

Multiple Choice Answers

Q20: D

Q21: C

Q22: A

Multiple Choice Answers

Q22: D

3(a)	→ BaSO ₄ (s) + 2NaCl(aq) M1 2NaCl (only) M2 (s) and (aq)
3(b)	M1 <i>M_r</i> BaCl ₂ = 208 M2 208 × 0.1 = 20.8
3(c)	0.100 ÷ 1.25 (× 1000) = 80 (cm ³)
3(d)	white
3(e)	residue
3(f)	M1 rinsing the residue (with water) M2 (mass was greater) because (dry) residue contains solid sodium chloride / NaCl adds to the mass (of residue)
3(g)	precipitation
3(h)	M1 named soluble barium salt other than barium chloride e.g. (barium) nitrate M2 named soluble sulfate salt other than sodium sulphate e.g. potassium (sulfate) / ammonium (sulfate) M3 named insoluble barium salt other than barium sulfate e.g. (barium) carbonate

3(a)(i)	aluminium oxide
3(a)(ii)	cryolite
3(a)(iii)	carbon
3(a)(iv)	Al ³⁺ + 3e ⁻ → Al M1 only Al ³⁺ + 3e ⁻ on the left M2 equation completely correct
3(b)(i)	unreactive coating of aluminium oxide
3(b)(ii)	2Al + 3Zn ²⁺ → 2Al ³⁺ + 3Zn
3(b)(iii)	M1 Zn ²⁺ = +2 M2 Zn = 0 / zero
3(b)(iv)	decrease in oxidation number
3(c)(i)	enthalpy change (of reaction)
3(c)(ii)	(forward) reaction is exothermic
3(d)	oxides that react with acids AND with bases to produce a salt and water
3(e)	2NaOH + Ga ₂ O ₃ → 2NaGaO ₂ + H ₂ O M1 NaGaO ₂ on the right-hand side of an equation M2 equation fully correct
3(f)	M1 GaBr ₃ M2 Ga ₂ (SO ₄) ₃

Multiple Choice Answers

Q19: C