SIMON FRASER UNIVERSITY
Department of Economics
Econ 103 Sample Final Examination

PART I. Multiple Choice. Choose the best answer. (60% - 1 point each!)

PART 1: MULTIPLE CHOICE (answers are at the end of the exam)

1. The fallacy of composition is essentially the error of
   a. generalizing from the particular to the general.
   b. using induction, when deduction is required
   c. confusing cause and effect in economic relationships
   d. reasoning from the general to the particular
   e. omitting relevant variables in constructing a model

2. A perfectly discriminating pure monopolist will charge each buyer
   a. the maximum price each would be willing to pay.
   b. that price which equals the buyer's marginal cost.
   c. the same price if per-unit cost is constant for each unit of the product.
   d. different prices to compensate for different product characteristics.
   e. both (a) and (d).

3. The basic difference between consumer goods and capital goods is that
   a. consumer goods satisfy wants directly while capital goods satisfy wants indirectly.
   b. the production of capital goods is not subject to the law of increasing costs.
   c. an economy that commits a relatively large proportion of its resources to capital goods must accept a lower growth rate
   d. consumer goods are produced in the private sector and investment goods are produced in the public sector.
   e. capital goods last longer than consumer goods.

4. With respect to income distribution which of the following would tend to move the Lorenz curve closer to the diagonal?
   a. the elimination of family allowances
   b. a reduction in the progressiveness of the federal personal income tax.
   c. an increase in social insurance wage and salary deductions.
   d. an increase in sales taxes.
   e. a guaranteed income of $12,000 for all families.

5. Marginal resource cost will exceed the wage rate when
   a. the labour market is characterized by monopsony.
   b. the labour market is characterized by monopoly.
   c. the output market is characterized by imperfect competition.
   d. the output market is perfectly competitive.
   e. none of the above.

6. If a pure monopolist is producing that output where P=ATC, we can conclude that the monopolist
   a. is allocatively efficient.
   b. is technically inefficient.
   c. is earning economic rents.
   d. is not earning economic rents.
   e. is dynamically efficient.

7. The law of increasing costs is reflected in a production possibilities curve that is
   a. convex to the origin.
   b. concave to the origin.
   c. a downsloping straight line.
   d. an upsloping straight line.
   e. linear.

8. We observe that over time the price and quantity sold of a certain product have both increased. A possible explanation is
   a. supply increased over time, while demand remained the same.
   b. demand increased over time, while supply remained the same
   c. supply and demand both decreased.
   d. supply decreased over time, while demand was constant.
   e. demand decreased while supply remained the same.

9. Which of the following statements is <u>not</u> correct.
   a. Demand is elastic at high prices and inelastic at low prices.
   b. Total receipts will not change if price varies within a range where the elasticity coefficient is unity.
   c. In the range of prices in which demand is elastic, total revenue will be diminishing as price decreases.
   d. If the relative change in price is greater than the relative change in quantity demanded associated with it, demand is inelastic.
   e. demand tends to become more elastic over time.

10. Which of the following statements is *correct*?
   a. If unions raise wage rates for specific groups of workers, then unions must also raise the average level of real wages for all workers.
   b. If unions raise wages for specific groups of workers, then unions must lower the average level of real wages for all workers.
   c. It is logically consistent to say that unions might raise the wage rates for specific groups of workers, but have no perceptible effect upon the average level of real wage rates for all workers.
   d. Unions can increase wage rates only if employers have no monopsony power.
   e. Both (c) and (d).

11. The single largest share of national income consists of
   a. corporation profits
   b. salaries & wages
   c. rent
   d. accrued net income of farmers
   e. interest

12. If demand for a product is perfectly inelastic, and supply is elastic, the incidence of an excise tax will be
   a. mostly on the seller
   b. entirely on the seller
   c. equally on buyer and seller.
   d. mostly on the buyer.
   e. entirely on the buyer.

13. In introducing the opportunity cost of time into the theory of consumer behaviour, we find that
   a. the marginal utility derived from each product must be multiplied by consumption time in determining equilibrium.
   b. the consumer's equilibrium position is not altered.
   c. one should consume more of time-intensive goods.
   d. one should consume less of time-intensive goods.
   e. both “a” and “d”.

14. Economies and diseconomies of scale explain
   a. why short-run marginal cost eventually rises.
   b. why short-run average variable cost eventually rises.
   c. both (a) and (b).
   d. neither (a) nor (b).

15. The relationship between the marginal cost and the average total cost schedule is such that
   a. if MC is declining, ATC must also be declining.
   b. if MC is rising, ATC must also be rising.
   c. if ATC exceeds MC, MC must be declining
   d. if ATC exceeds MC, MC must be rising.
   e. if MC is constant, ATC must be declining.

16. Which of the following statements concerning the relationships between total physical product (TP), average physical product (AP) and marginal product (MP) is <u>not</u> correct.
   a. MP cuts AP at the maximum AP.
   b. TP reaches a maximum when the MP of the variable input becomes zero.
   c. AP reaches a maximum before TP reaches a maximum.
   d. AP continues to rise so long as TP is rising.

17. For a perfectly competitive industry, demand is
   a. perfectly elastic.
   b. inelastic.
   c. downward sloping.
   d. unitary elastic.
   e. elastic

18. The long-run supply curve for a purely competitive
   a. decreasing-cost industry will be upsloping.
   b. industry will be less elastic than the industry's short-run supply curve.
   c. increasing-cost industry will be perfectly elastic.
   d. increasing-cost industry will be upsloping.
   e. decreasing-cost industry will be upsloping.

19. A purely competitive firm
   a. cannot earn economic profits in the short-run.
   b. cannot incur economic losses in the short-run.
   c. cannot earn economic profits in the long-run.
   d. can incur economic losses in the long-run.
   e. can earn economic profits in the long-run.

20. When a firm is maximizing profits it will necessarily be:
   a. maximizing total revenue.
   b. minimizing total cost.
   c. maximizing profit per unit.
   d. minimizing average total cost.
   e. none of these

21. Tying contracts
   a. prohibit firms from selling their products outside a specific region.
   b. allow manufacturers to specify minimum retail prices for their products.
   c. obligate a purchaser of product "x" to also buy "y" from the same seller.
   d. tie firms through the establishment of common boards of directors.
   e. are an illegal form of bondage.

22. Oligopoly is more difficult to analyse than other market models because
   a. we cannot assume firms are profit-maximizers.
   b. products may be differentiated or homogeneous.
   c. price and quantity decisions depend on the degree of mutual interdependence which is hard to measure.
   d. cost curves are indeterminate.
   e. all of the above.

23. Assuming identical costs the supply curve for a monopolist
   a. will be more elastic than for a purely competitive firm.
   b. will be less elastic than for a purely competitive firm.
   c. will be identical to the supply curve for a purely competitive firm.
   d. will have the same elasticity as the supply curve for a purely competitive firm.
   e. none of the above.

24. Marginal product
   a. diminishes at all levels of production.
   b. may initially increase then diminish, but never become negative
   c. may initially increase, then diminish, and ultimately become negative.
   d. is always less than average product.

25. When the pure monopolist's demand curve is elastic, MR
   a. is positive.
   b. is negative.
   c. is zero.
   d. can be positive or negative.

26. Which of the following is NOT a characteristic of a perfectly competitive market.
a. a large number of sellers and buyers.
b. easy entry and easy exit.
c. a homogenous (standardized) product.
d. constant returns to scale.
e. firms are price takers.

27. Consumer surplus
a. does not exist under monopoly.
b. is the unspent portion of a consumer's income.
c. represents the extra utility that consumers receive over what they pay for a commodity.
d. only exists when price is set above market equilibrium.

28. A monopolist
a. produces too much for technical efficiency.
b. produces too little for technical efficiency.
c. cannot achieve technical efficiency.
d. might achieve technical efficiency.
e. achieves dynamic efficiency.

29. Which of the following is characteristic of a pure monopolist's demand curve?
a. It is the same as the market demand curve.
b. Price and marginal revenue are equal at all outputs.
c. Its elasticity is less than "1" at all outputs.
d. As output increases, average revenue increasingly exceeds marginal revenue.
e. Both (a) and (d).

30. If the production possibilities curve were a straight line, this would imply that
a. equal quantities of the two products will be produced at each possible point on the curve.
b. the two products are equally important to consumers.
c. economic resources are perfectly shiftable between the production of the two products
d. the two products will sell at the same market prices.
e. it has a positive slope.

31. A barrier to entry exists when
a. firms do not enter an industry.
b. capital costs are high.
c. established firms can earn economic profits without attracting entry.
d. concentration ratios are high.
e. all of the above.

32. In Canada, mergers between competitors
a. are illegal.
b. are challenged if anti-competitive effects outweigh efficiency benefits.
c. rarely take place.
d. are challenged only if they lead to monopoly.
e. both (b) and (d).

33. In Canada, price fixing conspiracies are illegal only if
a. the fixed price is high.
b. most firms participate in the conspiracy.
c. the industry is highly concentrated.
d. the conspirators make high economic profits.
e. all of the above.

34. In equilibrium, which of the following conditions are common to both unregulated monopoly and to pure competition?
a. P = MR
b. AR = ATC
c. MR = MC
d. MC = P
e. both (c) and (d).

35. The concept of opportunity cost
   a. suggests that insatiable wants can be fulfilled.
   b. is irrelevant if the production possibilities curve is shifting to the right.
   c. suggests that the use of resources in any particular line of production means that alternative outputs must be forgone.
   d. is irrelevant in socialistic economies because of central planning.

36. In drawing the production possibilities curve, we assume
   a. fixed quantities of economic resources.
   b. full employment and full production.
   c. technology is fixed.
   d. all of the above.

37. Which of the following are preconditions for successful price discrimination?
   a. The seller must be able to identify differing elasticities of demand among buyers.
   b. The seller must be able to stop reselling of the product.
   c. The seller must have market power.
   d. All of the above.
   e. Both (a) and (b) but not (c).

38. Which of the following is *not* characteristic of monopolistic competition?
   a. easy entry to the industry.
   b. production at minimum ATC in the long run.
   c. extreme product differentiation.
   d. non-price competition.
   e. both (b) and (c).

39. If capital and labour are used in rigidly fixed proportions and the price of capital falls, it can be concluded that
   a. the substitution and output effects will work in the opposite directions so no judgment can be made as to the effect on labour demand.
   b. the MPP of capital will rise.
   c. the elasticity of demand for both labour and capital will increase.
   d. labour demand will necessarily decline.
   e. labour demand will tend to increase.

40. If the buyer of labour has market power in both the labour market and the output market, the marginal revenue product of labour
   a. will rise as output increases.
   b. will fall as output increases.
   c. will remain constant as output increases.
   d. might rise, fall or remain constant with increases in output.
   e. can only fall or remain constant as output increases.

41. The law of diminishing returns indicates that:
   a. as extra units of a variable resource are added to a fixed resource, marginal product will decline beyond some point.
   b. because of economies and diseconomies of scale a competitive firm's long-run average total cost curve will be U-shaped.
   c. the demand for goods produced by purely competitive industries is downsloping.
   d. beyond some point the extra utility derived from additional units of a product will yield the consumer smaller and smaller extra amounts of satisfaction.

42. The equilibrium interest rate equates:
   a. nominal and real interest rates
   b. the quantities demanded and supplied of loanable funds.
   c. consumption and saving.
   d. both (a) and (b)
   e. none of the above.

43. Economic cost can best be defined as
  a. all costs exclusive of payments to fixed factors of production.
  b. compensations that must be received by resource owners to ensure their continued supply.
  c. any contractual obligation to labour or material suppliers.
  d. any contractual obligation that results in a flow of money expenditures from an enterprise to resource suppliers.

44. According to Schwindt's law, economic rents exist
  a. whenever a resource is in fixed supply.
  b. whenever a resource is paid more than is required to keep it in a specific activity.
  c. whenever the recipient of the revenues is a landlord.
  d. whenever there is an economic shortage.
  e. all of the above.

45. The "wastes of monopolistic competition" arise because
  a. entry barriers are sufficiently high as to restrict artificially the entry of new firms.
  b. each firm's downsloping demand curve will be tangent to the AC curve short of its minimum in the long run.
  c. each firm's marginal revenue curve will coincide with its demand curve.
  d. each firm's demand curve becomes more elastic as we move down the curve.
  e. firms engage in wasteful non-price competition.

46. Refer to the profits-payoff table for a duopoly to the right. If initially firms X and Y are charging $5 and $4 respectively:
  a. the two firms will be maximizing joint profits.
  b. Y will find it advantageous to raise its price if it was certain X would not alter its price.
  c. X will find it advantageous to raise its price if it was certain Y would not alter its price.
  d. both firms would find it advantageous to collude to raise their prices by $1 each.
  e. none of the above.

		Y's prices		
	X \ Y	**$6**	**$5**	**$4**
X's prices	**$7**	12 16	14 15	15 13
	$6	9 19	11 16	13 14
	$5	7 18	9 17	10 15

47. The profit maximizing P = MC rule applies
  a. only to purely competitive firms.
  b. only to monopolies.
  c. only in the long-run.
  d. to firms in all industries.

48. For a monopolist,
  a. the marginal revenue (MR) curve will lie below the demand curve because any reduction in price applies only to the extra unit sold.
  b. the MR curve will lie below the demand curve because any reduction in price applies to all units sold.
  c. the MR curve lies above the average revenue curve.
  d. the average revenue curve lies below the demand curve.

49. If a firm is selling in an imperfectly competitive product market, then
  a. the marginal products of successive workers can be sold at the same price.
  b. the marginal products of successive workers can be sold at higher prices.
  c. the marginal products of successive workers must be sold at lower prices.
  d. average revenue product will be less than marginal revenue product for any number of workers hired.
  e. both (c) and (d).

50. Critics of social regulation argue that it
  a. contributes to inflation.
  b. dampens incentives to invest and innovate.
  c. is a relatively greater burden for small firms than for large.
  d. has all of the above effects.
  e. has effects (b) and (c).

51. Public choice theorists contend that
   a. government can efficiently correct instances of market system failure.
   b. the existence of benefit-cost analysis has brought about the efficient use of resources in the public sector.
   c. politicians favour programs with deferred benefits.
   d. public bureaucracies are inherently more efficient than private enterprises.
   e. public bureaucracies are inherently less efficient than private enterprises.

52. Assume that a firm's production technique is such that varying combinations of labour and capital can be used to produce any given output. If the price of labour falls relative to the price of capital and the firm decides to use more labour in the production process, this decision is
   a. solely the result of the substitution effect.
   b. solely the result of the output effect.
   c. probably the result of both substitution and output effects.
   d. the result of neither the substitution nor the output effect.
   e. an example of Rengaw's Law.

53. In which of the following instances will the effect upon equilibrium price be indeterminant.
   a. demand rises and supply is constant.
   b. supply rises and demand rises.
   c. demand rises and supply falls.
   d. supply falls and demand remains constant.
   e. whenever supply and demand simultaneously shift.

54. If a price floor is set below the equilibrium price
   a. there will be a shortage.
   b. there will be a surplus.
   c. there will be neither a surplus nor a shortage.
   d. there can be either a surplus or a shortage.
   e. price will rise.

55. When urban economists argue that a tax on urban land value is efficient, they mean that
   a. the effect of such a tax is to redistribute income from wealthy landlords to poor tenants.
   b. this tax does not contribute to the misallocation of land among alternative uses.
   c. the incentive effect of a higher land value tax is positive.
   d. the supply curve of urban land is upward-sloping so that a tax on land will force owners to use land more efficiently.
   e. both (a) and (d).

56.Economists are frequently critical of the minimum wage because it
   a. causes labour shortages in affected markets.
   b. conflicts with policies designed to equalize distribution of income.
   c. tends to reduce the number of available job opportunities.
   d. has a contractionary effect upon the price level.
   e. both (a) and (c).

57. Empirical tests show that high concentration in output markets is positively related to
   a. technical inefficiency.
   b. dynamic inefficiency.
   c. lower wages to unskilled labour.
   d. allocative inefficiency.
   e. all of the above.

58. The "break-even income" in a public assistance plan is
   a. earned income less the transfer.
   b. earned income plus the transfer.
   c. the sum of the transfer and earned income.
   d. the amount of the transfer when earned income is zero.
   e. the income level at which the transfer becomes zero.

59. If some firms leave a monopolistically competitive industry, the demand curves of the remaining firms will
   a. shift to the right
   b. become more elastic
   c. shift to the left
   d. be unaffected
   e. both (a) and (b)

60. Suppose there are 100 firms in an industry, each with a one percent market share. The four-firm concentration ratio and the Herfindahl Index respectively would be:
   a. 100 percent and 10,000.
   b. 4 percent and 4.
   c. 100 percent and 16.
   d. 4 percent and 16.
   e. 4 percent and 100.

PART II. ANALYSIS (25%)

1. Answer the following.questions based on the MPP data for resources A and B set out in the table. The output sells in a competitive market for $1 per unit. (10%)

Inputs of A	MPA	Inputs of B	MPB
1	25	1	40
2	20	2	36
3	15	3	32
4	10	4	24
5	5	5	20
6	2	6	16
7	1	7	8

a. Assuming the prices of A and B are $5 and $8 respectively, what is the least costly combination of resources for the firm to employ in producing 192 units of output?

b. Assuming the prices of resources A and B are $5 and $8 respectively, what is the profit-maximizing combination of resources?

c. Show that the combination of resources in question (b) is a least cost combination.

d. Given the combination of resources determined in question (b), what will be the firm's economic profit?

2. The table below refers to 3 different public asistance plans. (10%)

Plan A				Plan B				Plan C		
Earned Income	Trans-fer	Total Income		Earned Income	Trans-fer	Total Income		Earned Income	Trans-fer	Total Income
0	1000	1000		0	2000	2000		0	1500	1500
1000	750	1750		1000	1500	2500		1500	1000	2500
2000	500	2500		2000	1000	3000		3000	500	3500
3000	250	3250		3000	500	3500		4500	0	4500
4000	0	4000		4000	0	4000				

a. Which plan entails the highest minimum annual income? What is it?

b. Which plan entails the highest benefit-reduction rate? Explain.

c. What is the break even income for Plan C?

d. Which plan provides the greatest incentive to work?

3. The price of X drops from $1.10/kilo to $0.90/kilo, and as a result the demand for X increases from 100 kilos/day to 150 kilos/day. Simultaneously the demand for Y increases from 95 litres/day to 105 litres/day. Nothing else in the world has changed. Show your calculations. (5%)

a. What is the price elasticity of demand for X?
b. What impact does the price cut have on total revenue?
c. What is the cross price elasticity of demand between X and Y?
d. Are X and Y substitutes or complements? How do you know?
e. Is X a normal good or an inferior good? How do you know?

PART III. ESSAY (15%)

1. Markets do not achieve allocative efficiency when they are characterized by: (a) monopoly, (b) positive externalities [spillover benefits], (c) public goods. Explain, using diagrams where helpful, why markets do not achieve allocative efficiency under these conditions. Explain how each of these problems could be corrected by government. (10%)

2. Why is there so much advertising in monopolistic competition and oligopoly? How does such advertising help consumers and promote efficiency? Why might it be excessive at times? (5%).

ANSWERS:

Part I, Multiple Choice

1	a		16	d		31	c		46	d
2	a		17	c		32	b		47	a
3	a		18	d		33	b		48	b
4	e		19	c		34	c		49	c
5	a		20	e		35	c		50	d
6	d		21	c		36	d		51	e
7	b		22	c		37	d		52	c
8	b		23	e		38	e		53	b
9	c		24	c		39	e		54	c
10	c		25	a		40	b		55	b
11	b		26	d		41	a		56	c
12	e		27	c		42	b		57	d
13	d		28	d		43	b		58	e
14	d		29	e		44	b		59	a
15	a		30	c		45	b		60	e

Analysis.

1.

Inputs of A	MPA	Total Q	MP/$	MRPA	MRCA		Inputs of B	MPB	Total Q	MP/$	MRPB	MRCB
1	25	25	5	$25	$5		1	40	40	5	$40	$8
2	20	45	4	$20	$5		2	36	76	4.5	$36	$8
3	15	60	3	$15	$5		3	32	108	4	$32	$8
4	10	70	2	$10	$5		4	24	132	3	$24	$8
5	5	75	1	$5	$5		5	20	152	2.5	$20	$8
6	2	77	0.4	$2	$5		6	16	168	2	$16	$8
7	1	78	0.2	$1	$5		7	8	176	1	$8	$8

Construct the table above from the data.

a. 3 of A and 4 of B. Using this combination, MP/$ is equal at 3 units for both A and B, and total production is 60 + 132 = 192.

b. 5 of A and 7 of B. With this combination, MRC = MRP for each input.

c. This must be least cost because the [MPA/(Price of A)] is equal to [MPB/(Price of B)] (i.e., both are equal to one)

d. 170. Total revenue is total quantity produced (75 + 176 = 251) x $1 = $251 minus the cost of inputs ($5 x 5 units of A + $8 x 7 units of B = $25 + $56 = $81) = $170.

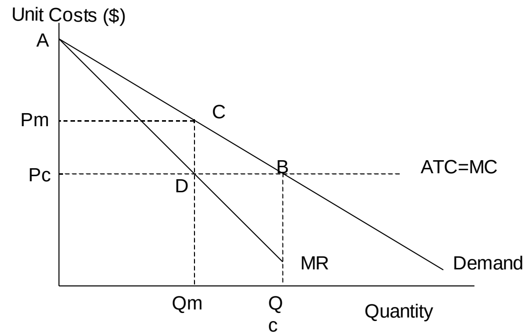
2.
a. Plan B (2,000)
b. Plan B
c. $4500
d. Plan A is the most effective.

3. You get to figure this one out on your own.

Essay:

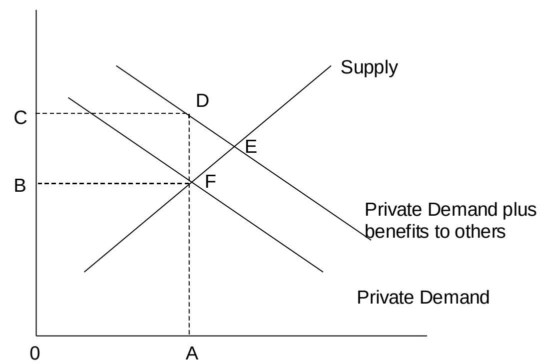
To answer this question you will of course have to understand allocative efficiency. See the answers to the midterm if you have (heaven forbid) forgotten this. Then turn to the following readings to address each market failure.

(a) monopoly: see Chapter 8, figure 8-10 and my lecture notes.
Graphic representation of the allocative inefficiency of Monopoly
Assume MC is constant (i.e., doesn't change) over the relevant range of output.
Under perfect competition consumer surplus is PcAB.
What happens to this surplus under monopoly? The consumers still get a consumer surplus of PmAC. The monopolist gets profits of PcPmCD. Who gets DCB? NOBODY!
This is the "deadweight loss" of monopoly.



Government could correct with competition policy or direct regulation.

(b) positive externalities
Example of a positive Spillover (externality)
Third parties receive a benefit of DF
In a competitive market, production and consumption occurs where Private Demand = Supply.
BUT, at quantity 0A, Social benefit of the last unit (0C) is greater than the Social cost of the last unit (0B). Society is forgoing the net benefits FDE!
The market has "failed" to achieve allocative efficiency.



Government could correct by subsidizing the production or consumption of the good.

(d) public goods
The problem is that public goods are characterized by "nonrivalry in consumption" and "non-excludability." This leads to free-rider problems. People will claim they do not want the public good and then will consume it when it is produced. Therefore actual demand will not reflect truce demand. Too little will be produced. The outcome can be graphed as with positive externalities (replace "private demand" with alleged demand and "private demand plus benefits to others" with actual demand). Real demand lies above "alleged" demand (i.e., the demand people claim as opposed to what they really want).

Government could correct by producing the good.

2. Monopolistically competitive firms maintain economic profits through product development and advertising. Advertising can increase demand for a firm's product. An oligopolist would rather not compete on a basis of price. Oligopolists can increase market share through advertising financed with economic profits from past advertising campaigns. Advertising can act as a barrier to entry.

Advertising provides information about new products and product improvements to the consumer. It may result in an increase in competition by promoting new products and product improvements. Advertising may result in manipulation and persuasion rather than information. An increase in brand loyalty through advertising will increase the producer's monopoly power. Excessive advertising may create barriers to entry into the industry.