Separate Science AQA GCSE Chemistry 8462 Additional Information Foundation Tier

Paper 1F 8462/1F

For this paper, the following list shows the major focus of the content of the exam:

- 4.1.1 A simple model of the atom, symbols, relative atomic mass, electronic charge and isotopes
- 4.1.2 The periodic table
- 4.2.1 Chemical bonds, ionic, covalent and metallic
- 4.2.2 How bonding and structure are related to the properties of substances
- 4.2.4 Bulk and surface properties of matter including nanoparticles
- 4.4.2 Reactions of acids
- 4.5.1 Exothermic and endothermic reactions

Required practical activities that will be assessed:

- Required practical activity 1: preparation of a pure, dry sample of a soluble salt from an insoluble oxide or carbonate, using a Bunsen burner to heat dilute acid and a water bath or electric heater to evaporate the solution.
- Required practical activity 2: determination of the reacting volumes of solutions of a strong acid and a strong alkali by titration.
- Required practical activity 4: investigate the variables that affect temperature changes in reacting solutions such as, eg, acid plus metals, acid plus carbonates, neutralisations, displacement of metals.

Topic not assessed in this paper:

- 4.5.2 Chemical cells and fuel cells

Paper 2F 8462/2F

For this paper, the following list shows the major focus of the content of the exam:

- 4.6.1 Rate of reaction
- 4.6.2 Reversible reactions and dynamic equilibrium
- 4.7.1 Carbon compounds as fuels and feedstock
- 4.8.3 Identification of ions by chemical and spectroscopic means
- 4.9.1 The composition and evolution of the Earth's atmosphere
- 4.10.1 Using the Earth's resources and obtaining potable water
- 4.10.2 Life cycle assessment and recycling
- 4.10.4 The Haber process and the use of NPK fertilisers

Required practical activities that will be assessed:

- Required practical activity 5: investigate how changes in concentration affect the rates of reactions by a method involving measuring the volume of a gas produced and a method involving a change in colour or turbidity. This should be an investigation developing a hypothesis.
- Required practical activity 6: investigate how paper chromatography can be used to separate and tell the difference between coloured substances. Students should calculate Rf values.
- Required practical activity 7: use of chemical tests to identify the ions in unknown single ionic compounds covering the ions from sections Flame tests through to Sulfates.
- Required practical activity 8: analysis and purification of water samples from different sources, including pH, dissolved solids and distillation.

Topic not assessed in this paper:

- 4.8.2 Identification of common gases