Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 12-point question should take 6 minutes. I cannot give extra time because some students have a class after your class.

1) (10 points) Answer EITHER Part A OR Part B.
A) Suppose you win the lottery and after taxes are paid $100,000 a year for 20 years, starting this year. If the interest rate is 6%, then what is the present value of your winnings. Set up the calculation, but do **not** actually do the calculation. Assume the winnings are paid once a year. Briefly explain why you put the numbers where you put them. Hint: the answer is **not** 20*100,000, if you think so, then do Part B.
B) What is wrong with the following statement? "When the cost of a raw material increases, it causes a reduction in supply. That drives the price up and reduces the demand. Therefore, both curves move to the left."

2) (14 points) Answer EITHER Part A OR Part B.
A) Suppose the total revenue function is given by $TR = -10 + 20Q - 4Q^{1/2}$. Do the calculations for AR and MR. Show all work.
B) Suppose that you do better on the third test than on the second test, i.e., your marginal test score goes up. Must your average test score go up? If it is true, then explain your logic. If it is false, then give an example which proves it is false.

3) (18 points) Answer EITHER Part A OR Part B.
A) Suppose that at a price of $10/CD, you buy 30 CDs, but at a price of $20/CD, you buy 18 CDs. Calculate the own-price elasticity of demand using both the point and arc formulas. Show all work. What type of elasticity are CDs? Explain your logic.
B) Give me a number which you would expect the own-price elasticity of demand for bananas is. Explain your logic. Give me a number which you would expect the own-price elasticity of demand for gasoline is. Explain your logic.

4) (18 points) Copy the following table into your answer booklet. Fill it in. **Show the calculations for all entries.** If there is no calculation, briefly explain how you knew what the value was.

Q	TR	AR	MR
0			
2	20		
4		8	
	25		-7

5) (20 points) Answer EITHER Part A OR Part B.
A) What is meant by "re-engineering"? What is a potential drawback to it?
B) What is TQM? Why must it be tailored to your company?

6) (20 points) Answer EITHER Part A OR Part B.
A) Illustrate an increase in the wage rate on the supply and demand for briefcases. Explain why the curve(s) moved as drawn. What happens to the price charged and quantity sold?
B) Illustrate an increase in the price of lawn mowers on the supply and demand for motorcycles. Explain why the curve(s) moved as drawn. What happens to the price charged and quantity sold?