Question	Marking Guidance	Mark	Comments
4(a)	Na_2O is an ionic <u>lattice</u> / giant ionic / ionic crystal	1	CE= 0 if molecules, atoms, metallic mentioned Mention of electronegativity max 1 out of 2
	With strong forces of attraction between ions	1	Allow strong ionic bonds/lots of energy to separate ions
4(b)	SO_3 is a larger molecule than SO_2	1	Allow greater M_r / surface area
	So <u>van der Waals'</u> forces <u>between molecules</u> are stronger	1	Any mention of ions, CE= 0
4(c)	Ionic	1	Do not allow ionic with covalent character
	Contains <u>O^{2-}</u> ions / oxide ions	1	Equations of the form $O^{2-} + H^+ \rightarrow OH^-$ / $O^{2-} + 2H^+ \rightarrow H_2O$ / $O^{2-} + H_2O \rightarrow 2OH^-$ score M2 and M3
	These / O^{2-} ions (accept protons to) form OH^- / hydroxide / water (must score M2 to gain M3)	1	
4(d)(i)	$SO_2 + H_2O \rightarrow H^+ + HSO_3^-$	1	Allow $2H^+ + SO_3^{2-}$ but no ions, no mark Only score (d)(ii) if (d)(i) correct
4(d)(ii)	Reaction is an equilibrium / reversible reaction displaced mainly to the left / partially ionised / dissociated	1	Allow reaction does not go to completion
4(e)	SiO_2 reacts with bases / NaOH / CaO / $CaCO_3$	1	Ignore incorrect formulae for silicate