**Chemistry Paper 2: FOUNDATION 20th June**

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| **Unit** | **Section** | **Content** |
| **The rate and extent of chemical change** | **5.6.1** Rate of Reaction | -Calculating the rate of a reaction-Describe collision theory-Define activation energy-Describe and explain the factors that increase the rate of reaction -Describe and explain the effect of catalysts on rate of reaction  |
| **Required Practical 11:** investigate how concentration affects the rates of reaction by a method involving measuring the volume of a gas produced/change in colour | -identify independent, dependent and control variables -describe how to measure the dependent variable -analyse results and draw conclusions from graphed data -calculate rate of reaction from data |
| **5.6.2** Reversible reactions and dynamic equilibrium  | -identify and give examples of reversible reactions -apply the conservation of energy to reversible reactions-define dynamic equilibrium |
| **Organic chemistry** | **5.7.1 C**arbon compounds as fuels and feedstock  | -describe crude oil as a mixture of different length hydrocarbons-define the term hydrocarbon-identify the first 4 alkanes from their chemical formula and name them-Describe the trend in properties as hydrocarbon chain length increases-Describe and explain the process of fractional distillation-describe the process of cracking -describe the use of alkenes  |
| **Chemical Analysis** | **5.8.1** Purity, formulations and chromatography  | -Define the term pure substance in chemistry-Use melting and boiling point data to identify pure and impure substances -Define the term formulation and give examples |
| **Required Practical 12:** investigate how paper chromatography can be used to separate and tell the difference between coloured substances. | -Describe the properties of the mixtures that chromatography can be used to separate-Describe and explain the experimental process of chromatography -Explain how substances are separated using chromatography -Interpret chromatograms +-Calculate Rf values  |
| **Chemistry of the atmosphere** | **5.9.1** The composition and evolution of the Earth’s Atmosphere  | -describe the composition of the current atmosphere-describe the composition of the early atmosphere and explain theories of how the early atmosphere formed-explain how the early atmosphere changed to that of the present atmosphere  |
| **5.9.3** Common atmospheric pollutants and their sources | -State the atmospheric pollutants released into the atmosphere from the complete and incomplete combustion of fossil fuels-Describe the negative impacts of these pollutants on health and the environment  |
| **Using resources** | **5.10.1** Using the Earth’s resources and obtaining potable water  | -Describe the renewable and non-renewable resources that we get form the Earth and its atmosphere-Define the term potable water -Describe how potable water can be produced.-Describe the differences in the treatment of waste water, salt water and ground water |