Multiple Choice	
Part II, Q1	
Part II, Q2	
Part III	
Total	

SIMON FRASER UNIVERSITY

ECON 103 (2008-2) MIDTERM EXAM

NAME _____

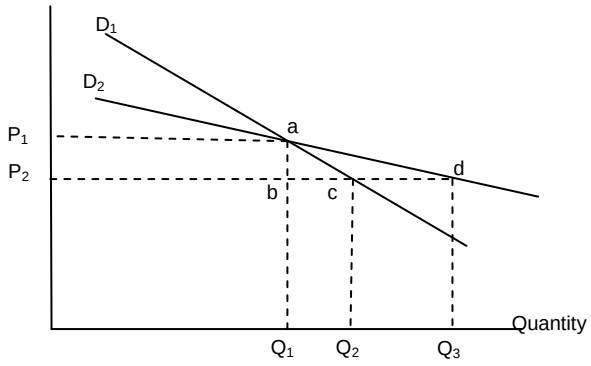
Student #_____ Tutorial #_____

PART I. MULTIPLE CHOICE (56%, 1.5 points each). Answer on the bubble sheet. Use a soft lead pencil.

1. Which of the following is a normative statement?
   a. The humidity is high today.
   b. It is too hot to jog today.
   c. Econ Profs. are hard graders.
   d. This exam is difficult.
   e. The temperature is 27 degrees today.

2. Which one of the following concepts is NOT illustrated by a production possibilities frontier?
   a. attainable and unattainable points
   b. monetary exchange
   c. the tradeoff between producing one good versus another
   d. opportunity cost
   e. scarcity

3. The figure to the right shows two demand curves, D1 and D2.
   a. Demand is elastic at every price on D_2.
   b. Demand is inelastic at every price on D_2.
   c. If demand is elastic on D_2 for a price cut from P_1 to P2, then the area P_2P_1ab is less than the area Q_1bdQ_3.
   d. If demand is inelastic on D_2 for a price cut from P_1 to P_2, then the area P_2P_1ab is less than the area Q_1bdQ_3.
   e. Demand is unitary elastic on D_2 at Q_1.



4. Referring to the figure to the right, we can tell that D_2 is more elastic than D_1 for a price cut from P_1 to P_2 if
   a. $P_2P_1ab < Q_1bcQ_2$
   b. $P_2P_1ab < Q_2cdQ_3$
   c $Q_1bdQ_3 < Q_1bcQ_2$
   d. $Q_1bdQ_3 > Q_1bcQ_2$
   e. $Q_2cdQ_3 < Q_1bdQ_3$

5. Suppose a firm sells its product at a price lower than the opportunity cost of the inputs used to produce it. Which of the following is true?
   a. The firm will earn accounting and economic profits.
   b. The firm will face accounting and economic losses.
   c. The firm will face an accounting loss, but earn economic profits.
   d. The firm may earn accounting profits, but will face economic losses.
   e. the firm will immediately shut down.

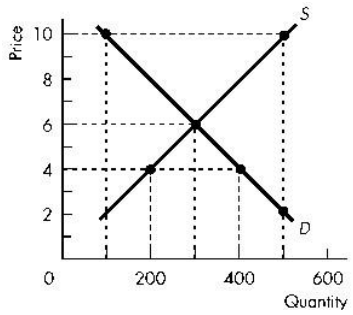
6. If additional units of any good could be produced at a constant opportunity cost, the production possibilities frontier would be
   a. negatively sloped.
   b. bowed inward (convex).
   c. linear.
   d. bowed outward (concave).
   e. both"a" and "c".

7. If a producer can use its resources to produce either good A or good B, then an increase in the price of A will cause
   a. the supply of A to shift out.
   b. the supply of B to shift in.
   c. . the supply of B to shift out.
   d. the supply of A to shift in.
   e. both "a" and "b".

8. An increase in income will
   a. cause the equilibrium price of turnips to fall if turnips are inferior goods.
   b.cause a decrease in supply of turnips whether or not turnips are inferior goods.
   c. cause the equilibrium quantity of turnips to decline if turnips are inferior goods.
   d. cause the equilibrium price of turnips to rise if turnips are inferior goods.
   e. both “a” and “c”.

9. Which one of the following statements concerning short-run costs is false?
   a. Marginal cost cuts the average variable cost curve at its minimum point.
   b. Average total cost and average variable cost are U-shaped.
   c. Marginal cost cuts the average total cost curve at its minimum point.
   d. The gap between average total cost and average variable cost is marginal cost.
   e. The gap between average total cost and average variable cost narrows as output increases.

10. Based on the figure to the right, at a price of $4
   a. there is a surplus of 200 units.
   b. there is a shortage of 200 units.
   c. the equilibrium quantity is 400 units.
   d. the quantity demanded is 200 units.
   e. the quantity supplied is 400 units.



11 Based on the figure to the right,
   a. at a price of $4 there is no consumer surplus.
   b. at a price of $6 there is a consumer surplus.
   c. at a price of $4, suppliers are not satisfied.
   d. at a price of $8, consumer demand is not met.
   e. all of the above are true.

12. Utility is best defined as
   a. the value of a good.
   b. equal to the price of a good.
   c. the benefit or satisfaction from consuming goods and services.
   d. the practical usefulness of a good.
   e. the additional satisfaction from consuming another unit of a good

13. Marginal product is the change in total product caused by a
   a. change in the cost of the variable input.
   b. one-unit increase in the variable input, holding the quantity of fixed input constant.
   c. 1 percent change in the amount of variable input used.
   d. one-unit increase in the quantity of fixed input employed, holding the quantity of the variable input constant.
   e. one-unit increase in both the quantity of variable and fixed inputs.

14. Recent theories of consumer behaviour have:
   a. emphasized that consumption is basically an instantaneous act.
   b. contended that in the MUx/Px = MUy/Py equation MU is understated for time-intensive goods.
   c. attempted to introduce the opportunity cost of time as a component of product price.
   d. argued that inflationary expectations negate the theory of consumer behaviour.
   e. argued that wealthy people are more likely to consume time intensive goods.

15. Raj and Eng have identical preferences but Raj has a much higher income. If each is maximizing his utility, then
   a. Raj will have lower total utility than Eng.
   b. they will have equal total utilities.
   c. Raj will have lower marginal utility than Eng for each normal good consumed.
   d. they will have equal marginal utilities for each normal good consumed.
   e. Raj will have higher marginal utility than Eng for each normal good consumed.

16. The high price of diamonds relative to the price of water reflects the fact that, at typical levels of consumption,
    a. the marginal utility of water is high.
    b. the total utility of diamonds is relatively high.
    c. the total utility of water is relatively low.
    d. the marginal utility of diamonds is relatively low.
    e. None of the above is true.

17. A horizontal demand curve
    a. is likely to rise in the short run.
    b. is impossible.
    c. illustrates zero income elasticity.
    d. illustrates infinite price elasticity.
    e. illustrates price elasticity of zero.

18. The simple circular flow model shows that:
    a. households are on the demand side of both product and factor markets.
    b. businesses are on the supply side of both product and factor markets.
    c. households are on the supply side of the factor market and on the demand side of the product market.
    d. businesses are on the demand side of the product market and on the supply side of the factor market.
    e. households contribute only labour to the factor market.

19 The idea that the desires of resource suppliers and producers to further their own self-interest will automatically further the public interest is known as:
    a. consumer sovereignty.
    b. derived demand.
    c. rent seeking.
    d. the invisible hand.
    e. profit maximization.

20. Suppose the cross elasticity of demand between peanut butter and jelly is negative, then
    a. an increase in the price of peanut butter will cause an increase in the equilibrium price of jelly.
    b. peanut butter and jelly are substitutes.
    c. a decrease in the price of peanut butter will cause a decrease in the equilibrium price of jelly.
    d. an increase in the price of peanut butter will cause a decrease in the equilibrium price of jelly.
    e. an increase in the price of peanut butter will have no effect on the equilibrium price of jelly.

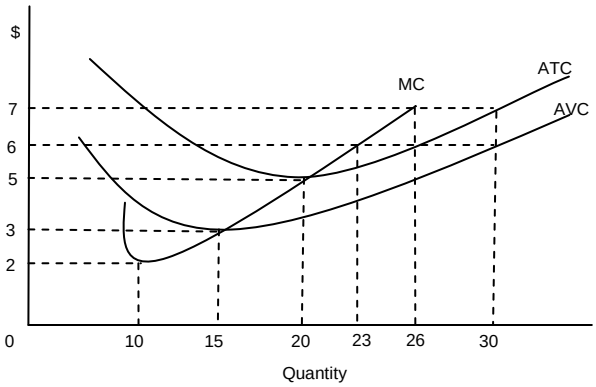
21. Which one of the following is not generally a transactions cost?
    a. the cost of phone calls made to find a buyer
    b. the cost of a lawyer who drafts a contract
    c. the cost of the owner's time in a sole proprietorship
    d. the cost of a lawyer to sue a supplier for breach of contract
    e. the cost of hiring someone to find you a supplier of raw materials

22. Total utility is always
    a. less than marginal utility.
    b. decreasing when marginal utility is decreasing.
    c. decreasing when marginal utility is increasing.
    d. greater than marginal utility.
    e. increasing when marginal utility is positive.

23. The term "other things equal" means that:
    a. the associated statement is normative.
    b. many variables affect the dependent variable.
    c. a number of relevant variables are assumed to be constant.
    d. when X increases so does related variable Y.
    e. the *ceteris paribus* assumption does not hold.

24. Which one of the following statements is true?
    a. When the average product curve is falling, marginal product is above average product.
    b. The highest average product occurs where average product is above marginal product.
    c. The highest average product occurs where average and marginal product are equal to each other.
    d. When the average product curve is rising, marginal product is below average product.
    e. The maximum total product occurs at minimum marginal product.

Answer the following six questions based upon the diagram at the right that refers to a perfectly competitive firm in the short run. Assume all firms in the industry have the same costs.



25. If the market price is $7, this firm would
   a. produce 26 units and make economic profits of $182.
   b. produce 26 units and make economic profits of $26.
   c. produce 26 units and earn economic profits of $1.
   d. produce 30 units and earn economic profits of $30.
   e. shut down.

26. If the market price is $6
   a. firms would leave this industry.
   b. each firm would produce 20 units.
   c. total output would be 2,600 units if there were 100 firms in the industry.
   d. firms would enter the industry in the long run.
   e. each firm would produce 30 units

27. If the market price were $2
   a. this firm would produce 10 units and incur a loss.
   b. this firm would produce 10 units and break even.
   c. this firm would shut down and incur a loss of $30.
   d. this firm would shut down and would have neither a profit nor a loss.
   e. this firm would shut down and incur a loss, but we cannot tell the amount of the loss from the diagram.

28. Assume there are 10 firms in this industry (and it is perfectly competitive). For a price increase from $5 to $6
   a. industry supply is own price inelastic.
   b. industry supply is own price elastic.
   c. industry supply is own price unitary elastic.
   d. industry supply must be own price inelastic because the price increase results in higher revenues.
   e. industry supply must be own price elastic because the price increase results in lower revenues.

29. For firms in this industry
   a. average productivity is maximized at a level of output of 20 units.
   b. average productivity is maximized at a level of output of 15 units.
   c. average productivity is maximized at a level of output of 10 units.
   d. marginal productivity is maximized at a level of output of 20 units.
   e. marginal productivity is maximized at a level of output of 15 units.

30. Firms in this industry experience increasing returns to scale
   a. only over the range from 0 to 10 units of output.
   b. only over the range from 0 to 15 units of output.
   c. only over the range from 0 to 20 units of output.
   d. over the range of output from 0 to 30 units.
   e. We cannot tell over what range of output the firm enjoys economies of scale.

31. Because productive resources are scarce, we must give up some of one good in order to acquire more of another. This is the essence of the concept of
   a. specialization.
   b. comparative advantage.
   c. opportunity cost.
   d. monetary exchange.
   e. absolute advantage.

32. In the long run,
   a. a firm must experience constant returns to scale.
   b. all resources are variable.
   c. only the scale of plant is fixed.
   d. all resources are fixed.
   e. none of the above is true.

33. Total revenue is more likely to rise when the price rises if
   a. a high proportion of income is spent on the good.
   b. some extended period of time passes.
   c. there are few substitutes for the good.
   d. all of the above.
   e. none of the above.

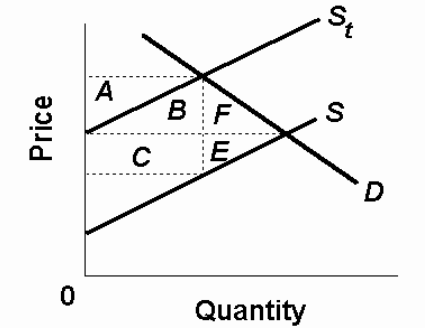
34. For which one of the following will demand be the most price elastic?
   a. Vancouver newspapers
   b. The Vancouver Sun
   c. British Columbia newspapers
   d. daily newspapers
   e. Each of the above will exhibit the same demand elasticity

35. Which one of the following is not one of the key decisions a perfectly competitive firm has to make?
   a. if the decision is to produce, how much to produce.
   b. whether to exit or enter the industry
   c. if the decision is to stay in the industry, whether to produce or temporarily shut down
   d. whether to stay in the industry or leave it
   e. after the decision is made to produce a certain amount of output, what price to charge for the product

36. In a perfectly competitive market, the short-run industry supply curve is
   a. the vertical sum of the supply curves of all the individual firms.
   b. horizontal at the current market price.
   c. the horizontal sum of the supply curves of all the individual firms.
   d. vertical at the total level of output being produced by all firms.
   e. none of the above.

37. Some producers are chatting during a coffee break. Which one of the following quotations refers to a rightward shift in the supply curve?
   a. "We anticipate a big increase in demand. Our product price should rise, so we are planning for an increase in output."
   b."Wage increases have forced us to raise our prices."
   c. "Our new, sophisticated equipment will enable us to undercut our competitors."
   d. "Raw material prices have sky-rocketed; we will have to pass the cost on to our customers."
   e. Both “a” and “c”.

38. Refer to the diagram in which S is the before-tax supply curve and St is the supply curve after the imposition of an excise tax. The total amount of the tax paid by consumers is shown by area(s):
   a. A + B + F.
   b. A + B.
   c. A + B + C.
   d. E + F.
   e. A + B + C + F + E

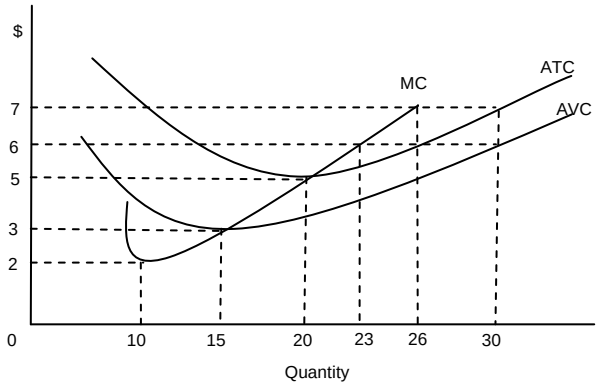


Answers to Multiple Choice

1	b
2	b
3	c
4	d
5	d
6	e
7	b
8	e
9	d
10	b
11	b
12	c
13	b
14	c
15	c
16	e
17	d
18	c
19	d
20	d
21	c
22	e
23	c
24	c
25	b
26	d
27	c
28	a
29	b
30	e
31	c
32	b
33	c
34	b
35	e
36	c
37	c
38	b

PART II.PROBLEMS. Q 1. Answer in the space below the question and on the back of this page (if you need the space).Show your work. (9%)

The figure to the right (the same as for multiple choice questions 25 to 30) shows the cost curves for a firm in a perfectly competitive industry. Assume there are 200 firms in this market, all with the same costs.



The demand schedule facing these suppliers is shown in the table to the right.

a. What is the market equilibrium price?
b. What is the market equilibrium quantity?
c. What economic profit (or loss) does each firm make?
d. In the long run will there be entry to (or exit from) this industry? How do you know?

Demand Schedule	
Price	Q demanded
$1	6,000
$2	5,500
$3	5,000
$4	4,500
$5	4,000
$6	3,500
$7	3,000
$8	2,500

Supply schedule with 200 firms

		200 firms
P	Q	Industry Q
1	0	0
2	0	0
3	15	3,000
5	20	4,000
6	23	4,600
7	26	5,200

Supply equals demand at:
a. price =$5
b. quantity = 4,000.
c. firms earn zero economic profits.
d. There will be no entry or exit. This is because price = average total cost so each firm is just covering its opportunity costs.

PART II. Q. 2. Answer in the space below the question and on the next page (if you need the space). Show your work. (25%).

Good A			p=$8	p=$4		Good B			p=$2	p=$2+$6
Units	Total Utility	MU	MU/$			Units	Total Utility	MU	MU/$	MU/$
0	0					0	0			
1	48	48	6	12		1	24	24	12	3
2	80	32	4	8		2	40	16	8	2
3	104	24	3	6		3	52	12	6	1.5
4	120	16	2	4		4	60	8	4	1
5	128	8	1	2		5	66	6	3	.75
6	132	4	0.5	1		6	70	4	2	.5

The table above shows total utility for consumption of goods A and B for a student named Min. Utility from the consumption of A is independent of the utility from consuming B (i.e., the quantity of A consumed does not affect the utility obtained from consuming B). Min spends all of her money on A and B (she does not save). The blank columns are for your convenience.

a. Assume the price of A = $8, the price of B = $2, and Min's income is $24.
   i. What is Min's utility maximizing combination of A and B?
   ii. Show that this combination satisfies the utility maximizing rule.

b. Now assume that the price of A falls to $4, and the price of B remains at $2.
   i. What is the new utility maximizing combination of A and B?
   ii. What is the own-price elasticity of demand for A for the price decline from $8 to $4?

c. Assume the price of A = $4, the price of B = $2, and Min's income is $24. Assume further that Min incorporates the value of her time into her decision making. It takes no time to consume A but it takes 0.5 hour to consume each unit of B. Min values her time at $12 per hour. What is her new utility maximizing combination of A and B?

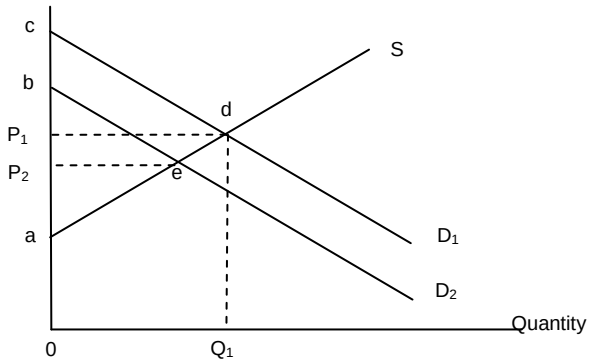
d. Assume the price of A = $8, the price of B = $2 but Min's income has been cut from $24 to $14.
   i. What is the new utility maximizing combination of A and B?
   ii. What is the income elasticity of demand for A for this cut in income?
   iii. Is A a normal good or an inferior good? How do you know?

a. i: 2 units of A and 4 units of B
a. ii: MY/$ = 4 for both goods
b.i:4 units of A and 4 units of B.
b. ii: own price elasticity of demand is unitary = 1.
c. the effective price of B is $2 plus the value of time spent consuming it, $6. Min will consume 5 units of A and 2 units of B. The budget is exhausted (5x$4 + 2x$2 = $24) and MU per dollar "spent" (in terms of actual dollars or time) = 2 for both A and B.
d. At income of $24, Min consumes 2 units of A and 4 units of B (see a.i.).
d.i.: At income of $14, she consumes 1 unit of A and 3 units of B.
d.ii: Percent change in quantity of A is -66%, percent change in income is -53%, income elasticity of demand is 1.27
d.iii. It is a normal good because the income elasticity is positive.

PART III. SHORT ESSAY. ANSWER BELOW.(10%)

1. Draw the supply and demand curves for a perfectly competitive market for hamburger meat in Vancouver. (a) Identify the areas of consumer and producer surpluses, and the total value of quantity consumed. Now, assume there is an announcement in the newspaper that salmonella (a bad germ) has been found in hamburger meat being sold in Vancouver. (b) What effect does this have on demand and on the consumer surplus shown in your diagram? Explain why. (c) At the new equilibrium, is this market achieving allocative efficiency? How do you know? In your answer be sure to define the concept of allocative efficiency.

a. The total value is the area under the demand curve, $0cdQ_1$. Consumer surplus is P_1cd. Producer surplus is aP_1d.



b. Demand shifts in and both consumer and producer surplus are reduced. Consumer surplus becomes P_2be. Because demand shifted in each unit is worth less and fewer units are consumed so the surplus declines.

c. Yes it achieves allocative efficiency because the sum of producer and consumer surpluses is maximized. At the new equilibrium, P_2 = MC. All units that add more to benefits than to costs are being produced. Therefore net benefits are being maximized.