

Do not write your name on the assignment. Write your name only on the back of this sheet of paper and staple your answers on the front of this sheet of paper. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to follow these directions will cost you 1 point on the assignment and failure to type it will cost you 10 points.

- 1) (20 points) Illustrate on the supply and demand for bananas, a price ceiling. Find the quantity sold and the price that the consumers pay including all opportunity costs. Did it help the consumers? Explain your logic.
- 2) (20 points) Illustrate on the supply and demand for carrots, a quota on carrot production. Find the quantity sold and the price that the consumers pay including all opportunity costs. Did it help the consumers? Explain your logic.
- 3) (30 points) Illustrate on the supply and demand for automobiles the effects of the pollution which they produce. Is the production at the socially optimal level? Why or why not? From an economic viewpoint, what is the most efficient way to correct the problem? Explain your logic using your graph.
- 4) (15 points) Using the tax rates in the book, if a single person earns \$30,000 of taxable income, then how much taxes will she pay? Show all work. What are her marginal and average tax rates? Show all work.
- 5) (15 points) Using the terms *tax base* and *tax rate*, explain why increasing a tax may cause the tax revenue to decline. Giving a mathematical example may help your explanation.