$6	7
\$5	8
\$4	9
\$3	10
\$2	11

**TABLE 10-1**

Refer to Table 10-1. For a single-price monopolist, the marginal revenue associated with increasing sales from 5 to 6 units is

- A) -4.
- B) -2.
- C) 0.
- D) 2.
- E) 4.

Question 74:

Consider a profit-maximizing single-price monopolist that faces a linear demand curve. The firm sets price where the price elasticity of demand is

- A) zero.
- B) less than one.
- C) one.
- D) greater than one.
- E) infinite.

Question 75:

Natural barriers to firms entering an industry include

- A) control or ownership of the entire supply of an essential raw material.
- B) large economies of scale in the industry.
- C) a government-awarded franchise.
- D) a patent that allows production by only the patent holder.
- E) increasing-cost production.

Question 76:

A likely cause of a natural monopoly occurring in some industry is

- A) scale economies.
- B) patents.
- C) licenses.
- D) charters.
- E) sabotage.

Question 77:

Suppose the technology of an industry is such that the typical firm's minimum efficient scale is 18 units per day at an average long-run cost of \$1600 per unit. If the total quantity demanded at a price of \$1750 per unit is 16 units per month, the likely result would be

- A) a competitive industry.
- B) a cartel.
- C) price discrimination.
- D) a natural monopoly.
- E) a concentrated oligopoly.

Question 78:

A number of firms agreeing together to restrict output and thereby raise prices is known as

- A) a monopoly.
- B) a natural monopoly.
- C) a cartel.
- D) a barrier to entry.
- E) an oligopoly.

Question 79:

Which of the following cases are examples of price discrimination?

1. A supermarket charging more for strawberries in December than in June.
2. A doctor charging for her services according to the income of her patients.
3. A fixed mortgage rate is higher than a variable mortgage rate.

- A) 1 only
- B) 2 only
- C) 3 only
- D) 1 and 3 only
- E) 1, 2, and 3

Question 80:

If a monopolist is practicing perfect price discrimination, then

- A) the producer surplus is zero.
- B) consumer surplus is zero.
- C) costs are lower than for the non-price-discriminating monopolist.
- D) demand must be inelastic.
- E) the monopolist is not profit maximizing.

Question 81:

If a monopolist is practicing perfect price discrimination, we know that

- A) the firm is facing a perfectly elastic demand curve.
- B) the firm is facing a perfectly inelastic demand curve.
- C) marginal cost is rising as output rises.
- D) the firm is producing a lower output than it would if it were a single-price monopolist.
- E) the firm is selling each unit at a different price and capturing all consumer surplus.

Question 82:

A monopolistically competitive firm and a monopoly are similar because

- A) both firms will earn zero profits in the long run.
- B) both firms always operate at their point of minimum average cost.
- C) they each face a downward-sloping demand curve.
- D) both firms must behave strategically toward other firms in the industry.
- E) each firm has a large number of competitors.

Question 83:

Compared with perfect competition, monopolistic competition results in

- A) a wider variety of goods produced, but at higher unit costs.
- B) the same degree of variety of the good, but higher unit costs.
- C) fewer varieties of the goods produced at lower unit costs.
- D) fewer varieties of the good produced at higher unit costs.
- E) a clearly more efficient social outcome.

**Question 84:**

A monopolistically competitive firm maximizes profits in the short run

- A) by equating  $MC$  with price.
- B) by equating  $MC$  with  $MR$ .
- C) when  $P = AVC$ .
- D) when  $P = ATC$ .
- E) by maximizing total revenue.

**Question 85:**

Which of the following statements is true for a monopolistically competitive industry?

- A) Only one firm is present in the industry.
- B) Firms set prices without any threat of competition.
- C) Firms set prices and are constrained by the existence of close substitutes for their product.
- D) Firms do not have any price-setting ability because the product is homogeneous.
- E) Firms can charge slightly different prices even though they produce identical goods.

**Question 86:**

Why do we say that a monopolistically competitive firm has some degree of market power?

- A) It always makes positive profits.
- B) There are few firms in the industry.
- C) There are natural barriers to entry.
- D) There are legal barriers to entry.
- E) It sells a differentiated product.

**Question 87:**

Which of the following statements is the best description of a Nash equilibrium?

- A) An equilibrium outcome is achieved by cooperation between players in the game.
- B) An outcome where each player's best strategy is to maintain its present behavior given the present behavior of the other players.
- C) An outcome that is achieved when players in the game have jointly maximized profits and divided those profits according to the market share of each player.
- D) An outcome where each player's strategy depends on the behavior of its opponents.
- E) An equilibrium outcome that is achieved by collusion, and no party has the incentive to change their behavior.

**Question 88:**

Which of the following is an *incorrect* statement about a Nash equilibrium?

- A) A Nash equilibrium is an example of a non-cooperative equilibrium.
- B) In a Nash equilibrium, all players are maximizing their payoffs given the current behavior of the other players.
- C) In a Nash equilibrium, all players are better off than they would be with any other combination of strategies.
- D) A Nash equilibrium is a self-policing equilibrium.
- E) Once a Nash equilibrium is established, no individual firm has an incentive to depart from it.

**Question 89:**

Suppose two firms, Allstom from France, and Bombardier from Canada, are bidding on a contract to replace train cars for the subway system in Mexico City. If they bid the same amount, they share the contract—otherwise, the low bid wins. The figure below shows the payoff matrix for this contest.

		Allstom (A)	
		A bids \$50 million	A bids \$35 million
Bombardier (B)	B bids \$50 million	Profit to A: \$10 m Profit to B: \$10 m	Profit to A: \$5 m Profit to B: \$0 m
	B bids \$35 million	Profit to A: \$0 Profit to B: \$5 m	Profit to A: \$2.5 m Profit to B: \$2.5 m

**FIGURE 11-6**

Refer to Figure 11-6. If Allstom and Bombardier co-operated with each other when bidding on the contract, then the likely outcome is that

- A) each firm bids \$35 million, and each earns a profit of \$2.5 million.
- B) Each firm bids \$50 million, and each earns a profit of \$10 million.
- C) Bombardier bids \$50 million, and earns a profit of \$0, while Allstom bids \$35 million and earns a profit of \$5 million.
- D) Bombardier bids \$35 million, and earns a profit of \$5 million, while Allstom bids \$50 million and earns a profit of \$0.

**Question 90:**

What is a Nash equilibrium?

- A) an example of a cooperative equilibrium
- B) a situation where all players are maximizing their payoffs given the current behavior of the other players
- C) a situation where all players are better off than they would be with any other combination of strategies
- D) an unstable equilibrium
- E) will in general produce the greatest payoff for the players

**Question 91:**

Which of the following is a characteristic of oligopolistic markets?

- A) Ease of entry and exit
- B) zero profits in the long run
- C) mutual interdependence between firms
- D) a horizontal demand curve facing each individual firm
- E) a large number of firms in the industry

**Question 92:**

Oligopolistic firms make decisions after taking into account the expected reaction of their competitors. In doing this, oligopolists are exhibiting

- A) non-strategic behavior.
- B) collusive behavior.
- C) cooperative behavior.
- D) non-cooperative behavior.
- E) strategic behavior.

**Question 93:**

What is a duopoly?

- A) an oligopoly with only two products
- B) an oligopoly with only two sellers
- C) an oligopoly with only two buyers
- D) a monopoly firm that has only two suppliers
- E) a monopolist that has two related products

**Question 94:**

An economy that engages in international trade is called

- A) an autarky.
- B) a comparative advantage.
- C) an open economy.
- D) the gains from trade.
- E) a specialized economy.

**Question 95:**

A country that engages in no foreign trade is said to be in a situation of

- A) comparative advantage.
- B) absolute advantage.
- C) reciprocal absolute advantage.
- D) autarky.
- E) isolation.

**Question 96:**

Consider the gains from trade. What is the best definition of "absolute advantage"?

- A) There will be no benefits from trade between two nations.
- B) A situation where one country can produce one unit of a given product with fewer resources than the other country.
- C) Trade fosters the self-sufficiency of nations.
- D) A situation where one country can produce one unit of all goods with fewer resources than can another country.
- E) Engaging in trade is always to the absolute advantage of one party to the transaction.

Question 97:

The existence of any "gains from trade" relies on

- A) closed economies.
- B) absolute advantage.
- C) comparative advantage.
- D) both absolute and comparative advantage.
- E) tariffs

Question 98:

Consider two countries that can produce rice and other products. If neither country has an absolute advantage in the production of rice,

- A) there is no possibility that either country will import rice from the other.
- B) neither country can possibly have a comparative advantage in the production of rice.
- C) rice will still be traded as long as one of the countries has a comparative advantage in its production.
- D) the opportunity cost of producing rice must be identical in the two countries.
- E) then rice should not be produced.

Question 99:

Consider the gains from trade. What is the best definition of "comparative advantage"?

- A) The ability of one region to produce a commodity at a lower opportunity cost than another region.
- B) The ability of one region to produce a commodity with less labour input than another region.
- C) The ability of one region to produce a commodity with fewer total inputs than another region.
- D) The gains from international trade.
- E) The terms of trade index.

**Question 100:**

There will be no gains from specialization and trade between two countries if

- 1) neither country has an absolute advantage in the production of any good;
- 2) neither country has a comparative advantage in the production of any good;
- 3) opportunity costs are the same in the two countries.

- A) 1 only
- B) 2 only
- C) 3 only
- D) 1 and 2
- E) 2 and 3