



What's included:

*definitions required by specification

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ATOMIC STRUCTURE

Atomic Number

Mass Number

Isotope

TOF Mass Spectrometer (Stages)

First Ionisation Energy*

Successive Ionisation Energies

Relative Atomic Mass*

Relative Isotopic Mass

Relative Molecular Mass*

Relative Formula Mass

FORMULAE & CALCULATIONS

Molecular Formula

Empirical Formula

% Atom Economy

% Yield

Ideal Gas Equation

BONDING

Covalent Bond

Co-ordinate Bond

Electrostatic Attractions

Ionic Bonding

Metallic Bonding

V.S.E.P.R.

Electronegativity

Permanent Dipole Force

Induced Dipole Forces

Hydrogen Bonding

ENTHALPY I

Enthalpy Change (ΔH)

Standard Conditions

Standard Enthalpy of
Formation ($\Delta_{\theta}H_f^{\circ}$)*

Standard Enthalpy of
Combustion ($\Delta_{\theta}H_c^{\circ}$)*

Heat Change (Q)

Hess' Law

Mean Bond Enthalpy*

KINETICS

Collision Theory

Catalyst

Homogeneous Catalyst

Heterogeneous Catalyst

Activation Energy*

Order of Reaction*

Rate Constant*

Rate Determining Step

Arrhenius Equation

EQUILIBRIA

Dynamic Equilibrium

Le Chatelier's Principle

Homogeneous

Equilibrium Constant - K_c

Equilibrium Constant - K_p

REDOX

Oxidation	
Reduction	
Oxidising Agent	
Reducing Agent	
Disproportionation	
Standard Hydrogen Electrode	
E.M.F.	

ACIDS & BASES

Bronsted-Lowry Acid

Bronsted-Lowry Base

pH

Strong Acid / Base

Weak Acid / Base

Ionic product of Water (K_w)

Buffer

Acid Buffer

Basic Buffer

ENTHALPY II

Born-Haber Cycle	
Enthalpy of Formation*	
Ionisation Energy*	
Enthalpy of Atomisation*	
Bond Enthalpy*	
Electron Affinity*	
Lattice Enthalpy*	
Enthalpy of Hydration*	
Enthalpy of Solution	
Entropy	
Gibbs Free Energy	

TRANSITION METALS

Transition Metal

Ligand

Complex Ion

Substitution Reaction

ORGANIC FORMULAE

General Formula	
Molecular Formula	
Empirical Formula	
Structural Formula	
Skeletal Formula	
Displayed Formula	

ISOMERISM

Structural Isomer*	
Chain Isomer	
Positional Isomer	
Functional Group Isomer	
Stereoisomer*	
Optical Isomer	

ALKANES

Alkane	
Fractional Distillation	
Thermal Cracking	
Catalytic Cracking	
Free Radical	
Free Radical Substitution	

HALOGENOALKANES

Halogenoalkane	
Nucleophilic Substitution	
Elimination Reaction	

ALKENES

Alkene	
C=C Double Bond	
Electrophilic Addition	
Addition Polymerisation	
Test for an Alkene	

ALCOHOLS

Alcohol	
Hydration of Alkenes	
Fermentation	
Oxidation of Alcohols	
Elimination Reaction	
Test for an Alcohol	

CARBONYLS & CARBOXYLIC ACIDS

Aldehyde	
Ketone	
Nucleophilic Addition	
Tests for Aldehydes / Ketones	
Carboxylic Acid	
Test for a Carboxylic Acid	
Ester	
Acid Anhydride	
Acyl Chloride	
Nucleophilic Addition-Elimination	

NITROGEN CONTAINING COMPOUNDS

Amine	
Nucleophilic Substitution	
Amide	
Nitrile	

AROMATIC COMPOUNDS

Benzene	
Electrophilic Substitution	
Nitration	
Friedel-Crafts Acylation	

BIOLOGICAL STRUCTURES

Condensation Polymerisation

Amino Acids

Zwitterion

Proteins

D.N.A.

Enzymes

ORGANIC ANALYSIS

Mass Spectroscopy

Molecular Ion Peak

Fragmentation

IR Spectroscopy

$^1\text{H-NMR}$

$^{13}\text{C-NMR}$

Thin Layer Chromatography

Column Chromatography

Gas Chromatography

GC-MS
