

Sections and Problem

GENERAL REMARKS	1
<i>Problem Set 1</i>	6
PART ONE <i>Substituent Effects</i>	
1.0 Introduction	9
Polar Transition States	
1.1 Acidity	11
<i>Problem Set 2</i>	22
1.2 very Weak Acids	23
<i>Problem Set 3</i>	42
1.3 Substituent Constants	45
<i>Problem Set 4</i>	60
1.4 Nucleophilic Displacement Reactions	63
<i>Problem Set 5</i>	82
1.5 Carbonium Ion Reactions	84
<i>Problem Set 6</i>	143
Radical Transition States	
1.6 Free Radical Reactions	148
<i>Problem Set 7</i>	177
	ix

x Sections and Problems

1.7	Charge-Transfer Complexes and Reactions	179
	<i>Problem Set 8</i>	194
	Isopolar Transition States	
1.8	Cycloadditions	195
	<i>Problem Set 9</i>	222
1.9	Rearrangements	225
	<i>Problem Set 10</i>	253

PART TWO Medium Effects

2.0	Introduction	259
2.1	Some Aspects of Solvent Structure	260
	<i>Problem Set 11</i>	264
2.2	Dielectric Constant	265
2.3	Dynamic Dielectric Constant	272
	<i>Problem Set 12</i>	273
2.4	Relaxation Times	274
	<i>Problem Set 13</i>	282
2.5	Water Structure	283
2.6	Solvent Polarity: Empirical Measures	293
	<i>Problem Set 14</i>	316
2.7	Applications of Solvent Polarity Parameters	317
	<i>Problem Set 15</i>	333
2.8	Aprotic Dipolar Solvents	334
2.9	Salt Effects	343
2.10	Reaction Partners	352
	<i>Problem Set 16</i>	382

PART THREE Intermediates and Unusual Molecules

3.0	Introduction	387
3.1	Charged Species	392
	<i>Problem Set 17</i>	415
3.2	Radicals	416
	<i>Problem Set 18</i>	454