

<ul style="list-style-type: none">Describe two physical properties of liquid or solid water that distinguishes it from 'normal' liquids or solids.	Marks 3
<p>The solid is less dense than the liquid.</p> <p>The density of the liquid can decrease on cooling.</p> <p>The melting and boiling points are significantly higher than would be predicted from extrapolation of the other group 16 dihydrides.</p> <p>It is capable of dissolving ionic solids to a larger extent than most other liquids.</p>	
<ul style="list-style-type: none">Molecules with multiple resonance structures are said to be "resonance stabilised". Briefly explain the origin of this extra stability in terms of electron waves and molecular orbitals.	2
<p>The presence of resonance Lewis structures indicates the presence of molecular orbitals that extend over more than a pair of atoms. This greater delocalisation of electrons produces lower energies and hence increased stabilisation of the molecule.</p>	