Write your name on the cover of the test booklet and nowhere else. 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 14-point question should take 7 minutes. I cannot give extra time because of the class which follows yours.

Regression Statistics	
Multiple R	0.9273
R Square	0.8599
Adjusted R Square	0.8524
Standard Error	30.3547
Observations	100

Analysis of Variance	***df***	***Sum of Squares***	***Mean Square***	***F***	***Significance F***
Regression	5	531576.6	106315.3278	115.3835	1.5453 E-38
Residual	94	86612.3	921.4081		
Total	99	618189.0			

	Coefficients	***Standard Error***	***t Statistic***	***P-value***	***Lower 95.00***	***Upper 95.00***
Intercept	-12.9303	86.5657	-0.1494	0.8816	-184.8086	158.9480
P apples	-4.1182	2.1123	-1.9496	0.0541	-8.3123	0.0759
P oranges	-10.3404	29.0562	-0.3559	0.7227	-68.0322	47.3514
P melons	5.8417	2.3456	2.4904	0.0144	1.1844	10.4990
Income	0.8887	0.0891	9.9780	1.222 E-16	0.7119	1.0655
Advertising	10.4995	28.8014	0.3646	0.7162	-46.6863	67.6854

1) (8 points each) Answer FOUR of the following questions using the regression statistics above. They were gotten by a regression to predict the sales of apples.

A) Write the equation which you would get from this regression to predict the quantity of apples bought. **Briefly** state how you got the equation.

B) Are the results of this regression good? **Briefly** explain your logic.

C) Are oranges and apples substitutes, likely substitutes, likely complements, complements or have an indeterminate relationship? **Briefly** explain your logic.

D) If you would buy 200 apples with the current prices and an income of $300, then what is the income elasticity of demand for this good? Show all work. What type of good is that? **Briefly** explain your logic.

E) Which variables are significant? **Briefly** explain your logic.

2) (10 points) For EITHER the statement in Part A OR the statement in Part B, determine if the statement is true or false. Explain your logic. All points will be based upon the logic used.

A) Indifference curves can cross.

B) A change of income will cause both the budget constraint and the indifference curve to move.

3) (14 points) Answer EITHER Part A OR Part B.
A) Under what circumstances would you want to use consumer clinics for estimating demand for a product?
B) State the equi-marginal principle as it applies to consumption. Explain why it should hold.

4) (16 points) Answer EITHER Part A OR Part B.
A) Illustrate an increase in the amount of capital on the MP_L/AP_L diagram. Explain why the curve(s) moved as drawn.
B) Illustrate an increase in the wage rate on the MRP_L/MRC_L diagram. Explain why the curve(s) moved as drawn.

5) (28 points) Answer EITHER Part A OR Part B.
A) Draw an indifference curve/budget constraint diagram for pizza and beer. Have the initial income be \$36, the price of pizza is \$6/pie, and the price of beer is \$3/bottle. Illustrate what happens when the price of beer changes to \$4/bottle, then to \$6/bottle, and finally to \$9/bottle. Use this information to draw the demand curve for conditioner. Explain why the curve(s) moved as drawn and how you found the points on the demand curve.
B) Draw an indifference curve/budget constraint diagram for candy and sodas. Have the initial income be \$40, the price of candy is \$5/lb, and the price of sodas is \$8/case. Draw an decrease in the price of sodas to \$4/case. Draw the diagram such that they are complements. Show the income and substitution effects. Explain why the curve(s) moved as drawn, how you found the income and substitution effects, and how you can tell they are complements.