

**SAMPLE FIRST MIDTERM EXAMINATION**

**PART I: SHORT ANSWER**

**[56 POINTS TOTAL]**

Answer all questions. Be sure to explain your answers and to draw diagrams where they are appropriate.

1. Why is the marginal revenue from producing and selling one more unit of a good equal to the price of the good for a competitive firm? **[14 points]**
2. Will imposing a binding price ceiling in a competitive market increase consumer surplus? **[14 points]**
3. Suppose that health care reform both improves productivity in the health care sector **and** moves some of the economy's labor and capital into the health care sector from other parts of the economy. How, if at all, would these developments show up in a PPC diagram? **[14 points]**
4. Consider a good with a positive externality. Explain why the amount of the good that is produced in a competitive market with no government intervention is less than the amount that maximizes the total social surplus. **[14 points]**

**PART II: PROBLEMS**

**[60 POINTS TOTAL]**

Answer both parts of each question. Be sure to explain your answers and to draw diagrams where they are appropriate.

5. Assume that diamonds are produced by a monopolist (which, until quite recently, was indeed the case).
  - a. Suppose news reports highlight the problem of "blood diamonds" (diamonds from conflict regions used to support warfare). Use the tools of utility maximization to deduce what this disturbing news is likely to do the demand for diamonds. **[15 points]**
  - b. What effect, if any, will the news described in part (a) have on the price and quantity of diamonds produced by the monopolist? **[15 points]**
6. Corn is produced in a well-functioning, highly competitive market. Assume that this market begins in long-run equilibrium.
  - a. Suppose the government decides to pay a subsidy to corn producers of a certain amount for each ton of corn produced and sold. What will happen to the equilibrium price and quantity in the market for corn in the short run? **[15 points]**
  - b. What will happen in the long run to the quantity of corn produced in the market? **[15 points]**

**PART III: MULTIPLE CHOICE**

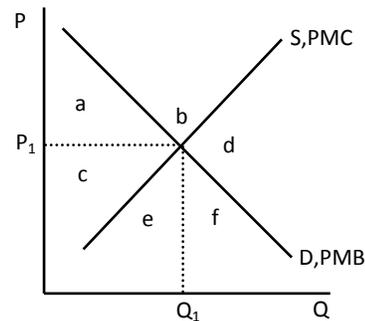
**[36 POINTS TOTAL]**

Circle the **best** answer to each question. Each question is worth 3 points.

7. The equilibrium in a perfectly competitive market for a good that has no externalities is desirable because:
  - a. everyone who really needs the good gets it, regardless of their income.
  - b. the amount produced is the amount where marginal benefit equals marginal cost.
  - c. there is no misallocation of production among producers.
  - d. (a) and (b).
  - e. (b) and (c).
  - f. (a), (b), and (c).
  - g. None of the above.
8. The reason that specialization based on comparative advantage can increase output relative to the case of no specialization is that:
  - a. specialization shifts the PPC out parallel relative to the PPC without specialization.
  - b. specialization rotates the PPC outward relative to the PPC without specialization.
  - c. specialization causes the economy to move along the PPC to a more desirable combination of goods.
  - d. specialization means that goods are produced by the workers and capital with the lowest opportunity costs of producing them.
  - e. some individuals are more talented than others in all activities.
9. If total spending on a good falls when the supply curve shifts to the left, we can deduce that:
  - a. the price elasticity of demand is greater than 1.
  - b. the price elasticity of demand is less than 1.
  - c. the price elasticity of supply is greater than 1.
  - d. the price elasticity of supply is less than 1.
10. If good a and good b are substitutes, an improvement in the technology for producing good a will cause:
  - a. the price of good b to fall.
  - b. the price of good b to rise.
  - c. the price of good b to fall if the demand for good b is elastic, but to rise if the demand for good b is inelastic.
  - d. the price of good b to fall if the demand for good b is inelastic, but to rise if the demand for good b is elastic.

11. A per-unit tax in a competitive market where there are no externalities causes a deadweight loss because:
  - a. it causes the amount produced to be less than the amount where marginal benefit equals marginal cost.
  - b. it causes misallocation of consumption among consumers.
  - c. it causes misallocation of production among producers.
  - d. tax payments enter negatively into the calculation of total surplus.
  - e. (a) and (b).
  - f. (b) and (d).
  - g. All of the above.
12. If the marginal cost curve of a monopolist shifts up:
  - a. the monopolist will raise its price by the amount of the increase in marginal cost and sell the same amount as before, so that its profits are unchanged.
  - b. the monopolist will keep its price the same but produce more to make up for the fact that the rise in marginal cost reduces its profits on the units it was producing before.
  - c. the monopolist will raise its price and reduce the quantity it produces.
  - d. the monopolist will innovate to offset the rise in marginal cost.

The diagram to the right shows the competitive equilibrium in the market for some good. **Questions 13 and 14 are about this diagram.**



13. Area e corresponds to:
  - a. consumer surplus.
  - b. producer surplus.
  - c. total private surplus.
  - d. fixed cost.
  - e. variable cost.
  - f. total cost.
14. Area a+c corresponds to:
  - a. consumer surplus
  - b. producer surplus.
  - c. total private surplus.
  - d. fixed cost.
  - e. variable cost.
  - f. total cost.
15. In “The Misallocation of Housing under Rent Control,” Edward Glaeser and Erzo Luttmer attempt to measure the misallocation of housing under rent control by:
  - a. conducting surveys on the amount of excess housing demand in cities with and without rent control.
  - b. measuring the amount of effort households expend trying to get a rent-controlled apartment.
  - c. looking at the difference between the number of rooms a household has and what one would predict based on its demographic characteristics in cities both with and without rent control.
  - d. all of the above.
16. If the price of good a is much higher than the price of good b, consumers who want to maximize their utility will:
  - a. spend much more on good a than on good b.
  - b. spend much less on good a than on good b.
  - c. spend equal amounts on good a and good b.
  - d. allocate their spending so that the marginal utility of good a is much higher than the marginal utility of good b.
  - e. allocate their spending so that the marginal utility of good a is much lower than the marginal utility of good b.
  - f. allocate their spending so that the marginal utilities of good a and good b are equal to one another.
17. Consider a household choosing between two goods (j and k). The slope of the household’s budget constraint when good j is on the vertical axis and good k is on the horizontal axis is:
  - a.  $-P_j/P_k$ .
  - b.  $-P_k/P_j$ .
  - c. Increasing (that is, more negative) as the household buys more of good k.
  - d.  $\text{Income}/P_j$ .
  - e.  $\text{Income}/P_k$ .
18. The discovery and growing popularity of the idea of using avocados to make avocado toast will:
  - a. cause the demand curve for avocados to shift to the right.
  - b. cause the supply curve of avocados to shift to the right.
  - c. cause total private surplus in the market for avocados to fall.
  - d. cause total private surplus in the market for avocados to rise.
  - e. cause a deadweight loss.
  - f. (a) and (d).
  - g. (b) and (d).
  - h. (a), (b), and (e).