Version 333

THE UNIVERSITY OF WESTERN ONTARIO
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ECONOMICS 020-002/004

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MIDTERM 2

INSTRUCTIONS:

1. The examination begins at **4:00 p.m.** and ends at **6:00 p.m.**
2. Check that your examination paper contains 24 pages.
3. Use a **BLACK PENCIL** to complete your Scantron Form.

   Print your **NAME** and complete your SIGNATURE.

   Enter your **STUDENT NUMBER**.

   Enter your **SECTION NUMBER**, which is either 002 or 004.
4. Calculators may be used.
5. Please hand in Scantron forms only.

NOTE: QUESTIONS ARE PRINTED AT THE BACK OF EACH PAGE

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) A tractor is an example of which of the following factors of production?
A) energy
B) land
C) labour
D) entrepreneurship
E) capital

Use the figure below to answer the following question.

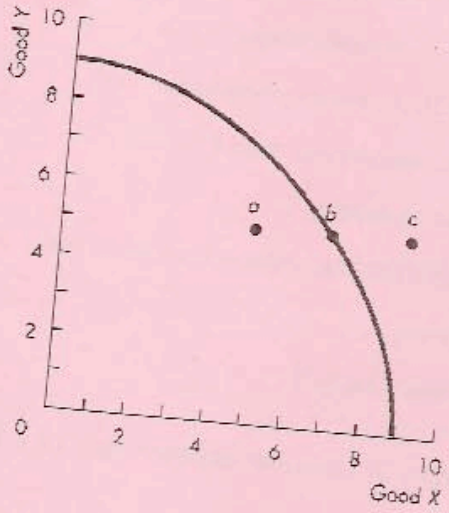

Figure 1

2) Refer to the production possibilities frontier in Figure 1. Which of the following statements is true about point *c*?
A) It is unattainable
B) It is attainable only if we consume less of good *X*
C) It is attainable only if we consume more of good *X*
D) It is attainable only if we consume more of good *Y*
E) It is attainable only if we consume less of good *Y*

3) Complete the following sentence. Marginal cost
A) remains constant.
B) is unrelated to the production possibilities frontier.
C) is always greater then marginal benefit.
D) is defined as the opportunity cost of producing another unit of a good or service.
E) always equals marginal benefit.

4) Individuals *A* and *B* can both produce good *X*. We say that *A* has a comparative advantage in the production of good *X* if
A) *A* can produce *X* using newer technology than *B*.
B) *A* has a higher opportunity cost of producing X than B.
C) *A* has a lower opportunity cost of producing *X* than *B*.
D) *A* can produce less units of *X* in a given time period than *B*.
E) *A* can produce more units of *X* in a given time period than *B*.

5) A market where no single buyer or seller can influence the price is known as
A) an output market.
B) a buyer's market.
C) an input market.
D) a competitive market.
E) a seller's market.

6) The law of demand states that, everything else remaining the same,
A) the higher the price of a good, the greater is the quantity demanded.
B) price and quantity supplied are positively related.
C) as income increases, willingness to pay for the last unit increases.
D) the higher the price of a good, the smaller is the quantity demanded.
E) the higher the price of a good, the smaller is the quantity supplied.

7) An increase in supply is represented by
A) an intial movement up and then down along the same supply curve.
B) a movement down along the supply curve.
C) a rightward shift of the supply curve.
D) a leftward shift of the supply curve.
E) a movement up along the supply curve.

8) The price elasticity of demand is a units-free measure of the responsiveness of
A) quantity demanded to a change in the price of the good.
B) price to a change in the quantity demanded.
C) quantity demanded to a change in income.
D) quantity demanded to a change in the price of a substitute or complement.
E) none of the above.

9) Suppose the demand curve for good X is horizontal. This means that the demand for good X is
A) perfectly elastic.
B) unit elastic.
C) inelastic.
D) perfect inelastic.
E) elastic.

10) The maximum price a consumer is willing to pay for a good is the
A) marginal cost of the good.
B) consumer surplus.
C) minimum supply-price.
D) value of the good.
E) opportunity cost of producing the good.

Use the figure below to answer the following question.

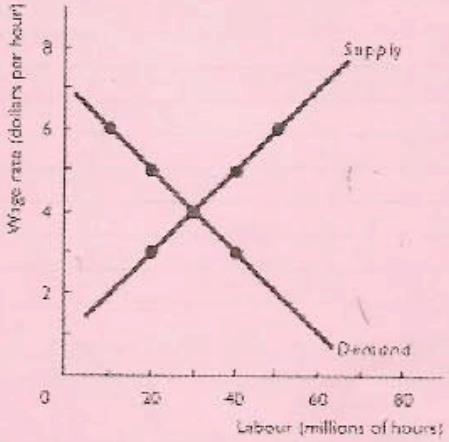

Figure 2

11) Refer to Figure 2. What is the equilibrium wage rate per hour in an unregulated market?

A) $4
B) $5
C) $2
D) $3
E) We cannot tell from the diagram.

12) The table shows the demand and supply schedules for rental housing in a city.

Rent (dollars per month)	Quantity demanded (Thousands of housing units per month)	Quantity supplied (Thousands of housing units per month)
1,300	3	9
1,200	4	8
1,100	5	7
1,000	6	6
900	7	5
800	8	4
700	9	3
600	10	2

A rent ceiling is introduced at a rent of $800 a month. At the same time, landlords are given a $200 subsidy on each housing unit that they rent. In this housing market, there is

A) a surplus of 2,000 housing units per month and a deadweight loss from overproduction.
B) a surplus of 2,000 housing units per month but no deadweight loss.
C) no shortage of housing and no deadweight loss.
D) a shortage of 2,000 housing units per month and a deadweight loss from underproduction.
E) a shortage of 2,000 housing units per month but no deadweight loss.

13) If income decreases, the budget line will

A) shift leftward but parallel to the original budget line.
B) shift rightward but parallel to the original budget line.
C) shift parallel but leftward or rightward depending on whether a good is normal or inferior.
D) become flatter.
E) become steeper.

14) Suppose all prices double and income also doubles. Which statement is true?

A) The consumption of normal goods will rise.
B) The budget line moves away from the origin.
C) The best affordable point remains the same.
D) The slope of the budget line decreases.
E) The slope of the budget line increases.

15) A prefcrence map is defincd as

A) a scries of points that represent levels of equal satisfaction.
B) a single indifferencc curve.
C) the set of preferred indiffcrence curves.
D) the marginal rate of substitution between two goods.
E) a series of indifferencc curves.

Use the figure below to answer the following question.

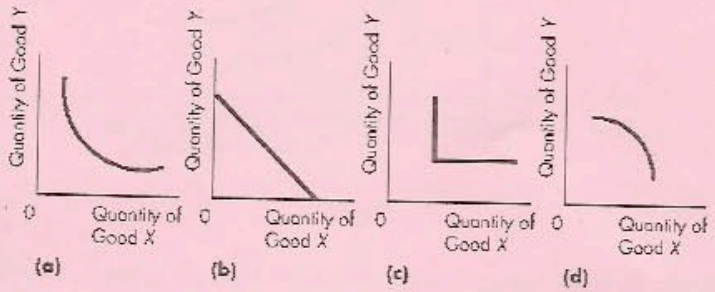

Figure 3

16) Which one of the diagrams in Figure 3 depicts perfect substitutes?

A) (a).
B) (b).
C) (c).
D) (d).
E) (c) and (d).

Use the figure below to answer the following question.

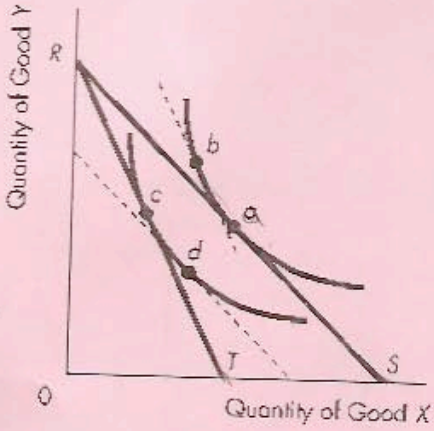

Figure 4

17) Consider an initial budget line labelled *RT* in Figure 4. If the budget line shifts to *RS*, the substitution effect is illustrated by the move from point
A) *a* to *c*.
B) *a* to *d*.
C) *b* to *d*.
D) *b* to *a*.
E) *c* to *d*.

18) The *PPF* for *X* and *Y* is linear (not bowed outward). The indifference curves for the same two goods are also linear (not bowed inward). The opportunity cost of *X* is 2 units of *Y*. The marginal rate of substitution of *X* for *Y* is 3–willing to give up 3 units of *Y* to get one unit of *X*. Given this information, we know that
A) both *X* and *Y* are produced and in fixed proportions: 2 of *X* for every 3 of *Y*.
B) only *X* is produced.
C) both *X* and *Y* are produced and the proportions don't matter.
D) both *X* and *Y* are produced and in fixed proportions: 3 of *X* for every 2 of *Y*.
E) only *Y* is produced.

19) The short run is a period of time in which
A) the quantities of some resources are fixed, and others can be varied.
B) there is a shortage of most resources.
C) the firm is not able to hire more workers.
D) the amount of output produced is fixed.
E) There is not enough time to make all of the decisions.

Use the table below to answer the following question.

Table 1

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

20) Refer to Table 1 which represents Swanky's total product curve. The marginal product that would be produced if the firm employed four workers is
A) 9.
B) 4.
C) 7.
D) 2.
E) 6.

Use the figure below to answer the following question.

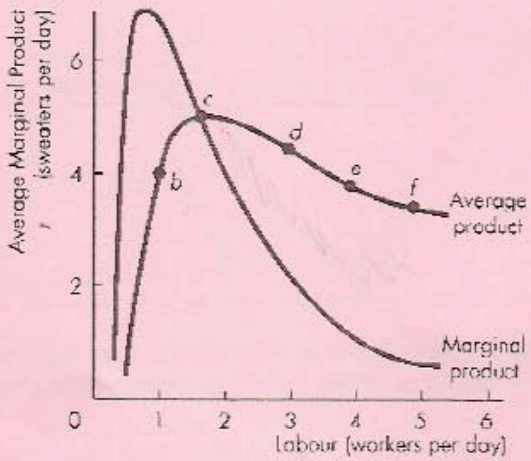

Figure 5

21) Refer to Figure 5 which illustrates Swanky's average product curve. The point of maximum average product is point
A) *b*.
B) *c*.
C) *d*.
D) *e*.
E) *f*.

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

23) The price of a fixed input increases. The firm's
A) average total cost curve shifts upward.
B) average total cost curve shifts downward.
C) marginal cost curve shifts downward.
D) average variable cost curve shifts upward.
E) marginal cost curve shifts upward.

Use the table below to answer the following question.

Table 2
Swanky's output levels

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

24) Refer to Table 2, which represents Swanky's production possibilities as the firm varies the quantities of knitting machines and workers per day. If Swanky increased the number of knitting machines from 2 to 3 and increased the number of workers employed from 2 to 3, the factory would experience

A) constant marginal product.
B) minimum efficient scale.
C) diseconomies of scale.
D) constant returns to scale.
E) economies of scale.

diseco ↑ input ↓ output

LCO ↓ input ↑ output

25) Table 3 shows the number of sweaters that can be produced by various combinations of labour and knitting machines by 1 firm in a day and Table 4 shows the market demand schedule for sweaters. The wage rate of labour is $25 a day and the rental rate of a knitting machine is $30 a day. The market for sweaters is perfectly competitive. In the long run, there are _____ firms in this market and _____ workers are employed in the industry.

Table 3

Quantity of Labour (workers)	1 knitting machine	2 knitting machines	3 knitting machines
1	4	10	15
2	10	15	19
3	15	19	22
4	19	22	24
5	22	23	23

Table 4

Price (dollars per sweater)	Quantity demanded (sweaters per day)
4.84	10,500
5.84	10,000
6.84	9,500
7.84	9,000
8.84	8,500

A) 375; 1,125
B) 375; 1,500
C) 500; 2,000
D) 375; 375
E) 500; 500

26) Perfect competition occurs in a market where there are many firms, each selling
A) a similar product.
B) a competitive product.
C) a capital-intensive product.
D) a unique product.
E) an identical product.

27) A price taker is a firm that
A) cannot influence the price of its product.
B) must accept the price set by a monopoly.
C) can raise its price if it lowers output.
D) is experiencing economic losses.
E) must lower its price if it wants to sell more output.

Use the table below to answer the following question.

Table 5

Output	Total Revenue ($)	Total Cost ($)
0	0	25
1	30	49
2	60	69
3	90	86
4	120	100
5	150	114
6	180	128
7	210	170

28) Refer to Table 5, which represents the total revenue and total cost schedules of a perfectly competitive firm. The marginal revenue received from the sale of the 4th unit of output is
A) $30.
B) $10.
C) $120.
D) $15.
E) $3.

29) A perfectly competitive industry, with no external economies or diseconomies, is initially in long-run equilibrium. There is a permanent rise in demand. After adjustment to the new long-run equilibrium _____ compared to before the increase in demand.
A) each remaining firm in the industry will be producing more output
B) each remaining firm in the industry may be producing more output, depending on the size of the change in demand
C) each remaining firm in the industry will be producing less output
D) each remaining firm in the industry will be producing either the same or more output
E) each remaining firm in the industry will be producing the same amount of output

30) The maximum loss for a firm in long-run equilibrium is
A) its average total cost.
B) its total variable cost.
C) its total cost.
D) zero.
E) none of the above.

31) Assuming external economies, when demand increases in a perfectly competitive market, price
A) decreases and the equilibrium quantity increases.
B) decreases and the equilibrium quantity will stay the same.
C) remains constant and the equilibrium quantity decreases.
D) increases and the equilibrium quantity decreases.
E) remains constant and the equilibrium quantity increases.

32) A natural monopoly exists when
A) one firm can supply the entire market at a lower cost than two or more firms.
B) the government protects the firm by granting an exclusive franchise.
C) there are no rivals in the market.
D) the average total cost curve is upward sloping.
E) production can take place with constant returns to scale.

Use the figure below to answer the following question.

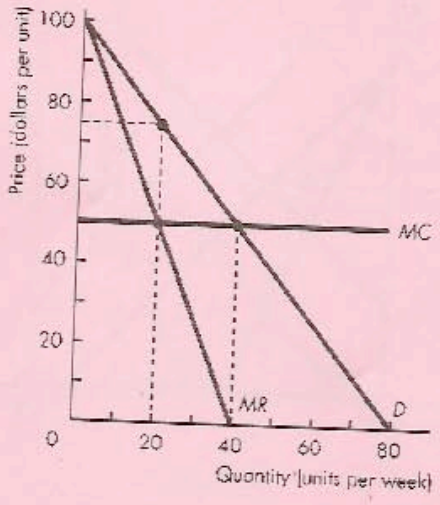

Figure 6

33) Refer to Figure 6 A single-price monopoly produces output of _____ units per day and the price is $_____ per unit.
A) 20; 20
B) 40; 50
C) 20; 50
D) 20; 75
E) zero; 0

Use the figure below to answer the following question.

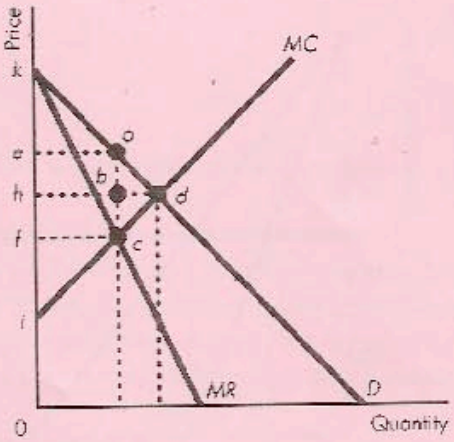

Figure 7

34) Consider the industry demand curve in Figure 7. If this is a single-price monopoly, what is consumer surplus?

A) *eadh.*
B) *abd.*
C) *eabh.*
D) *kea.*
E) *acd.*

35) A perfect price-discriminating monopoly without rent seeking will be

A) as efficient as a perfectly competitive industry.
B) less efficient than a single-price monopoly.
C) more efficient than a perfectly competitive industry but less efficient than a single-price monopoly.
D) more efficient than a perfectly competitive industry.
E) more efficient than a single-price monopoly, but less efficient than a perfectly competitive industry.

Use the figure below to answer the following question.

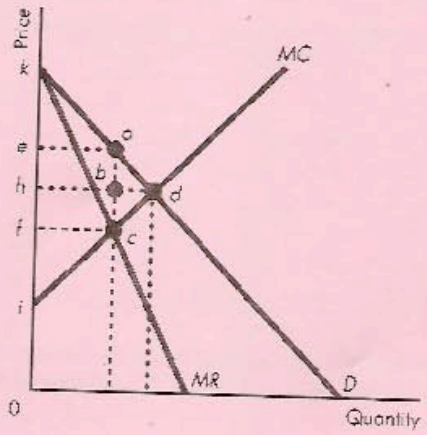

Figure 8

36) Which area in Figure 8 indicates the deadweight loss from a perfect price-discriminating monopoly?

A) *acd*
B) *abd*
C) *bcd*
D) *eacf*
E) none of the above

Use the table below to answer the following question.

Table 6

Price ($)	Quantity Demanded
8	0
7	1
6	2
5	3
4	4
3	5
2	6
1	7

37) If a perfect price-discriminating monopoly faces the demand schedule shown in Table 6 and if marginal cost is constant at $3, output will be

A) 5.
B) 6.
C) 3.
D) 4.
E) 2.

38) The table shows a single-price monopoly's demand schedule and cost schedules.

Price (dollars per unit)	Quantity demanded (units per day)	Total variable cost (dollars per day)	Total cost (dollars per day)
24.50	9	247	272
24.00	10	256	281
23.50	11	267	292
23.00	12	280	305
22.50	13	295	320
22.00	14	312	337
21.50	15	331	356
21.00	16	352	377
20.50	17	375	400
20.00	18	400	425
19.50	19	427	452
19.00	20	456	481
18.50	21	487	512

When this firm is maximizing profit, it

A) incurs an economic loss but does not impose a deadweight loss.

B) earns a positive economic profit.

C) earns zero economic profit.

D) incurs an economic loss and imposes a deadweight loss.

E) incurs an economic loss of $27.50 a day and imposes a deadweight loss.

Use the figure below to answer the following question.

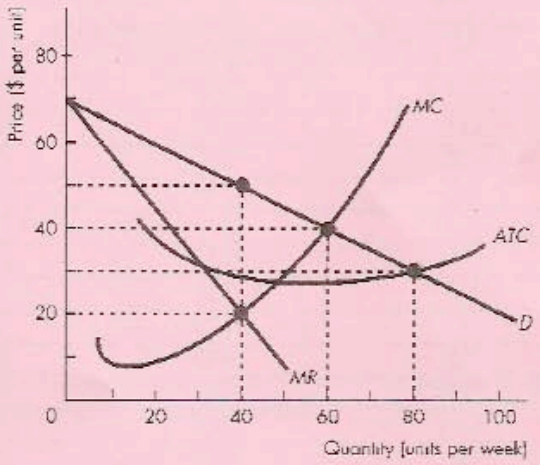

Figure 9

39) Refer to Figure 9. If this firm is in monopolistic competition, it will produce an output level
A) of 60 units.
B) that is lower than 40 units.
C) of 80 units.
D) of 40 units.
E) that is impossible to determine without information concerning the rival firms.

40) Which of the following are true? The similarities between perfect competition and monopolistic competition include:
(1) free entry and exit
(2) profit-maximizing output where $MC = MR$
(3) long-run economic profits equal zero.
A) (1)
B) (2)
C) (1) and (2)
D) (2) and (3)
E) (1), (2), and (3)

Use the figure below to answer the following question.

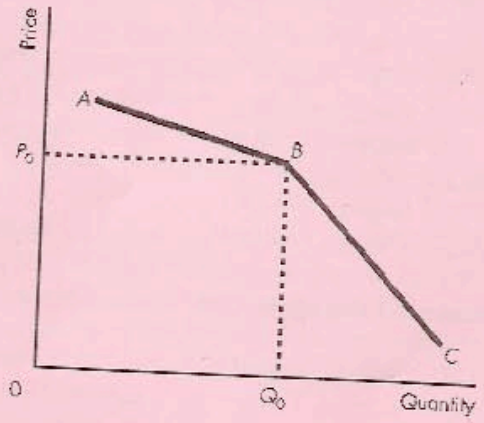

Figure 10

41) Which one of the following statements about the sections of the kinked demand curve in Figure 10 is correct?
A) *AB* assumes other firms will match a price increase, while *BC* assumes other firms will not match a price decrease.
B) The kink between sections reflects market imperfections.
C) *AB* assumes other firms will not match a price increase, while *BC* assumes other firms will match a price decrease.
D) *AB* assumes no new firms will enter the industry, while *BC* assumes new firms will enter.
E) *AB* assumes new firms will enter the industry, while *BC* assumes no new firms will enter.

42) A Nash equilibrium occurs when
A) each player takes the best possible action given the other player's action.
B) each player complies with the collusive agreement.
C) there is a clear strategy for each player independent of the other player's actions.
D) you cooperate until the other player cheats, and then you cheat forever.
E) none of the above.

Use the table below to answer the following question.

Table 7

		Firm *B*	
		Lower Prices	Higher Prices
Firm *A*	Lower Prices	A: \$2 B: \$5	A: \$20 B: -\$10
	Higher Prices	A: -\$10 B: \$25	A: \$10 B: \$20

43) Refer to the nonrepeated duopoly in Table 7. In equilibrium, firm *A* will make a profit of
A) -\$10.
B) \$20.
C) \$10.
D) \$2.
E) an indeterminate amount.

Use the table below to answer the following question.

Table 8

		Bud Light	
		Offer New Ads	Don't Offer New Ads
Miller Lite	Offer New Ads	B: \$100 M: \$100	B: \$50 M: \$200
	Don't Offer New Ads	B: \$200 M: \$50	B: \$120 M: \$120

44) Refer to Table 8. The marketers of Budweiser Light beer and Miller Lite beer must decide whether or not to offer new advertising campaigns promoting their products. The elements in the table are the dollar profits earned by Bud and Miller. Which one of the following observations is correct?
A) If Miller offers a new advertising campaign, then Bud will be better off by not offering a new advertising campaign.
B) Both Bud and Miller would be better off if they could collude and agree to coordinate their new advertising campaigns.
C) This is not a game described as a prisoners' dilemma.
D) If Bud offers a new advertising campaign and Miller does not, Bud will earn a \$200 profit.
E) Both Bud and Miller will be better off if they both offer a new advertising campaign.

45) A firm in monopolistic competition is maximizing profit and to do so it has temporarily shut down. If the firm produced the quantity at which marginal revenue equals marginal cost, which of the following would **NOT** occur?

A) Price would be less than average total cost.
B) Marginal revenue would be less than average variable cost.
C) Economic loss would exceed total fixed cost.
D) Average variable cost would be at its minimum.
E) Price would be less than average variable cost.

46) Ben is buying a car and a book and has a choice of car dealership and bookstore. He can get the car for $10,000 at the dealer around the corner or for $9,970 at the dealer across town. He can buy the book for $50 at the bookstore around the corner or for $20 at the bookstore across town. Ben decides to buy the car from the dealer around the corner. If Ben is making rational choices, which book does he buy?

A) it makes no difference
B) the one across town
C) we can't tell unless we know how long it takes Ben to travel across the town
D) the one around the corner
E) we can't tell unless we know how much Ben's time is worth

47) The market demand curve and the market supply curve in a perfectly competitive market intersect at a point on the demand curve where demand is inelastic, but not perfectly inelastic. The demand curve faced by each firm in the industry will be

A) similar to the demand curve faced by the industry, but the quantity at each price will equal the quantity on the industry demand curve divided by the number of firms in the industry.
B) more elastic than the demand curve faced by the industry.
C) downward sloping and each firm will produce at a point on its demand curve where demand is elastic, but not perfectly elastic.
D) downward sloping and each firm will produce at a point on its demand curve where demand is perfectly elastic.
E) upward sloping and each firm will produce at a point on its demand curve where demand is elastic, but not perfectly elastic.

48) China Panda is a natural monopoly that breeds pandas and sells them to zoos. China Panda's total fixed cost is $100 million a year and its marginal cost is $100,000 per panda. China Panda faces a linear demand curve. When the price of a panda is $1 million, the quantity of pandas demanded is zero. And when the price of a panda is $100,000 the quantity of pandas demanded is 10 a year.
When China Panda maximizes profit, it charges a price of _____ a panda. If China Panda practises perfect price discrimination, the quantity of pandas it sells is _____ a year. The total surplus is _____ when China Panda maximizes profit as a perfectly price discriminating monopoly than when it maximizes profit as a single price monopoly. When China Panda maximizes profit as a single-price monopoly, the demand for its pandas is _____; if China Panda follows a marginal cost pricing rule, the demand for its pandas is _____.

A) $100,000; 10; greater; elastic; inelastice priced.
B) $550,000; 5; less; inelastic; elastic
C) $550,000; 10; greater; elastic; inelastic
D) $100,000; 10; less; inelastic; elastic
E) $1,000,000; 5; greater; elastic; elastic

49) Tamiflu is an antiviral drug that might help victims of avian flu if a pandemic occurs. Assuming that Roche, the maker of Tamiflu, behaves like a textbook monopoly, you would expect an increase in the likelihood of avian flu to _____ the price of a dose of Tamiflu, _____ the quantity of Tamiflu produced, _____ Roche's economic profit, and the potential deadweight loss that may be created in rent seeking following the increase in demand will be _____ the potential deadweight loss that may be created in rent seeking prior to the increase in demand. If India starts to produce oseltamivir, a generic form of Tamiflu, and supplies it to Asian countries, Roche will most likely respond by _____.

A) lower; decrease; increase; equal to; cutting its price and colluding with the Indian producer
B) lower; decrease; decrease; less than; cutting its price
C) lower; decrease; decrease; greater than; raising its price
D) raise; increase; decrease; less than; raising its price and colluding with the Indian producer
E) raise; increase; increase; greater than; cutting its price

50) A firm in the perfectly competitive worm industry has a marginal cost curve that intersects its average variable cost curve at a price of $1.00 a bucket. Its marginal cost curve intersects its average total cost curve at a price of $2.50 a bucket and a quantity of 1,000 buckets of worms a week. In the long run, the firm produces _____ and in the short run, the firm produces no worms if the price is less than _____ a bucket.

A) more than 1,000 buckets of worms a week at a price of $2.50 a bucket; $2.50
B) less than 1,000 buckets of worms a week at a price of $1.00 a bucket; $2.50
C) 1,000 buckets of worms a week at a price of $2.50 a bucket; $1.00
D) more than 1,000 buckets of worms a week at a price of $2.00 a bucket; $2.50
E) more than 1,000 buckets of worms a week at a price of $2.50 a bucket; $1.00

ESA

The University of Western Ontario
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