

[U] Understand (Could be one of the small questions)

[S] Short answers

[G] Draw Graphs

[C] Calculate numerical results

### Chapter 3. Demand and Supply

#### 1. Demand [G]

1.1 Demand Curve and Function

1.2 Individual Demand and Market Demand

1.3 Consumer Surplus [C]

1.4 Determinants

#### 2. Supply [G]

2.1 Supply Curve and Function

2.2 Producer Surplus

2.3 Factors that Affects Supply Curve

#### 3. Market Equilibrium [G][C]

#### 4. Price control policies [S] [G][C]

#### 5. Comparative Static Analysis [S] [G][C]

- Burden of Taxation (**Chapter 16**) [S][G][C]

### Chapter 6. Theory of Production

Section	Subsection	Key Concepts	Level
Production function		The law of diminishing returns	[C]
		AP, MP	[G] [C]

## Chapter 7. Analysis of Costs

Section	Subsection	Key Concepts	Level
1. Economic Analysis of Costs	1.1 Total Cost: Fixed and Variable	TC, VC, FC	[C]
	1.2 Average Cost	ATC, AVC, AFC	[G]
	1.3 Marginal Cost	MC	
	1.4 Link between Production and Cost	MP and MC, AP and AVC	
2. Opportunity Costs			[U]

## Chapter 8. Analysis of Perfectly Competitive Market

Section	Subsection	Key Concepts	Level
1. Supply Behavior of the Competitive Firm	1.1 Features		[U]
	1.2 Demand Curve (price taker, horizontal line)		[S][G]
	1.3 Output Decision Rules (Short-run):	MC=MR=P Zero-profit point Shutdown Point Firm's Supply Curve	[S][G]
2. Supply Behavior in Competitive Industries	Market Supply	Individual firm supply -> market supply	[U]
	Short-run v.s. Long-run	Effects of a Positive/Negative Demand Shock	[S][G]
3. Special Cases of Competitive Market	Constant Cost Fixed Supply Backward-Bending Supply Curve	Substitution effect Income effect	[U]
4. Efficiency and Equity of Competitive Markets	Pareto efficiency		[S][G]
	Efficiency of Competitive Market	Consumer surplus, Producer surplus, Social surplus	

## Chapter 9 & 10. Imperfect Competition

Section	Subsection	Key Concepts	Level
2. Monopoly Behavior		Demand, MR, Elasticity, and TR	[S]
	Output and Pricing Decisions of Monopoly	$MR(Q^M) = MC(Q^M)$ $P^M = P(Q^M)$	[S][G]
3. Public Policies to Combat Market Power		Inefficiency of monopoly; DWL	[S][G]
4. Competition among the Few		C4 HHI	[C]
4.1 Market Power and Its Measure			
4.2 Three Cases of Imperfect Competition	Case 1: Monopolistic Competition	Features	[U]
		Short-run & Long-run	[S][G]
	Case 2. Rivalry among the Few	Game Theory	
	Case 3. Collusive Oligopoly	Collusion Cartel Obstacles to Effective Collusion	[U][G]
5. Pricing Strategy		<i>Price discrimination</i>	[U]

## Chapter 10. (subtopic) Game Theory

Two-way payoff table [S]

Dominant Strategy [S]

Nash Equilibrium [S]

Cooperative Solution [S]

Models: 1. Prisoner's dilemma; 2. Free rider's problem

### Chapter 11. Uncertainty, Insurance, and Information

Section	Subsection	Key Concepts	Level
2. Concepts Regarding "Risk"	Risk Aversion/Neutral/Loving	Uncertainty (value and probability) Expected Value of the uncertainty Certainty Equivalent	[S][C][G]
3. Insurance		$I_{\max}$ and $I_{\min}$	[S][C]
4. Asymmetric Information	4.1 Adverse Selection		[U]
	4.2 Moral Hazard		[U]

### Chapter 14. Natural Resources and the Environment

Section	Subsection	Key Concepts	Level
2. Environmental Economics	2.1 Concepts	Positive/Negative Externality Public/Private Goods	[U]
	2.2 Inefficiency in market with externalities	Marginal Social Cost/benefit Socially Efficient Level Market provision level Dead weight loss	[S][G]
	2.3 Policies to Correct Externalities	Direct control	[S][G]
		Emission fee	[S][G]
		Ensure complete property rights (Coase Theorem)	[S]

## Chapter 12. Factor Input Demand

Section	Subsection	Key Concepts	Level
1. Input Demand for Profit-maximizing Firms	1.1 Marginal Revenue Product (MRP)	$MRP = MP_i \times MR$	[S][C]
	1.2 Input Demand for Profit-maximizing Firms	$MRP_i = \text{Price of factor } i$	[S][C]
	1.3 Least Cost Rule	$MPL/\text{wage} = MPK/\text{interest} = 1/MP$	[S][C]
2. Substitution among Factor Inputs			[U]
3. Firm's and Market's Factor Demand			[U][G]