Unit 19 Period 3 Elements & Their Oxides (Paper 1 & 3)

19.1 Properties of Period 3 elements and their oxides

The reactions of Na and Mg with water.

The trends in the reactions of the elements Na, Mg, Al, Si, P and S with oxygen, limited to the formation of Na₂O, MgO, Al₂O₃, SiO₂, P₄O₁₀, SO₂ and SO₃ The trend in the melting point of the highest oxides of the elements Na–S The reactions of the oxides of the elements Na–S with water, limited to Na₂O, MgO, Al₂O₃, SiO₂, P₄O₁₀, SO₂ and SO₃, and the pH of the solutions formed. The structures of the acids and the anions formed when P₄O₁₀, SO₂ and SO₃ react with water.

You should be able to:

- explain the trend in the melting point of the oxides of the elements Na–S in terms of their structure and bonding
- explain the trends in the reactions of the oxides with water in terms of the type of bonding present in each oxide
- write equations for the reactions that occur between the oxides of the elements Na–S and given acids and bases.

