Economics 2 | Professor Christina Romer
Spring 2020 | Professor David Romer

SAMPLE FIRST MIDTERM EXAMINATION

PART I: SHORT ANSWER [60 POINTS TOTAL]

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

1. When there is a negative externality associated with a good, is the socially optimal level of production and consumption of the good zero? **[15 points]**

2. Does a monopolist want to produce where price is equal to marginal cost? **[15 points]**

3. You observe that whenever a household's income increases, they increase their consumption of restaurant meals more than their consumption of clothing. What does this tell you about the relative slopes of the household's marginal utility curves for restaurant meals and clothing? **[15 points]**

4. Suppose there are two workers who produce two goods. If one worker is twice as productive as the other worker at both activities, could the two workers gain from specialization? **[15 points]**

PART II: PROBLEMS [60 POINTS TOTAL]

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

5. The market for furniture is highly competitive. Assume that this market begins in long-run equilibrium.

a. Suppose that climate change and overharvesting cause the price of wood (an obvious input to the production of furniture) to rise. What will this development do to the equilibrium price and quantity of furniture and to the quantity supplied by a typical producer in the short run? **[15 points]**

b. What will happen to the profits of a typical producer in the short run? Would you expect there to be entry, exit, or no change in the number of producers in the long run? **[15 points]**

6. Suppose the government decides to put a tax on over-the-counter drugs (physically collected from sellers). You can assume that the over-the-counter drug market is highly competitive and does not involve either positive or negative externalities.

a. If demand for over-the-counter drugs is relatively inelastic and supply is relatively elastic, who will pay most of the tax—consumers or producers? **[15 points]**

b. Will the tax cause a deadweight loss? Will there be misallocation of the production and/or consumption of the good? **[15 points]**

PART III: MULTIPLE CHOICE [30 POINTS TOTAL]

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

7. At the long-run equilibrium of a competitive market, for a typical firm:
- **a.** price equals marginal cost.
- **b.** marginal revenue equals average total cost.
- **c.** marginal cost equals average total cost.
- **d.** (a) and (b).
- **e.** (a) and (c).
- **f.** (a), (b), and (c).

8. Suppose the price elasticity of supply in a market is very high. An outward shift of the demand curve will tend to cause:
- **a.** a large rise in quantity and a small rise in price.
- **b.** a small rise in quantity and a large rise in price.
- **c.** a large fall in quantity and a small rise in price.
- **d.** a small fall in quantity and a large rise in price.

9. The supply curve of a monopolist:
- **a.** is the same as its marginal cost curve.
- **b.** is to the left of its marginal cost curve.
- **c.** is steeper than its marginal cost curve.
- **d.** (b) and (c).
- **e.** does not exist.

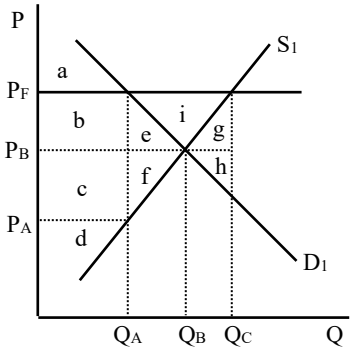
10. The following is ***not*** an example of a negative externality:
- **a.** when a mall installs brighter lights in its parking lot, it is harder for professional astronomers to see the stars.
- **b.** when a mall installs brighter lights in its parking lot, it is harder for people who enjoy astronomy as a hobby to see the stars.
- **c.** when a firm produces more of a good, its marginal costs rise.
- **d.** when someone drives during rush hour, they increase congestion.
- **e.** (a) and (d).
- **f.** (b) and (c).
- **g.** all of the above (that is, none of (a)-(d) are negative externalities).

11. If we observe that both the price and quantity of a good have increased, we can deduce that:
- **a.** the demand curve has shifted to the right.
- **b.** the supply curve has shifted to the right.
- **c.** the demand curve has not shifted.
- **d.** the supply curve has not shifted.
- **e.** (a) and (d).
- **f.** (b) and (c).

12. In "Fairness as a Constraint on Profit Seeking: Entitlements in the Market" by Kahneman, Knetsch, and Thaler, the authors find that people feel it is:
- **a.** always unfair for firms to raise prices.
- **b.** unfair for firms to raise prices when demand increases but not when costs rise.
- **c.** unfair for firms to pay workers less than the minimum wage.
- **d.** none of the above.

13. The fact that the PPC of the economy of a country is typically bowed out reflects:
- **a.** the gains from specialization.
- **b.** the gains from international trade.
- **c.** government tax revenue.
- **d.** deadweight loss.

14. The diagram to the right shows a market where there is a binding price floor, P_F. (The market is highly competitive and there are no externalities or other market failures.) In this market, the deadweight loss is:
- **a.** area e+f.
- **b.** area g+h.
- **c.** at least area e+f, but almost certainly more than that.
- **d.** at least area g+h, but almost certainly more than that.
- **e.** area a+b+c+d.
- **f.** area i.



15. Suppose the owner of a firm does not pay himself or herself a salary. In computing the economic profits of the firm, the time the owner works at the firm should be valued at:
- **a.** zero.
- **b.** the average wage of the firm's employees.
- **c.** the minimum wage.
- **d.** the opportunity cost of the owner's time.

16. 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, a rise in the price of pizza will:
- **a.** make the horizontal intercept of the budget constraint smaller.
- **b.** not affect the horizontal intercept of the budget constraint.
- **c.** make the vertical intercept of the budget constraint smaller.
- **d.** not affect the vertical intercept of the budget constraint.
- **e.** (a) and (d).
- **f.** (b) and (c).
- **g.** (a) and (c).
- **h.** (b) and (d).