Review sheet exam#1  
ECON 5313-01  
Exam #1: September 9, 2013

Format: The exam will likely consist of 20-25 multiple choice questions, with a second section containing short answer questions that may require some calculations. Students should bring a calculator to the exam. Students will be asked to turn their cell phones off during the exam.

The exam will cover any material covered during the first four lectures. Anticipated topics include, but are not limited to the following:

- Rational actor paradigm  
- Guideposts to economic thinking  
- Voluntary transactions and wealth creation  
- The government’s role in creating and destroying wealth
  - Creation
    - Protection of property rights and contracts  
    - Provision of public goods
  - Destruction
    - Taxes  
    - Subsidies  
    - Price controls
- The one rule of business  
- The one rule of economics  
- Measuring costs
  - Fixed costs
    - The fixed-cost or sunk-cost fallacy
  - Variable costs
  - Economic versus accounting profits
  - Average cost and marginal cost
    - Average total cost, average fixed cost, and average variable costs
- Extent decisions and marginal thinking
  - Production decisions
    - Marginal revenue and marginal cost
  - Effort and incentive schemes
    - (to induce more effort from workers, we need to set up incentives properly so that the marginal benefit of effort exceeds the marginal cost).
- Investment decisions
  - Compounding versus discounting
  - Utilizing the net-present value rule
  - Using break-even analysis
    - Break-even quantity
The contribution margin

A word of caution about break-even analysis

- Shutdown decisions
  - Break even price = average avoidable cost per unit
- Sunk costs and post-investment hold-up
  - When transaction specific sunk costs are incurred, the post investment hold-up can be avoided through vertical integration, contracts, and the “exchange of hostages.”

Law of demand
- The three laws of demand
- Consumer surplus

Aggregate demand
- When should you raise prices? When should you lower prices?
  - Remember, economics is about marginal thinking

Elasticity of demand
- Own price elasticity
- Cross price elasticity
- Income elasticity
- Price elasticity and marginal revenue
- Determinants of elasticity

Consider the following review type questions

Multiple choice

1. Which of the following is not an example of the government’s role in helping create wealth?
   a. Assessing property taxes
   b. Recording property transactions
   c. Providing federal courts to adjudicate contract disputes
   d. Assigning street addresses

2. In a transaction for a good valued at $100,000 by a buyer and $95,000 by a seller, what amount of tax would result in an unconsummated transaction?
   a. Any tax amount would result in an unconsummated transaction
   b. A tax of $1500
   c. A tax of $5500
   d. It depends on how much the parties are willing to pay (and accept) for the good.

3. A computer manufacturer shares its production capacity across two separate products, computers and printers. If the profitability of selling printers decreases, then the company will find that the
   a. cost of producing computers decreases.
   b. cost of producing computers increases.
   c. cost of producing computers is not affected.
   d. profitability of producing computers increases.
4. Smoke in Dallas produces 10,000 dry-rubbed rib slabs per year. Annually Smoke’s fixed costs are $50,000. The average variable cost per slab is a constant $2. The average total cost per slab then is
   a. $7.
   b. $2.
   c. $5.
   d. impossible to determine.

Use the following information to answer the next two questions:

A firm’s fixed costs are $5000. The firm charges $12 for each unit. For every additional unit the firm produces, it costs the firm $8.

5. What’s the firm’s contribution margin?
   a. $12
   b. $10
   c. $8
   d. $4

6. The break-even quantity is
   a. 1250
   b. 625
   c. 416.67
   d. 500

7. A company currently sells 60,000 units a month at $10 per unit. The marginal cost per unit is $6. The company is considering raising the price by 10% to $11. If the price elasticity of demand is _________________ in that price range, then profit would increase if the company decided to raise the price by 10%.
   a. Equal to -3
   b. Greater than +1
   c. Less than -2.5
   d. Greater than or equal to -2

Calculation questions:

#1. Suppose your market consists of 10 individuals with values of $1, $2, $3, $4, $5, $6, $7, $8, $9, and $10. Your marginal cost of production is constant and equal to $2.50. What is the profit maximizing price?

#2. A University spent $1.8 million to install solar panels atop a parking garage. These panels will have a capacity of 500 kilo-watt hours, and they have a life expectancy of 20 years. Suppose the University has a cost of capital equivalent to 10%.

   a. If electricity can be purchased for costs of $0.10 per kilo-watt hour, how many hours per year will the solar panels have to operate to make this project break even?
   b. If efficient systems operate for 2400 hours per year, would the project break even?