Contents

1	Introduction	
1.1 1.2 1.3 1.4 1.5 1.6	Informal Description of Games and Game Theory 1 Dynamic Programming 3 Subgame Perfect Equilibria 6 Sequential Equilibria and Perfect Equilibria 8 Perfect, Proper and Persistent Equilibria 13 Essential Equilibria and Regular Equilibria 17 Notes 20	55570
2	Games in Normal Form	2
2.1 2.2 2.3 2.4 2.5 2.6	Preliminaries 22 Perfect Equilibria 26 Proper Equilibria 29 Essential Equilibria 32 Regular Equilibria 34 An "Almost all" Theorem 42 Notes 44	2595325
3	Matrix and Bimatrix Games	5
3.1 3.2 3.3 3.4 3.5	Preliminaries 40 Perfect Equilibria 40 Regular Equilibria 51 Characterizations of Regular Equilibria 52 Matrix Games 57 Notes 62	5) 1 4 7 2
4	Control Costs	3
4.1 4.2 4.3 4.4 4.5 4.6	Introduction66Games with Control Costs66Approachable Equilibria66Proper Equilibria77Perfect Equilibria77Regular Equilibria77	4 6 8 2 4 7
	INOTES	7

5	Incomplete Information	•	80
5.1	Introduction		81
5.2	Disturbed Games	•	83
5.3	Firm Equilibria	•	85
5.4	Perfect Equilibria	•	87
5.5	Weakly Proper Equilibria		90
5.6	Strictly Proper Equilibria and Regular Equilibria		93
5.7	Proofs of the Theorems of Sect. 5.5.	•	96
	Notes	•	100
6	Extensive Form Games		101
61	Definitions		102
6.2	Equilibria and Subgame Perfectness	•	102
63	Sequential Equilibria	•	108
6.7	Derfect Equilibrio	•	113
6.5	Proper Equilibria	•	117
6.6	Control Costs	•	122
67	Incomplete Information	•	122
0.7		•	124
		•	120
7	Bargaining and Fair Division		130
7.1	Introduction		131
7.2	2 Divide and Choose.		. 133
7.3	3 Auction Methods	,	. 136
7.4	Bargaining Problems and Bargaining Solutions		. 141
7.5	5 The Nash Negotiation Game		. 145
7.6	5 The Rubinstein/Binmore Model		. 150
7.7	7 The Crawford/Moulin Model		. 156
7.8	Bargaining Games with Variable Threat Point		. 159
	Notes		. 164
Q	Denoated Cames		100
0			. 100
8.2	1 Introduction		. 167
8.2	2 Preliminaries		. 171
8.:	3 Infinitely Repeated Games Without Discounting		. 175
8.4	4 Infinitely Repeated Games with Discounting: Nash Equilibria		. 181
8.:	5 Infinitely Repeated Games with Discounting:		
	Subgame Perfect Equilibria		. 187
8.	6 Finitely Repeated Games: Nash Equilibria		. 195
8.	7 Finitely Repeated Games: Subgame Perfect Equilibria		. 198
8.	8 Renegotiation-Proof Equilibria		. 207
	Notes		. 211

9	Evolutionary Game Theory
9.1	Introduction
9.2	Evolutionarily Stable Strategies
9.3	Strategic Stability of ESS
9.4	Population Dynamics
9.5	Asymmetric Contests: Examples and the Model
9.6	Asymmetric Contests: Results
9.7	Contests in Extensive Form: Definitions
9.8	Contests in Extensive Form: Results
	Notes
10	Strategic Stability and Applications
10.1	Equivalence of Games
10.2	Requirements for Strategic Stability
10.3	Stable Equilibria
10.4	Signalling Games: Introduction
10.5	Signalling Games: Dominance, Intuitive Arguments and Stability 282
10.6	Spence's Job Market Signalling Model
10.7	The Chain Store Paradox
10.8	Repeated Games
	Notes
Refe	rences
Surv	ey Diagrams
Subj	ect Index

XIX