SAMPLE FIRST MIDTERM EXAMINATION

PART I: TRUE, FALSE, OR UNCERTAIN [40 POINTS TOTAL]
For each of the following decide whether the statement is true, false, or uncertain and explain why. Your explanation determines your grade; you will receive no credit for an answer without an explanation. Use diagrams where appropriate.

1. A binding price ceiling will reduce the quantity of a good supplied in a competitive market. [10 points]
2. Because the market demand curve is downward sloping, the marginal revenue curve of a typical competitive firm is also downward sloping. [10 points]
3. The more elastic demand for a good is with respect to its price, the greater the deadweight loss caused by a tax on the good. (For ease of analysis, assume that the tax is a per-unit tax physically collected from the seller.) [10 points]
4. The income effect of a rise in the price of a good on the quantity demanded of that good is typically positive. [10 points]

PART II: PROBLEMS [40 POINTS TOTAL]
Answer all parts of each question. Be sure to explain your answers and to draw diagrams where they are appropriate. Your explanation and analysis determine your grade.

5. Suppose a country produces two goods, steel and wheat. All workers have the same skills, and a typical worker can produce either A pounds of steel in a day or B pounds of wheat. Assume that A is greater than B.
   a. Draw the production possibilities curve (per worker, per day) for the country, with steel on the vertical axis and wheat on the horizontal axis. What are the values of the horizontal intercept, the vertical intercept, and the slope (and why)? [10 points]
   b. Suppose the world relative price of steel and wheat is 1 pound of steel for 1 pound of wheat. What is the consumption possibilities curve for the country? [10 points]

6. Suppose that the market for sugary snacks is perfectly competitive, and that initially it is in long-run equilibrium with no subsidies, taxes, or other government intervention. Now suppose that the government introduces a tax on sugary snacks. The tax is charged to customers and is like a sales tax: a certain percentage amount (for example, 10% of the sticker price) is added to the sticker price as a tax and is paid by the customer (which the seller then transfers to the government).
   a. What effect, if any, will the introduction of the tax have on the positions and/or slopes of the market demand and supply curves for sugary snacks? What will be the short-run effect of the tax on the quantity of sugary snacks, the price received by sellers, and the price paid by buyers? [10 points]
   b. Would you expect to see entry, exit, or no change in the number of firms in this industry in the long run as a result of the tax? [10 points]

PART III: MULTIPLE CHOICE [20 POINTS TOTAL]
Circle the best answer to each question. Each question is worth 2 points.

7. Consider the budget constraint for a consumer choosing between books and pizza. If books are on the vertical axis and pizza is on the horizontal axis, the slope of the budget constraint is:
   a. minus the price of books divided by the price of pizza.
   b. flatter at low levels of pizza consumption and steeper at higher levels.
   c. minus the price of pizza divided by the price of books.
   d. the same as the slope of the utility function.
   e. none of the above.

8. If demand for a good is elastic, a decrease in the price (caused by an increase in supply) will:
   a. increase the total amount that consumers spend on the good.
   b. decrease the total amount consumers spend on the good.
c. either increase or decrease the total amount that consumers spend on the good depending on the level of marginal utility associated with the good.

9. For a person choosing between a job paying $50,000 a year and one-year master’s program with a tuition of $30,000, the opportunity cost of the master’s program is:
   a. $20,000.
   b. $30,000.
   c. $50,000.
   d. $80,000.

10. A firm that is earning zero economic profits:
    a. will eventually want to leave the industry.
    b. has total revenue less than total costs.
    c. will want to shut down in the short run.
    d. is covering the opportunity cost of all its inputs.

11. A binding price ceiling will cause:
    a. a deadweight loss.
    b. a misallocation of production among producers.
    c. a misallocation of consumption among consumers.
    d. (a) and (b).
    e. (a) and (c).
    f. (a), (b), and (c).

12. The PPC for a typical economy is bowed out because:
    a. as people consume more of a good, their marginal utility falls.
    b. total surplus in a market is maximized at the level of production where supply equals demand.
    c. in order to produce more and more of a good, we have to use workers whose opportunity cost is higher and higher.
    d. the economy will specialize in the good in which it has a comparative advantage and trade on world markets to obtain the other good.

13. The research paper by Esther Duflo that you read found that an increase in pension payments in South Africa led to:
    a. reduced poverty among the elderly.
    b. better education for all children living with someone receiving a pension.
    c. remarkably little change in life expectancy among the elderly.
    d. improved nutrition for girls living with a woman receiving a pension.
    e. (a) and (b).
    f. (b) and (d).
    g. (c) and (d).

14. If, under free trade, a country imports a good:
    a. the quantity supplied by domestic producers is less than it would be under autarchy (that is, no trade).
    b. the quantity supplied by domestic producers is the same as it would be under autarchy.
    c. the quantity supplied by domestic producers is greater than it would be under autarchy.

15. A perfectly competitive firm maximizes profits by producing where:
    a. total revenue equals total cost.
    b. marginal revenue exceeds marginal cost.
    c. price equals marginal cost.
    d. marginal benefit exceeds marginal cost.

16. Suppose that a country produces two goods. The point of tangency between the production possibilities curve (PPC) and the consumption possibilities curve (CPC) shows:
    a. the quantity of the two goods the country will consume.
    b. the amount of each good that the country will export.
    c. the point where the domestic opportunity cost is the same for both goods.
    d. the combination of the two goods the country can produce that has the highest value on world markets.