

CONTENTS

I.	INTRODUCTION	1
II.	THE QUANTITATIVE ASPECT OF CHEMISTRY	20
III.	THE NOMENCLATURE AND LANGUAGE OF CHEMISTRY	41
IV.	OXYGEN	48
V.	PHYSICAL PROPERTIES OF GASES	60
VI.	HYDROGEN	78
VII.	WATER	92
VIII.	SOLUTIONS, CRYSTALS, THERMOCHEMISTRY	106
IX.	MOLECULAR AND ATOMIC WEIGHTS	122
X.	CHLORINE AND HYDROGEN CHLORIDE	141
XI.	THE HALOGEN FAMILY: FLUORINE, CHLORINE, BROMINE, IODINE AND THEIR HYDR-ACIDS	158
XII.	THE OXIDES AND OXY-ACIDS OF THE HALOGENS	174
XIII.	OZONE: HYDROGEN PEROXIDE	191
XIV.	CHEMICAL EQUILIBRIUM-LAW OF MASS ACTION-DISSOCIATION	200
XV.	SULPHUR: ITS HYDRIDES AND CHLORIDES	214
XVI.	THE OXIDES AND OXY-ACIDS OF SULPHUR	229
XVII.	THE CLASSIFICATION OF THE ELEMENTS-THE PERIODIC LAW	254
XVIII.	NITROGEN-ATMOSPHERIC AIR-THE RARE GASES	266
XIX.	THE HYDRIDES AND HALIDES OF NITROGEN	277
XX.	THE OXIDES AND OXY-ACIDS OF NITROGEN	287
XXI.	PHOSPHORUS	305
XXII.	ARSENIC, ANTIMONY, BISMUTH, VANADIUM, NIOBIUM, TANTALUM	328
XXIII.	CARBON AND ITS OXIDES	346
XXIV.	TYPICAL CARBON COMPOUNDS	363
XXV.	FLAME	380
XXVI.	SILICON	388
XXVII.	OSMOTIC PRESSURE-MOLECULAR WEIGHTS OF DISSOLVED SUBSTANCES	399
XXVIII.	CONDUCTIVITY AND ITS BEARING UPON THE IONIC THEORY	415
XXIX.	APPLICATION OF THE IONIC THEORY TO CHEMICAL REACTIONS	430
XXX.	THE METALS	453
XXXI.	GROUP 1A. THE METALS OF THE ALKALIES: SODIUM, POTASSIUM, RUBIDIUM, CAESIUM	466
XXXII.	GROUP 1B. COPPER, SILVER, GOLD	497
XXXIII.	GROUP 2A. GLUCINUM, MAGNESIUM, CALCIUM, STRONTIUM, BARIUM	521
XXXIV.	GROUP 2B. ZINC, CADMIUM, MERCURY	547

XXXV.	GROUP 3. BORON, ALUMINIUM, GALLIUM, INDIUM, THALLIUM, SCANDIUM, YTTRIUM, LANTHANUM	563
XXXVI.	GROUP 4. GERMANIUM, TIN, LEAD, ZIRCONIUM, CERIUM, THORIUM	580
XXXVII.	GROUP 6A. CHROMIUM, MOLYBDENUM, TUNGSTEN, URANIUM	599
XXXVIII.	GROUP 7A. MANGANESE	613
XXXIX.	IRON, COBALT, NICKEL	625
XL.	RUTHENIUM, RHODIUM, PALLADIUM, OSMIUM, IRIDIUM, PLATINUM	646
XLI.	RADIO-ACTIVITY-THE CONSTITUTION OF MATTER	652
	INDEX	681
	INTERNATIONAL ATOMIC WEIGHTS	694