Rewarding Learning

**General Certificate of Secondary Education
2011–2012**

Science: Double Award (Modular)

Using Materials and Understanding Reactions
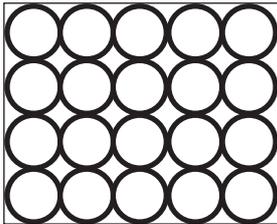
End of Module Test

Foundation Tier

[GDB01]

**WEDNESDAY 9 NOVEMBER 2011
9.15 am–10.00 am**

MARK SCHEME

1 **(a)** Hazard [1]

(b) Idea of warning of danger or idea that people who cannot read will recognise the symbol [1]
Do not allow the idea of eye-catching or different spoken languages

(c) **(i)** Idea that the fuel is flammable [1]

(ii) Idea that the plant food is harmful (allow irritant) [1] 4

2 **(a)** high melting point [1]

(b) metal/glass [1]

(c) malleable [1]
unreactive [1] 4

3 **(a)** liquid to a gas [1]

(b) saturated [1]

(c)

[1]

(d) chlorine
(**not** chloride) [1] 4

4 **(a)** low melting point
dull
low density
brittle
3 correct = 2   2 correct = 1 [2]

(b) magnesium hydroxide [1]
sodium nitrate [1] [2] 4

5 **(a)** **(i)** zinc chloride [1]

(ii) sulphuric acid [1] [2]

(b) **(i)** copper sulphate/zinc chloride [1]

(ii) copper oxide [1] 4

				AVAILABLE MARKS

6 **(a)** Any **two** from:
sugar
citric acid
carbon dioxide [2]

(b) water [1]

(c) cola (drink)
allow fizzy drink or sugar solution or citric acid solution [1]

(d) carbon dioxide (gas) causes the drink to be fizzy [1]
idea that the solubility of gases decreases as the temperature
increases [1] [2]   6

7 **(a)** 3 different elements [1]

(b) 2 oxygen atoms [1]

(c) 5 [1]

(d) 1^- or -1 [1]
(**not** negative or $-$)

(e) hydrogen (ion) [1]   5
allow H^+ (**not** H)

8 **(a)** Idea that the brown colour has spread throughout the gas jars [1]

(b) (3rd option) some of the oxygen moved into the lower jar and some of
the bromine moved into the top gas jar [1]

(c) diffusion [1]   3

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Particle	Relative charge	Relative mass	Position in atom: shells/nucleus
proton	$+1$	1 [1]	nucleus [1]
electron	-1 [1]	$\dfrac{1}{1840}$	shells
neutron	0	1 [1]	nucleus

[4]   4

10 **(a)** Soap (solution) [1]

(b) Idea it takes most soap solution to produce a lather [1]

(c) A [1]

(d) C [1]   4

	Mass number	Number of protons	Number of neutrons	Number of electrons		AVAILABLE MARKS
11	206	82	124	82		
	207	82	125	82		
	208	82	126	82		
	[1]	[1]	[1]	[1]	[4]	4

12 (a) False [1]

(b) True [1]

(c) True [1]

(d) True [1] 4

Total **50**

111993

4