Contents

Foreword *iii*

Preface *v*

Unit 10 Haloalkanes and Haloarenes 281

10.1 Classification 282
10.2 Nomenclature 283
10.3 Nature of C–X Bond 285
10.4 Methods of Preparation 286
10.5 Physical Properties 289
10.6 Chemical Reactions 291
10.7 Polyhalogen Compounds 308

Unit 11 Alcohols, Phenols and Ethers 315

11.1 Classification 316
11.2 Nomenclature 317
11.3 Structures of Functional Groups 320
11.4 Alcohols and Phenols 321
11.5 Some Commercially Important Alcohols 336
11.6 Ethers 337

Unit 12 Aldehydes, Ketones and Carboxylic Acids 349

12.1 Nomenclature and Structure of Carbonyl Group 350
12.2 Preparation of Aldehydes and Ketones 353
12.3 Physical Properties 357
12.4 Chemical Reactions 358
12.5 Uses of Aldehydes and Ketones 365
12.6 Nomenclature and Structure of Carboxyl Group 366
12.7 Methods of Preparation of Carboxylic Acids 367
12.8 Physical Properties 371
12.9 Chemical Reactions 371
12.10 Uses of Carboxylic Acids 376

Unit 13 Amines **381**

13.1 Structure of Amines 381
13.2 Classification 382
13.3 Nomenclature 382
13.4 Preparation of Amines 384
13.5 Physical Properties 387
13.6 Chemical Reactions 388
13.7 Method of Preparation of Diazonium Salts 396
13.8 Physical Properties 397
13.9 Chemical Reactions 397
13.10 Importance of Diazonium Salts in Synthesis of Aromatic Compounds 398

Unit 14 Biomolecules **403**

14.1 Carbohydrates 403
14.2 Proteins 412
14.3 Enzymes 417
14.4 Vitamins 417
14.5 Nucleic Acids 419

Unit 15 Polymers **425**

15.1 Classification of Polymers 426
15.2 Types of Polymerisation 428
15.3 Molecular Mass of Polymers 435
15.4 Biodegradable Polymers 435
15.5 Polymers of Commercial Importance 436

Unit 16 Chemistry in Everyday Life **439**

16.1 Drugs and their Classification 439
16.2 Drug-Target Interaction 440
16.3 Therapeutic Action of Different Classes of Drugs 443
16.4 Chemicals in Food 449
16.5 Cleansing Agents 450

Answers to Some Questions in Exercises **456**

Index **461**