

Final

Part I. Multiple Choice (75 Points): For each of the following choose the best answer.

1. In the von Stackelberg duopoly model:
 - a) Each firm takes its rival's reaction function as given.
 - b) The strategic variable is price.
 - c) The leader has higher costs than the follower.
 - d) The leader claims the lion's share of the market.

2. If cartel behavior is properly modelled as the equilibrium outcome of a *twice* repeated Prisoner's Dilemma game, then which of the following is true?
 - a) The profit maximizing joint output for the cartel exceeds the monopoly output.
 - b) The stable cartel outcome requires dividing the monopoly profits equally.
 - c) The cartel will necessarily break down because cheating on the output quota is a dominant strategy.
 - d) Cooperation is possible if the discount factor is near one.

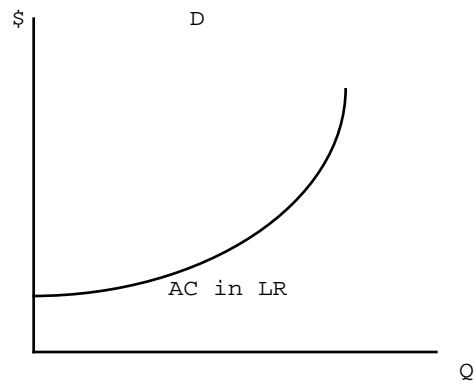
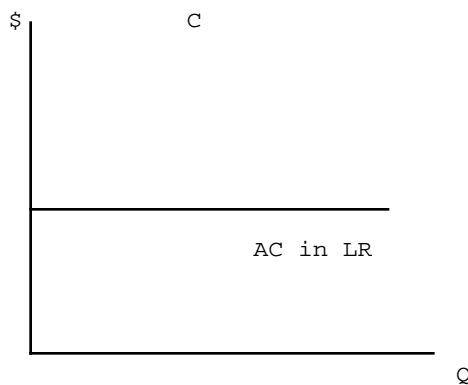
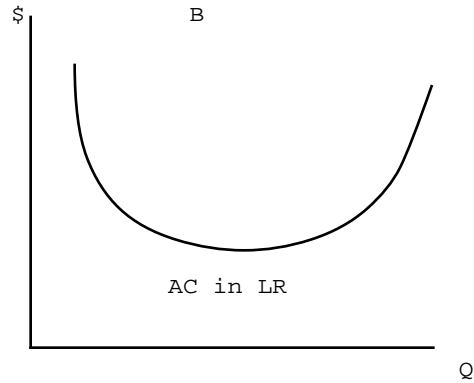
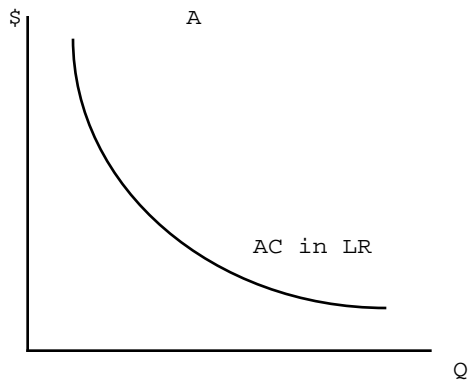
3. Limit pricing is a form of:
 - a) Tacit collusion.
 - b) Strategic entry deterrence.
 - c) Price discrimination.
 - d) Bertrand Competition.

4. Relative to the case of uniform pricing by a monopolist, the imposition of a two-part tariff:
 - a) Increases social surplus.
 - b) Lowers the monopolist's profit.
 - c) Decreases the surplus that goes to the monopolist.
 - d) Makes consumers better off.

5. Suppose a monopolist sells in two distinct markets, A & B, which are naturally separated.
 - a) The monopolist prices so that the price differential between markets A & B reflects the cost differential between A & B.
 - b) The monopolist prices so that the quantity demanded in market A equals the quantity demanded in market B.
 - c) The monopolist prices so that the elasticity of demand in market A equals the elasticity of demand in market B.
 - d) If the monopolist sets the price in market A higher than in market B, it must be that demand in A is less elastic than in market B.

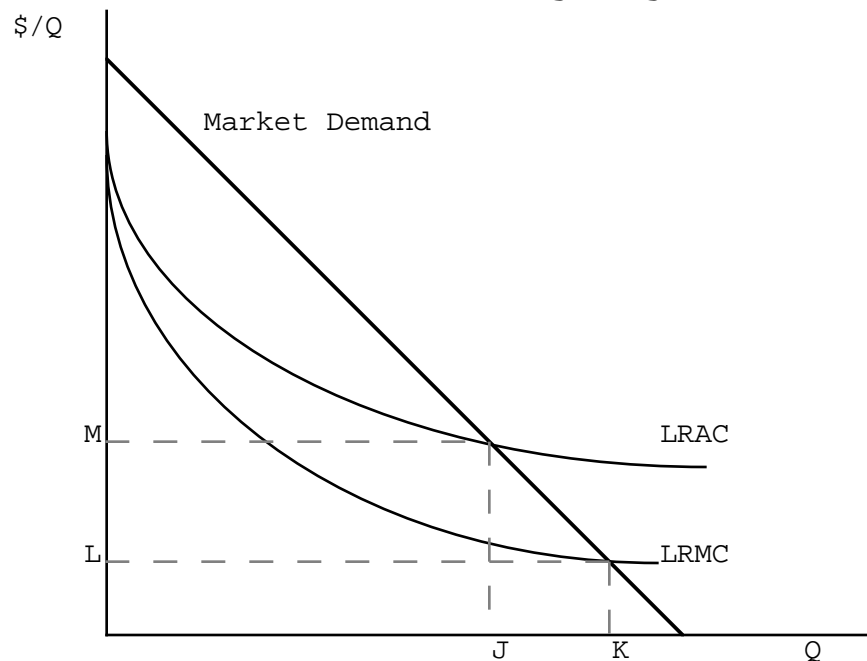
6. Which of the following *does not* characterize competitive markets?
 - a) A large number of buyers and sellers.
 - b) A differentiated product.
 - c) No buyer or seller can influence the product price.
 - d) Market price determined by supply and demand.

Questions 7 - 9 refer to the following diagrams



7. Constant returns to scale corresponds to:
- A.
 - B.
 - C.
 - D.
8. Increasing returns to scale corresponds to:
- A.
 - B.
 - C.
 - D.
9. Initial increasing returns, followed by a range of constant returns, and then followed by decreasing returns corresponds to:
- A.
 - B.
 - C.
 - D.
10. An allocation of resources is Pareto Optimal if:
- The distribution of income is equitable.
 - Compared to the status quo, the gains to the winners are larger than the losses of the losers.
 - There is no reallocation of resources that will make some people better off without making some other people worse off.
 - Everybody consumes positive amounts of each good.

Questions 11 - 13 refer to the following diagram.



11. The output that maximizes social surplus is given by:
 - a) J.
 - b) K.
 - c) L.
 - d) M.

12. If a regulator wanted to maximize social surplus but was constrained to ensure a fair rate of return for the firm, the regulator would set price at:
 - a) J.
 - b) K.
 - c) L.
 - d) M.

13. If a regulator wanted to maximize social surplus and could make up losses the firm might incur with a lump sum transfer out of general tax revenues, the regulator would set price at:
 - a) J.
 - b) K.
 - c) L.
 - d) M.

14. When economists refer to, "moral hazard," they mean:
 - a) Religion and capitalism should be legally separated.
 - b) Purchasers of insurance can affect the probability of loss via costly actions which providers of insurance cannot observe.
 - c) Purchasers of insurance know their individual probability of loss while providers of insurance only know the distribution of these probabilities.
 - d) Government should provide insurance if markets fail to do so.

15. If the government institutes a health care plan for the needy by providing health insurance for the heretofore uninsured, then

a) More doctor visits would be made under the plan than under an alternative plan where the needy simply received the cash equivalent.

b) Fewer doctor visits would be made under the plan than under an alternative plan where the needy simply received the cash equivalent.

c) The needy would prefer the plan to receiving the cash equivalent.

d) The needy would be made worse off by the plan.

Part II. Essay (25 Points): Write a paragraph or two to argue in support or against the following statement. You must justify the position you take.

A "Match-the-Competition" clause in a contract is a promise by a seller to: Match the price for any one buyer if that buyer gets a lower price offer from another firm. Such clauses promote tacit collusion.

Part III. Problems (50 Points): Do each of the following. Draw any graph you deem appropriate. Provide enough of a textual explanation to make sure I understand your reasoning.

1. Here we reconsider a firm's labor demand. Suppose the firm is a price taker in both the input and output markets. The price at which the firm can sell its output is fixed at \$100 per unit.

a) Given the total product schedule below, derive the firm's labor demand curve and graph it.

Worker	0	1	2	3	4	5
Days						
Output	0	10	19	27	34	40
Units						

b) Suppose that the firm can hire as many workers as it would like at a wage of \$650 per day. On the same graph as you drew for part (a), draw the labor supply curve.

c) At this wage, how many workers would the firm hire? Is there a unique optimal employment level in this case?

d) Do the data in the table conform with the "Law of Diminishing Returns?"

2. Consider a market where the inverse demand curve is

$$P(Q) = 200 - 2Q,$$

where Q denotes the industry output. Suppose the cost function for firm i is given by

$$C(Q_i) = 80 Q_i,$$

where Q_i denotes the output of firm i , for $i = 1$ or 2 .

a) Suppose the market is characterized by monopoly. Find the monopolist's output and the monopoly price.

b) Now suppose the market is characterized by duopoly and the firms compete in quantity. Find the Cournot equilibrium quantities and the Cournot equilibrium price.

c) Finally, suppose the market is characterized by duopoly but now the firms compete in price. Find the Bertrand equilibrium price.