

Sample Final Exam¹

1. (30 points total, 10 points each) Choose the 3 out of 4 of the following concepts. In this question, you must: (1) **explain** the concepts as indicated and (2) tell the **context** in which the concepts were discussed in the course.

- a. *Cost containment* (Give two cost-containment strategies, and explain how they can help contain costs.)
- b. *The quality-quantity nonprofit theory* (Explain with the aid of a correctly labeled quantity-quality diagram.)
- c. *Small area variation* (Explain with the aid of marginal cost and marginal benefit curves.)
- d. *Pareto efficiency* (Explain with the aid of an appropriately labeled Edgeworth Box diagram.)

2. (10 points total, 5 points each) Do you agree or disagree with the following statements?

Discuss. (To get full credits, you must refer to the context or journal articles in which related concepts were discussed in the course, and/or use appropriate diagrams where applicable.)

- a. *“Drug patents enable pharmaceutical firms to have a market power, or even become a monopolist. Hence, the government’s price control in the pharmaceutical market is only a good thing because it can reduce the social welfare loss.”*
- b. *“Increasing health care expenditures in the United States have been partly due to defensive medical practices. Hence, malpractice liability reforms, which can reduce benefits from filing lawsuits, can potentially reduce medical expenditure growth.”*

¹ The format and number of questions on take-home final exam might differ from this sample exam.

3. (20 points total) Efficiency, Equity, Market Failures, and Government Intervention

- a. (10 points) Explain the Second Welfare Theorem. Make sure that you illustrate the concept of the *redistribution of the endowment* using an appropriately labeled Edgeworth Box diagram.
- b. (10 points) According to Sloan et al. (2004), the total external costs of cigarette smoking is approximately \$7 per pack. Use the concept of a demand-side externality to explain why the number of cigarettes sold in the market is likely to be higher than the socially optimal number. Explain an intervention that the government can implement to achieve the optimal consumption level of cigarettes.

4. (20 points total) Evaluation of Health Care Projects

- a. (5 points) Discuss the difference between cost-benefit analysis (CBA) and cost-effectiveness analysis (CEA). In what circumstances, would the CEA be preferred to the CBA?
- b. (5 points) Consider the information in the table below.

| Treatment | Cost | Effectiveness |
|-------------------|-----------|----------------------|
| Current Treatment | \$100,000 | 4 life-years gained |
| New Treatment | \$220,000 | 10 life-years gained |

Calculate the ICER for the new treatment, assuming that the new treatment would replace the old one. Should the new treatment be adopted? Why or why not?

- c. (10 points) Suppose that the health utility index, which indicates the quality of life, is 0.8 for the new treatment and 0.75 for the current treatment. Calculate the number of QALYs for the current and new treatment, and use the cost-utility analysis (CUA) to determine whether the new treatment should be adopted. Discuss your result.

5. (20 points total) Comparative Health Care Systems

- a. (10 points) Compare and contrast the financing methods used in the health care systems in United Kingdom, Germany, Canada, and the United States. Do the financing methods used in the Thai health care system resemble any of the health financing methods in these four countries?
- b. (10 points) In Schoen et al. (2010)'s article "How Health Insurance Design Affects Access to Care And Costs, By Income, In Eleven Countries, it is found that *US adults were the most likely to incur high medical expenditures, even when insured*. Discuss this finding based on what you have learned in this course. Make sure to discuss the association between reimbursement schemes, consumer copayment scheme, and the likelihood of a large volume of medical services.