

## Midterm Exam 1 Guide

### I. Midterm Rules

- a. Exam in 145 Dwinelle, 10:00-11:30
- b. No blue books required.
- c. No text, notes, calculators allowed.
- d. Sit in section for your GSI. Seating Chart online & on overhead at exam.
- e. Arrive Early, sit toward middle. If you need aisle seat, stand in aisle when others need to pass you
- f. Begin only when told to start. Stop when told to stop. Pass exam to GSI.
- g. If fire alarm rings, collect your things, follow your GSI to steps of Dwinelle to take exam.

### II. Midterm 1 Topics Outline

#### Coverage through Lecture 6 topics

#### Chapter 1

- 1) Economic Surplus
- 2) Opportunity Cost
- 3)  $MB=MC$  rule

#### Chapter 2 & 16

- 1) Construct PPF
  - a. Calculate OC
  - b. Draw PPF
  - c. Interpret vertical intercept, horizontal intercept, changing slope
- 2) Comparative vs absolute advantage
- 3) Gains from specialization

#### Chapter 3

- 1) Change in quantity demanded or supplied vs Change in demand or supply
- 2) Demand shifters
- 3) Supply shifters
- 4) Equilibrium price and quantity

#### Chapter 4

- 1) Price elasticity of demand
- 2) Cross price elasticity of demand (sign)
- 3) Income elasticity (sign)
- 4) Price elasticity of supply
- 5) Perfectly inelastic vs perfectly elastic (demand, supply)
- 6) Elasticity changes along linear demand
- 7) Elasticity and total revenue

## Chapter 5

- 1) Utility maximization
  - a. Rational spending rule
  - b. Law of diminishing marginal utility
- 2) Market demand (horizontal sum)
- 3) Consumer surplus

## Chapter 6

- 1) Profit Maximization
  - a. Step 1 : Output decision  $P=MC$   
Step 2: SR Shutdown decision, operate if  $P > \text{Min AVC}$  ( $TR > TVC$ )
  - b. Note: If  $P > \text{Min AVC}$  and Loss operate in SR, exit in LR
- 2) Perfectly Competitive Firm Assumptions
- 3) Variable Cost and Fixed Costs
- 4) Marginal Cost, Average Variable Cost, Average Total Cost
  - a. Graphical and Numerical
  - b. Calculation of Profit/Loss
- 5) Market Supply (horizontal sum)
- 6) Producer Surplus

## Chapter 8

- 1) Economic Profit
  - a. Economic costs include opportunity costs
  - b. Economic costs = explicit plus implicit
  - c. Another name for opp cost is implicit cost.  
Firm context: normal profit or return to owners' resources
    - i. labor
    - ii. land
    - iii. capital
- 2) Profit/Loss and Entry & Exit leads to zero economic profit in LR

## Chapter 7

- 1) ED/ES Again
  - a. excess demand : quantity supplied exchanged on market
  - b. excess supply: quantity demanded exchanged on market
- 2) Analysis with producer and consumer surplus
  - a. price ceiling
  - b. price floor
  - c. tax
  - d. subsidy

## Chapter 9

- 1) Monopoly (sources of market power/reasons for monopoly)
- 2) Perfect vs Imperfect competition (Demand curve facing individual firm)
  - a. Monopolist D and MR curves
  - b. Linear Demand :  $P=a -bQ$  and  $MR=a-2bQ$ .
- 3) Profit Maximization Decision

- 4) DWL from monopoly
  - a.  $MB > MC$  at profit max output
  - b.  $Q_m$  lower than  $Q_{pc}$
- 5) Natural Monopoly  
Everywhere declining ATC (AC)  $\Rightarrow$  MC below ATC everywhere, ie in relevant range of output
- 6) Price discrimination
  - a.  $Q$  with price discrim  $> Q_m$
  - b. Surplus extracted

### **Chapter 10,12**

- 1) Elements of Game (player, payoff, strategies)
- 2) Dominant Strategy
- 3) Nash Equilibrium
- 4) Prisoner's Dilemma (individual rationality vs socially optimal outcome)
  - a. Classic prisoner's problem
  - b. Rival oligopoly firms
  - c. Cartel (colluding firms)

### **Chapter 12**

Lemons model

### **Chapter 11**

- 1) Positive and Negative Externality
- 2) Social vs private optimum
- 3) Coase Theorem

### **Chapter 15**

- 1) Types of goods (rival/nonrival, excludable/nonexcludable)
  - a. private
  - b. public
  - c. commons
  - d. collective
- 2) Demand for public good
- 3) Classic Problems
  - a. Public good: Free Rider
  - b. Commons Good: Tragedy of Commons