Multiple Choice (MC) questions have only one correct answer, which may depend on your interpretation of the question. Other kinds of questions may have more than one correct answer. If you don’t understand the meaning of a question, you may write to your own TF (on course website see Classes > Teaching Fellows), but do not expect him/her to give you answers. The problem set will not be graded, but the way you discuss the problems in your discussion section will affect your discussion-section score. Your work on the problem sets will improve you performance in the course, but only if you understand the ideas behind the answers. Good reasons for your answer are more important than what the answer is. You are allowed to work on the problem sets with other students.

1. [MC] One of the main differences between the models of perfect competition and monopolistic competition is that
   a. There are a small number of sellers in the monopolistic-competition model.
   b. Under monopolistic competition, the marginal revenue is less than the price.
   c. There isn’t perfect information under monopolistic competition.
   d. NONE of the above

2. Are the following statements true or false? Explain each of your answers.
   i. Monopolists tend to restrict production to below the efficient level, an action that causes a deadweight loss of surplus.
   ii. It is economically efficient for the private sector to produce nonrivalrous goods.
   iii. A small number of sellers and product differentiation are the only important causes of imperfect competition.
   iv. Monopolies are bad for consumers and the economy.

3. What are the advantages and disadvantages of the following methods of controlling the free-rider problem that public goods have? Explain each of your answers.
   i. taxing the good
   ii. regulating the good to limit its overuse
   iii. letting the government itself provide the good
   iv. educating consumers so they buy the optimal quantity of the good

4. Is each of the following goods nonexcludable? nonrivalrous? Is the good a public good? a common good? Explain each of your answers.
   i. an idea that has been patented
   ii. streetlights in the public streets of Brookline
   iii. a large museum with beautiful works of art
   iv. a bench in the Boston Common
   v. Manove’s confusing lecture on public goods
   vi. a concert by Twenty One Pilots in a very large public area

5. State the type of market structure that each of the following cases most closely resembles. Explain each of your answers.
   i. Unilever and P&G together control most of the UK detergent industry.
   ii. Individual corn farmers and buyers are unable to affect the price of corn.
   iii. The market for men’s watches has thousands of different brands.
   iv. The so-called Big Four accounting firms (Deloitte, PwC, EY, KPMG) provide audit services to 99 percent of FTSE 100 companies.
6. Which of the following is an example of moral hazard, adverse selection, both or neither? Explain each of your answers.
   i. A person who has dental insurance stops brushing his teeth.
   ii. A student pays too much for a bicycle that has hidden problems.
   iii. A person on unemployment insurance does not try to find a job.
   iv. Consumers with big appetites like at all-you-can-eat restaurants, which charge a fixed price and let customers eat as much as they want.

7. [MC] A patent creates a monopoly by restricting
   a. entry into the market.
   b. demand for the product.
   c. the amount of advertising that can be undertaken.
   d. the number of complements of the product.

8. Are the following statements true or false? Explain each of your answers.
   i. Since they are price setters, monopolists are motivated to choose the price that maximizes profits.
   ii. Monopolists often worry about the possible entry of other firms that sell close substitutes.
   iii. In the labor market, adverse selection refers to workers that expect high salaries.

9. [MC] Which of the following firms is most likely to be a monopoly?
   a. a shoe store
   b. a computer store
   c. a local fast-food restaurant
   d. a local bus company

10. You own a pizza restaurant in the free city of Karalis. You hire a teenager and pay her a fixed wage of $10 per hour to manage the restaurant. Because she is lazy, your shop doesn’t produce many pizzas, and you lose money. Explain each of your answers to the following questions.
    i. Does the teenager have an incentive to work hard?
    ii. How does this relate to the concept of moral hazard?
    iii. Based on your answers, is there a different payment system (other than a fixed hourly wage) that would be likely to increase your profits?

11. Are the following statements true or false? Explain each of your answers.
    i. The more elastic that demand is, the higher the producer surplus for a monopolist will be.
    ii. Taxes on a goods produced by a monopoly are paid mainly by consumers.
    iii. In the market for smart phones, Apple and Samsung engage in monopolistic competition.

12. Consider the market for bank loans: people ask for money and promise to repay the debt plus interest. Determine whether the following statements are true or false, and explain why:
    i. In this market there is room for moral hazard.
    ii. Adverse selection plays a major role in this market.

13. Markets for healthcare tend to be inefficient. What are the main reasons for the inefficiency? Explain.