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م_درسـ دين	Founders DUBA	. School Subjee	t Chemistr	ry Performar Learning
Wee	h Data	Parma	£	Learning Outcomes
wee	in Date	Focus	Summary	Teacher 1:
				Explain the trends in atomic radius and first ionisation energy
				Explain the melting point of the elements in terms of their structure and bonding Understand the reactions of the elements Mg–Ba with water
		Teacher 1:	Teacher 1:	Recall the use of magnesium in the extraction of titanium from TiCl4
		Group 2 Metals	Trends in Group 2	Recall the relative solubilities of hydroxides and sulfates of the elements Mg–Ba in water
15	02/01/23		Uses of Group 2 Compounds	Discuss the use of Mg(OH)2 in medicine, Ca(OH)2 in agriculture and CaO/CaCO3 to remove SO2 from flue gases
		Teacher 2: Periodicity	Teacher 2:	Explain the use of acidified BaCl2 solution to test for sulfate ions
		Periodicity	Physical Properties of Period 3 Elements	Teacher 2:
				Explain the trends in atomic radius and first ionisation energy
				Explain the melting point of the elements in terms of their structure and bonding
16	09/01/23	Mock Exams	Mock Exams	
17	16/01/23	Mock Exams	Mock Exams	
18		Mock Exams	Mock Exams	
				Teacher 1:
				Represent organic compounds as empirical, molecular, general, structural, displayed and skeletel formula
			Teacher 1:	Explain the characteristics of a homologous series
		Teacher 1: Introduction to	Representing Organic Compounds	Apply the IUPAC rules for nomenclature
		Organic Chemistry	Homologous Series	Teacher 2:
19	30/01/23		IUPAC Rules for Nomeclature	Explain the trend in electronegativity
		Teacher 2:	Teacher 2:	Explain the trend in boiling point of the elements in terms of their structure and bonding
		Group 7 - The	Trends in Group 7 Properties	Explain the trend in oxidising ability of the halogens down the group, including displacement reactions of halide ions in aqueous solution
		Halogens	Testing for Halide lons	Explain the trend in reducing ability of the halide ions, including the reactions of solid sodium halides with concentrated sulfuric acid Discuss the use of acidified silver nitrate solution to identify and distinguish between balide ions
				Discuss the use of acidified silver nitrate solution to identify and distinguish between halide ions. Recall the trend in solubility of the silver halides in ammonia.
				Explain why silver nitrate solution is used to identify halide ions, the silver nitrate solution is acidified and ammonia solution is added
-	+	-	+	Teacher 1:
				Draw structural, displayed and skeletal formulas for given organic compounds
		Teacher 1:	Teacher 1:	Apply IUPAC rules for nomeclature to name organic compounds limited to chains and rings with up to six carbon atoms each
		Introduction to	Drawing Structures	Apply IUPAC rules for nomenclature to draw the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from the IUPAC name limited to chains and rings with up to six can be apply to the structure of an organic compound from t
20	06/02/23	Organic Chemistry	IUPAC Rules for Nomenclature	atoms each
		Teacher 2:	Teacher 2:	Teacher 2:
		Group 7 - The	Uses of Chlorine and Chlorate	Recall the reaction of chlorine with water to form chloride ions and chlorate ions/ oxygen
		Halogens	Required Practical	Appreciate that society assesses the advantages and disadvantages when deciding if chemicals should be added to water supplies
				Explain the reaction of chlorine with cold, dilute, aqueous NaOH and uses of the solution formed
	13/02/23			Carry out simple test-tube reactions to identify cations and anions School Break Half Term February
				Teacher 1:
				Define the term structural isomer
		Teacher 1:	Teacher 1: Structural Isomer	Draw the structures of chain, position and functional group isomers Define the term stereoisomer
		Introduction to	Chain, Position and Functional Group Isomers	Draw the structural formulas of E and Z isomers
21	20/02/23	Organic Chemistry	Nomenclature of Isomers	Apply the CIP priority rules to E and Z isomers
21	20/02/23			
		Teacher 2: Alkanes	Teacher 2: Fractional Distillation of Alkanes	Teacher 2: Understand that alkanes are saturated hydrocarbons
		Aikalles	Thermal and Catalytic Cracking	Explain that are restorated hydrocarbons Explain that petroleum is a mixture consisting mainly of alkane hydrocarbons that can be separated by fractional distillation
				Recall the process of thermal and catalytic cracking and the different conditions
				Explain the economic reasons for cracking alkanes
				Teacher 1:
				Describe alkenes as unsaturated hydrocarbons
			Teacher 1:	
1	1		Structure, Bonding and Reactivity of Alkenes	Describe the bonding in alkenes
		Teacher 1:	Structure, Bonding and Reactivity of Alkenes Addition Reactions of Alkenes	Outline the mechanisms for the electrophilic addition reactions of alkenes with HBr, H2SO4 and Br2
22	27/02/22	Alkenes	Addition Reactions of Alkenes	Outline the mechanisms for the electrophilic addition reactions of alkenes with HBr, H2SO4 and Br2
22	27/02/23	Alkenes	Addition Reactions of Alkenes Teacher 2:	Outline the mechanisms for the electrophilic addition reactions of alkenes with HBr, H2SO4 and Br2
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23	05/03/23	Alkenes Teacher 2: Alkanes Teacher 1: Alkenes Teacher 2: Halogenoalkanes Teacher 1: Organic Analysis	Addition Reactions of Alkenes Teacher 2: Combustion of Alkanes Chorination of Alkanes Chorination of Alkanes Free Radical Substitution Reactions Teacher 1: Nomenclature for Polymers Properties of Polymers Epowerthane Teacher 2: Nucleophilic Substitution Mechanisms Teacher 1: Identification of Functional Groups by Test Tube Reactions Required Practical Teacher 2: Oxidation of Alkohols	Outline the mechanisms for the electrophilic addition reactions of alienes with HBr, H2SO4 and Br2 Explain the formation of major and minor products by reference to the relative stabilities of primary, secondary and tertiary carbocation intermedia Teacher 2: Explain the production of pollutaris from internal combustion Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the reaction of methane with chlorine as a free-radical substitution mechanism involving initiation, propagation and termination steps Explain the production of pollutaris from a monomer structure Draw the regulating unit from a section of the polymer chain Draw the regulating unit from a section of the polymer chain Draw the structure of the monomer from a section of the polymer Explain the high reactivity of eposysthane Write equations for the reactions of eposysthane Write equations for the reactions of eposysthane Unit the termine environmental importance of products including, surfactaris and antifreeze, formed in these reactions. Teacher 2: Outline the nucleophilic substitution mechanisms of halogenoalkanes reacting with nucleophiles OH-, CN- and NH3 Explain hut the arbon-haloeen bond enthalou influences the rate of reaction Teacher 2: Identify the functional groups using reactions in the specification Teacher 2: Write equations for these oxidation reactions (Sequences the rate of reaction Teacher 2: Unit write environmental importance of products including. Social at are acceptable) Explain how the method outles to oxidise a primary alcohol determinies whether an aldehyde or carboxylic acid is obtained Use chemical tests to distinguis hower alcoholes and ketones including Felling's social on and Tolleng' reagent
23	05/03/23	Alkenes Teacher 2: Alkanes Teacher 1: Alkenes Teacher 2: Halogenoalkanes Teacher 1: Organic Analysis Teacher 2:	Addition Reactions of Alkenes Teacher 2: Combustion of Alkanes Chlorination of Alkanes Chlorination of Alkanes Free Radical Substitution Reactions Teacher 1: Nomenclature for Polymers Epoxyethane Teacher 2: Nucleophilic Substitution Mechanisms Elimination of Functional Groups by Test Tube Reactions Required Practical Teacher 2: Oxidation of Alcohols Elimination of Alcohols	Outline the mechanisms for the electrophilic addition reactions of alkenes with HBr, H2SO4 and Br2 Explain the formation of major and minor products by reference to the relative stabilities of primary, secondary and tertiary carbocation intermedia Tacher 2: Teacher 2: Teacher 2: Teacher 2: Teacher 2: Outline the indexphilic substitution mechanisms of hologenoalkanes reactings with weak and number of reactions. Teacher 2: Outline the indexphilic substitution mechanism involving initiation, propagation and termination steps Explain the yail of the group of the polymer of the polymer Explain the repeating unit from a section of the polymer Explain why addition polymers are unreactive Explain the high reactivity of epoxyethane Write equations for the reactions of epoxyethane Write equations for the reactions of epoxyethane Explain the high reactivity of epoxyethane Write equations for the reactions of epoxyethane Explain the end of the reactions of epoxyethane Explain the the indexphilic substitution mechanisms of hologenoalkanes reacting with nucleophiles OH-, CN- and NH3 Explain the cancen haloreen bond enthalaw influences the rate of reaction Teacher 1: Interferent 1: Outline the undexphilic substitution mechanisms of hologenoalkanes reacting with nucleophiles OH-, CN- and NH3 Explain the functional groups using reactions in the specification Teacher 1: Identify the functional groups using reactions in the specification
23	05/03/23	Alkenes Teacher 2: Alkanes Teacher 1: Alkenes Teacher 2: Halogenoalkanes Teacher 1: Organic Analysis Teacher 2: Alcohols	Addition Reactions of Alkenes Teacher 2: Combustion of Alkanes Chorination of Alkanes Chorination of Alkanes Free Radical Substitution Reactions Teacher 1: Nomenclature for Polymers Properties of Polymers Epowerthane Teacher 2: Nucleophilic Substitution Mechanisms Teacher 1: Identification of Functional Groups by Test Tube Reactions Required Practical Teacher 2: Oxidation of Alkohols	Outline the mechanisms for the electrophilic addition reactions of alkenes with HBr, H2504 and Br2 Explain the formation of major and minor products by reference to the relative stabilities of primary, secondary and tertiary carbocation intermedia Explain the formation of major and minor products by reference to the relative stabilities of primary, secondary and tertiary carbocation intermedia Explain the production of pollutaris from internal combustion Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the reaction of methane with chlorine as a free radical substitution mechanism involving initiation, propagation and termination steps Tancher 1: Draw the regeating unit from a accion of the polymer chain Draw the regeating unit from a section of the polymer chain Draw the structure of the monomer from a section of the polymer Explain the high reactivity of eposysthane Write equations for the reactions of eposysthane with water and with alcohols and outline the mechanism for these reactions. Explain the end of the reactions of eposysthane Write equations for the reactions of eposysthane Unline the nucleophilic substitution mechanisms of halogenoalkanes reacting with nucleophiles OH-, CN- and NH3 Explain the structure and groups using reactions in the specification Teacher 2: Identify the functional groups using reactions in the specification Teacher 2: Write equations for these oxidation reactions (equations showing [O] as oxidant are acceptable] Explain how the method used to oxidise a primary alcohol determinies whether an aldehyde or carboxylic acid is obtained Use chemical tests to distinguis bitween aldehydes and ketones including Falling's solution and Tolens' reagent.
23	05/03/23	Alkenes Teacher 2: Alkanes Teacher 1: Alkenes Teacher 2: Halogenoalkanes Teacher 1: Organic Analysis Teacher 2: Halogenoalkanes Teacher 1: Teacher 1: Teacher 1:	Addition Reactions of Alkenes Teacher 2: Combustion of Alkanes Chlorination of Alkanes Chlorination of Alkanes Free Radical Substitution Reactions Teacher 1: Nomenclature for Polymers Properties of Polymers Epoxyethane Teacher 2: Nucleophilic Substitution Mechanisms Elimination Mechanisms Teacher 1: Identification of Functional Groups by Test Tube Reactions Required Practical Teacher 2: Oxidation of Alkohols Elimination of Alkohols Elimination of Alkohols Elimination of Alkohols Elimination Functional	Outline the mechanisms for the electrophilic addition reactions of altenes with HBr, H2SO4 and Br2 Explain the formation of major and minor products by reference to the relative stabilities of primary, secondary and tertiary carbocation intermedia Teacher 2: Explain the production of pollutaris from internal combustion Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the reaction of methane with chlorine as a free-radical substitution mechanism involving initiation, propagation and termination steps Explain the production of pollutaris from internal combustion Explain the reaction of methane with chlorine as a free-radical substitution mechanism involving initiation, propagation and termination steps Explain the reaction of methane with chlorine as a free-radical substitution mechanism involving initiation, propagation and termination steps Draw the regeating unit from a mechanism from a section of the polymer Explain the rule of intermolecular forces between molecules of polyalkenes Explain the high reactivity of eposysthane Write equations for the reactions of eposysthane with water and with alcohols and outline the mechanism for these reactions. Explain the ensure of intermolecular forces between molecules of polyalkenes Explain the ensure of intermolecular of eposysthane Unite equations for the reactions of eposysthane with water and with alcohols and outline the mechanism for these reactions. Teacher 2: Outline the nucleophilic substitution mechanisms of halogenoalkanes reacting with nucleophiles OH-, CN- and NH3 Explain hut the carbon-halosen bond enthalos influences the rat of reaction Teacher 2: Identify the functional groups using reactions in the specification Teacher 2: Uwrite equations for these oxidation reactions (equations showing [O] as oxidant are acceptable] Explain how the method used to oxidise a primary alcohol determinies whether an aldehyde or carboxylic acid is obtained Use chemical tests to distinguis theorem alackbees includi
23	. 06/03/23 . 13/03/23	Alkenes Teacher 2: Alkanes Teacher 1: Alkenes Teacher 2: Halogenoalkanes Teacher 1: Organic Analysis Teacher 2: Alcohols Teacher 1: Organic Analysis	Addition Reactions of Alkenes Teacher 2: Combustion of Alkanes Chlorination of Alkanes Chlorination of Alkanes Free Radical Substitution Reactions Teacher 1: Nomenclature for Polymers Epoxyethane Teacher 2: Nucleophilic Substitution Mechanisms Elimination Mechanisms Elimination of Functional Groups by Test Tube Reactions Required Practical Teacher 1: Identification of Alkohols Elimination of Alkohols Elimination of Alkohols Elimination of Alkohols Teacher 1: Mass Spectrometry Infrared Spectroscopy	Outline the mechanisms for the electrophilic addition reactions of altenes with HBr, H2SO4 and Br2 Explain the formation of major and minor products by reference to the relative stabilities of primary, secondary and tertiary carbocation intermedia Explain the production of pollutants from internal combustion Explain the production of pollutants from internal combustion engines and write appropriate equations Explain the production of pollutants from internal combustion engines and write appropriate equations Explain the production of pollutants from internal combustion engines and write appropriate equations Explain the reaction of methane with chlorine as a free-radical substitution mechanism involving initiation, propagation and termination steps Teacher 1: Draw the regeating unit from a section of the polymer thain Draw the regeating unit from a section of the polymer Explain why addition polymers are unreactive Explain the high reactivity of expoyethane Write equations for the reactions of expoyethane Write equations for these constants of halogenoalianes reacting with nucleophiles OH-, CN- and NH3 Explain hub during aroups using reactions in the specification Teacher 1: Write equations for these constants of halogenoalianes reacting with nucleophiles OH-, CN- and NH3 Explain how the nucleophilic substitution mechanisms of halogenoalianes reacting with nucleophiles OH-, CN- and NH3 Explain how the method used to oxidise a primary alcohol determines whether an aldehyde or carboxylic acid is obtained Use chemical tests to distinguish between aldehydes and ketones including felling's solution and Tollens' reagent Outline the mechanism for the elimination of water from alcohols. Teacher 1:
23	. 06/03/23 . 13/03/23	Alkenes Teacher 2: Alkanes Teacher 1: Alkenes Teacher 2: Halogenoalkanes Teacher 1: Organic Analysis Teacher 2: Alcohols Teacher 1: Organic Analysis	Addition Reactions of Alkenes Teacher 2: Combustion of Alkanes Chlorination of Alkanes Chlorination of Alkanes Free Radical Substitution Reactions Teacher 1: Nomenclature for Polymers Epocyethane Teacher 2: Nucleophilic Substitution Mechanisms Elimination Mechanisms Teacher 1: Identification of Functional Groups by Test Tube Reactions Required Practical Teacher 2: Oxidation of Alkohols Elimination of Alkohols Elimination of Alkohols Infrared Spectroscopy Teacher 2:	Outline the mechanisms for the electrophilic addition reactions of alienes with HBr, H2SO4 and Br2 Explain the formation of major and minor products by reference to the relative stabilities of primary, secondary and tertiary carbocation intermedia Explain the production of pollutaris from internal combustion Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the reaction of methane with chlorine as a free-radical substitution mechanism involving initiation, propagation and termination steps Teacher 1: Draw the regeating unit from a encion of the polymer chain Draw the regeating unit from a exciton of the polymer chain Draw the regeating unit from a section of the polymer chain Draw the regeating unit from a exciton of the polymer chain Draw the regeating the polymers are unreactive Explain the high reactivity of googrethane Write equations for the reactions of epocythane with water and with alcohols and outline the mechanism for these reactions. Explain the endecyhilic substitution mechanisms of halogenoalkanes reacting with nucleophiles OH-, CN- and NH3 Explain why the carbon-halogene bond enthaloy influences the rate of reaction Teacher 2: Unite the uncleophilic substitution mechanisms of halogenoalkanes reacting with nucleophiles OH-, CN- and NH3 Explain why the network due to oxidise a primary alcohol determines whether an aldehyde or carboxylic acid is obtained Use chemical tests to distiguin binverse alcohols and kenteen including fielding's solution and Tollens' reagent Outline the mechanism for the elimination of water from alcohols. Teacher 1: Use there incluse a bot elimination of water from alcohols.
23	. 06/03/23 . 13/03/23	Alkenes Teacher 2: Alkanes Teacher 1: Alkenes Teacher 2: Halogenoalkanes Teacher 2: Halogenoalkanes Teacher 1: Organic Analysis Teacher 2: Alcohols Teacher 1: Organic Analysis Teacher 1: Organic Analysis	Addition Reactions of Alkenes Teacher 2: Combustion of Alkanes Chlorination of Alkanes Chlorination of Alkanes Free Radical Substitution Reactions Teacher 1: Nomenclature for Polymers Epoxyethane Teacher 2: Nucleophilic Substitution Mechanisms Elimination Mechanisms Elimination of Functional Groups by Test Tube Reactions Required Practical Teacher 1: Identification of Alkohols Elimination of Alkohols Elimination of Alkohols Elimination of Alkohols Teacher 1: Mass Spectrometry Infrared Spectroscopy	Outline the mechanisms for the electrophilic addition reactions of alikenes with HBr, H2504 and Br2 Explain the formation of major and minor products by reference to the relative stabilities of primary, secondary and tertiary carbocation intermedia Teacher 2: Full the groutication of pollutaris from internal combustion Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the production of pollutaris from internal combustion engines and write appropriate equations Explain the reaction of methane with chlorine as a free-radical substitution mechanism involving initiation, propagation and termination steps Teacher 1: Draw the regeating unit from a motion of the polymer chain Draw the regeating unit from a section of the polymer chain Draw the structure of inter monomer from a section of the polymer Explain the nature of intermolecular forces between molecules of polyalkenes Explain the the reaction of geopsysthane Write equations for the reactions of epocythane with water and with alcohols and outline the mechanism for these reactions. Teacher 2: Outline the nucleophilic substitution mechanisms of halogenoalkanes reacting with nucleophiles OH-, CN- and NH3 Explain the carbon-falseoen bond enthaloy influences the rate of reaction Teacher 2: Identify the functional groups using reactions in the specification Teacher 2: Write equations for these oxidation reactions (equations showing [O] a oxidant are acceptable] Explain how the method used to oxidise a primary alcohol determines whether an aldehyde or carbonylic acid is obtained Use chemical test to distinguis therewe aldehydes and ketones including felling's solution and Tollens' regent Outline the mechanism for the elimination of water from alcohols.