



Yr 12 Chemistry End of Year Assessment

1 Paper, Duration 120 minutes

Module 2: Foundations in Chemistry	A01 A02 A03 Multiple choice questions, recall, apply and explain, data interpretation	R	A	G
Atomic structure and isotopes including the calculation of Relative atomic masses				
Formulae and equations, writing balanced equations				
Amounts of substance, use of Avogadro's constant and molar mass				
Empirical and molecular formulae				
Calculation of reacting masses and mole concentrations				
Percentage yield				
Acids, bases, alkalis and neutralisation				
Acid-base titration				
Redox equations and oxidation number				
Electronic structure				
Ionic bonding, including dot and cross diagrams and explanations of properties				
Covalent bonding, including dot and cross diagrams and average bond enthalpy				
The shapes of simple molecules and ions (VSEPR)				
Electronegativity and bond polarity				
Intermolecular forces and explanation of effect of structure and bonding on physical properties				

Module 3: Periodic Table and Energy		R	A	G
Periodic Trends in electronic configuration and ionisation energy				
Periodic trends in structure and melting point				
The Halogens, physical properties, reactivities and their redox reactions				
Quantitative analysis: test tube tests				
Enthalpy changes: ΔH of formation, reaction, combustion				
Bond enthalpies				
Hess' Law and enthalpy cycles				
Reaction rates: catalysts, the Boltzmann distribution				

Module 4: Core Organic Chemistry		R	A	G
Basic concepts and hydrocarbons, naming and functional groups				
Isomerism				
Properties of alkanes				
Reactions of alkanes: combustion and reactions with Chlorine and bromine (mechanism)				
Alkenes: Properties including isomerism and use of Cahn-Ingold-Prelog rules				
Addition reactions of alkenes (mechanism)				
Polymers: addition polymerisation and disposal of polymers				
Alcohols: properties and reactions				
Haloalkanes: substitution reactions (mechanism) and trend in rates of hydrolysis				
Infrared Spectroscopy: identification of functional groups from spectra				

Resources required for revision

Exercise book

OCR Chemistry A Textbook

Practice exam questions:

From Yr 12 Papers 1 &2 <https://www.physicsandmathstutor.com/chemistry-revision/a-level-ocr-a/>

Suggested websites:

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