


International AS Chemistry (A-Level Year 1)
September 21 Intake

IA-Chem-21S


Start Date:	06-Sep-21
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	Week Number	Week Commencing Date	Topic	Subtopic	Video Lesson and MCQs	Drop in Session Date	Drop in Session Time	Notes	Tutor Marked
Year 1	1	06-Sep-21	Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Atoms, elements and molecules	09/09/21	12:00-12:40	Formulae, Equations and Amount of Substance - Part 1	
			Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Writing chemical equations				
			Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Reactions of acids			Formulae, Equations and Amount of Substance - Part 2	
			Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Displacement reactions				
	2	13-Sep-21	Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Precipitation reactions	16/09/21	12:00-12:40	Formulae, Equations and Amount of Substance - Part 3	
			Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Moles and masses				
			Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Reacting masses			Percentage yield	
			Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Percentage yield				
	3	20-Sep-21	Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Atom economy	23/09/21	12:00-12:40	Formulae, Equations and Amount of Substance - Part 4	
			Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Empirical and molecular formulae				
			Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Concentration			Formulae, Equations and Amount of Substance - Part 5	
			Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Gas volumes				


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	4	27-Sep-21	Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Measurement of the molar volume of a gas - Practical	30/09/21	12:00-12:40	Atomic structure and the periodic table - Part 1	
			Structure, Bonding and Introduction to Organic Chemistry	Atomic structure and the periodic table	Structure of atoms and isotopes				
			Structure, Bonding and Introduction to Organic Chemistry	Atomic structure and the periodic table	Mass spec				
			Structure, Bonding and Introduction to Organic Chemistry	Atomic structure and the periodic table	Orbitals				
	5	04-Oct-21	Structure, Bonding and Introduction to Organic Chemistry	Atomic structure and the periodic table	Ionisation energies	07/10/21	12:00-12:40	Atomic structure and the periodic table - Part 2	
			Structure, Bonding and Introduction to Organic Chemistry	Atomic structure and the periodic table	The periodic table				
			Structure, Bonding and Introduction to Organic Chemistry	Atomic structure and the periodic table	Periodic properties			Bonding and structure - Part 1	
			Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Ionic bonding				
	6	11-Oct-21	Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Ionic radii and polarisation	14/10/21	12:00-12:40		
			Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Physical properties				
			Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Covalent bonding			Bonding and structure - Part 2	
			Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Electronegativity and bond polarity				


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	7	18-Oct-21	Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Simple molecules	21/10/21	12:00-12:40	Bonding and structure - Part 3	
			Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Dative bonds				
			Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Shapes of molecules				
			Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Polar and non-polar molecules				
Holiday 25/10/21 - 31/10/21									
	8	01-Nov-21	Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Metallic bonding	04/11/21	12:00-12:40	Bonding and structure - Part 4	
			Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Solid lattices				
			Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Intro to organic chemistry			Introductory Organic Chemistry and Alkanes - Part 1	
			Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Types of formulae				
	9	08-Nov-21	Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Homologous series and functional groups	11/11/21	12:00-12:40		
			Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Nomenclature				
			Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Structural isomers				
			Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Types of reactions				


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	10	15-Nov-21	Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Hazards	18/11/21	12:00-12:40	Introductory Organic Chemistry and Alkanes - Part 2	
			Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Alkane from crude oil				
			Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Alkanes as fuel				
			Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Alternative fuels				
	11	22-Nov-21	Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Substitution reactions	25/11/21	12:00-12:40	Introductory Organic Chemistry and Alkanes	
			Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Bonding				
			Structure, Bonding and Introduction to Organic Chemistry	Alkenes	Geometric isomerism				
			Structure, Bonding and Introduction to Organic Chemistry	Alkenes	Addition reactions				
	12	29-Nov-21	Structure, Bonding and Introduction to Organic Chemistry	Alkenes	Mechanisms	02/12/21	12:00-12:40	Alkenes - Part 2	
			Structure, Bonding and Introduction to Organic Chemistry	Alkenes	Polymerisation reactions				
			Structure, Bonding and Introduction to Organic Chemistry	Alkenes	Polymer waste				
			Structure, Bonding and Introduction to Organic Chemistry		End of Unit				
	13	06-Dec-21	Structure, Bonding and Introduction to Organic Chemistry		End of Unit	09/12/21	12:00-12:40		End of unit


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	14	13-Dec-21	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Energetics	Introduction	16/12/21	12:00-12:40	Energetics - Part 1			
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Energetics	Enthalpy						
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Energetics	Enthalpy level diagrams			Energetics - Part 2			
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Energetics	Combustion, neutralisation and formation						
	Holiday 20/12/21 - 09/01/22										
	15	10-Jan-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Energetics	Hess's law	13/01/22	12:00-12:40	Energetics - Part 3			
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Energetics	Bond Enthalpies						
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Energetics	Determination of the enthalpy change of a reaction using Hess's Law. - Practical			Intermolecular forces			
Energetics, Group Chemistry, Halogenoalkanes and Alcohols			Intermolecular forces	Intermolecular interactions							


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	16	17-Jan-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Intermolecular forces	Properties	20/01/22	12:00-12:40	Redox Chemistry and Groups 1, 2 and 7 - Part 1	
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Electrons				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Oxidation number				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Nomenclature				
	17	24-Jan-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Full ionic equations	27/01/22	12:00-12:40	Redox Chemistry and Groups 1, 2 and 7 - Part 2	
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Trends in groups 1 & 2				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Group 1 reactions				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Group 2 reactions				


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	18	31-Jan-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Oxides and hydroxides	03/02/22	12:00-12:40		
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Thermal stability				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Flame tests				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Finding the concentration of a solution of hydrochloric acid _ Practical				
	19	07-Feb-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Preparation of a standard solution from a solid acid and use it to find the concentration of a solution of sodium hydroxide. - Practical	10/02/22	12:00-12:40	Redox Chemistry and Groups 1, 2 and 7 - Part 3	
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Trends in group 7				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Halides reactions			Redox Chemistry and Groups 1, 2 and 7 - Part 4	
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Making standard solutions				
Holiday 14/2/22 -20/02/22									


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	20	21-Feb-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Titrations	24/02/22	12:00-12:40		
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Errors, precision, accuracy				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Introduction to Kinetics and Equilibria	Reaction rates			Introduction to Kinetics and Equilibria - Part 1	
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Introduction to Kinetics and Equilibria	factors				
	21	28-Feb-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Introduction to Kinetics and Equilibria	reversible reactions	03/03/22	12:00-12:40	Introduction to Kinetics and Equilibria - Part 2	
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Introduction to Kinetics and Equilibria	Conditions				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Introduction to Kinetics and Equilibria	Reversible reactions in industry				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	General principles			Organic Chemistry: Halogenoalkanes, Alcohols and Spectra - Part 1	


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	22	07-Mar-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Hydrolysis reactions	10/03/22	12:00-12:40	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra - Part 2	
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Mechanisms				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Investigation of the rates of hydrolysis of some halogenoalkanes. - Practical				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Chlorination of 2-methylpropan-2-ol with concentrated hydrochloric acid. - Practical				
	23	14-Mar-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Alcohols and the reactions	17/03/22	12:00-12:40	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra - Part 3	
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Oxidation				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Purifying an organic liquid				
			Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	The oxidation of propan-1-ol to produce propanal and propanoic acid. - Practical				

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24	21-Mar-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Mass spec	24/03/22	12:00-12:40	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra - Part 4		
		Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	IR					
		Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Analysis of some inorganic and organic unknowns. - Practical					
		Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra						
25	28-Mar-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols		End of Unit	31/03/22	12:00-12:40		End of unit	
Holiday 04/04/22 - 24/04/22									
26	25-Apr-22	Structure, Bonding and Introduction to Organic Chemistry	Formulae, Equations and Amount of Substance	Recap	28/04/22	12:00-12:40		Mock Exam	
		Structure, Bonding and Introduction to Organic Chemistry	Atomic structure and the periodic table	Recap					
27	02-May-22	Structure, Bonding and Introduction to Organic Chemistry	Bonding and structure	Recap	05/05/22	12:00-12:40			
		Structure, Bonding and Introduction to Organic Chemistry	Introductory Organic Chemistry and Alkanes	Recap					
28	09-May-22	Structure, Bonding and Introduction to Organic Chemistry	Alkenes	Recap	12/05/22	12:00-12:40			
		Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Energetics	Recap					

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29	16-May-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Intermolecular forces	Recap	19/05/22	12:00-12:40			
		Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Redox Chemistry and Groups 1, 2 and 7	Recap					
30	23-May-22	Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Introduction to Kinetics and Equilibria	Recap	26/05/22	12:00-12:40			
		Energetics, Group Chemistry, Halogenoalkanes and Alcohols	Organic Chemistry: Halogenoalkanes, Alcohols and Spectra	Recap					
Holiday 30/05/21 - 05/06/22									
31	06-Jun-22	Self directed revision Exam period				09/06/22	12:00-12:40	Self directed revision Exam period	
32	13-Jun-22					16/06/22	12:00-12:40		
33	20-Jun-22					23/06/22	12:00-12:40		
34	27-Jun-22					30/06/22	12:00-12:40		
35	04-Jul-22					07/07/22	12:00-12:40		
36	11-Jul-22					14/07/22	12:00-12:40		
Holiday 18/07/22 -04/09/22									