Specification Amendments and Clarifications for the current IGCSE Chemistry (4335) and Double Award Science (4437) for Examinations in 2009 and 2010

(26/10/2007)

Further to the notice posted on the international website regarding the redevelopment of IGCSE qualifications and the current specifications being valid for final examination in 2010, please note that Edexcel has amended the current specification content for IGCSE Chemistry (4335) and Double Award Science (4437) for examinations in **2009** and **2010.** This is in response to queries and feedback received from centres.
This amended specification will be used to set examinations in 2009 and 2010 whilst the IGCSEs are being redeveloped.

The amendments to the current specifications are listed below.

Topic 1 – Principles of chemistry

a) Atoms
- **remove** reference to "Brownian motion" in first bullet point

c) Relative formula masses and molar volumes
- please note that guidance has already been issued on moles calculations
- **remove** third bullet point "find the molar volume of some gases from experimental data and from relative formula masses and densities"

d) Chemical formulae and chemical equations
- **remove** "percentage purity" in fifth bullet point

f) Covalent substances
- in the fifth bullet point, **remove** "water" and "ammonia"
- **remove** the sixth bullet point "recall the existence of simple molecular crystals of ice, solid carbon dioxide, solid methane, solid ammonia and iodine at suitable temperatures"

g) Electrolysis
- **remove** last bullet point "recall that experiments on migration of ions provide some evidence for the ionic theory"

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Topic 2 – Chemistry of the elements

b) The Group 1 elements

- please note that guidance has already been issued on what is required to address the third bullet point

c) The Group 2 elements

- please note that guidance has already been issued on what is required to address the third bullet point

d) The Group 7 elements

- **remove** the fifth bullet point "describe the laboratory preparation of chlorine from hydrochloric acid"

e) Oxygen and oxides

- **remove** second bullet point "recall the industrial extraction of oxygen, by fractional distillation, from liquid air"

f) Sulphur and nitrogen

- **remove** the first bullet point "describe the physical characteristics of the allotropes of sulphur, including its allotropes"
- **remove** the fourth bullet point "recall the importance of the inert nature of nitrogen in protecting food"
- **remove** the fifth bullet point "describe the laboratory preparation of ammonia"

g) Hydrogen

- **remove** the second bullet point "describe the laboratory preparation of hydrogen"

h) The transition metals

- **remove** the third bullet point "describe the redox reaction of concentrated nitric acid on copper"
- please note that guidance has already been issued on what is required to address the fourth bullet point

Topic 3 – Organic chemistry

c) Ethanol

- **remove** the third bullet point "describe the reaction of ethanol with sodium"
- **remove** the final bullet point "recall that many esters have distinct pleasant smells"

Topic 4 – Physical chemistry

a) States of matter

- **remove** last bullet point "explain how heats of vaporisation can be used to compare the energy needed to separate the same number of different particles"

b) Acidity, alkalinity and neutralisation

- **remove** last bullet point "explain the terms 'weak' and 'strong' when applied to acids and alkalis in terms of dissociation"

Topic 5 – Chemistry in Society

a) Extraction and uses of metals

- **remove** seventh bullet point "describe the extraction of chromium by the thermite process"

d) The manufacture of some important chemicals

- **remove** fourth bullet point "describe the manufacture of nitric acid from ammonia"
- **remove** fifth bullet point "recall the sources of sulphur"

Please note that the removed items will **not** be examined in Examinations taking place in 2009 and 2010.