

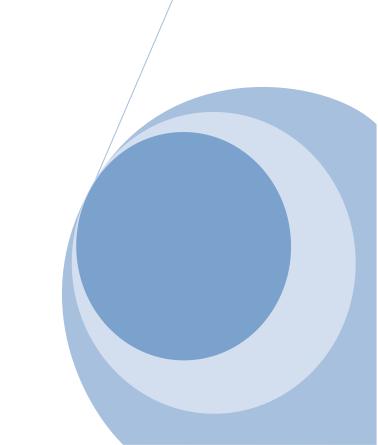
K Education Centre

AS Chemistry

C4: Inorganic Chemistry and Periodic Table -1

Assignment Questions

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Inorganic Chemistry and Periodic Table -1

- Q1: Explain the trend in first ionisation energy down group2.
- Q2: Barium reacts vigorously with water.
- a) Write an equation for this reaction including state symbols.
- b) Describe the observations that would be made in this reaction.
- Q3: Explain what is meant by thermal stability?
- Q4: Potassium nitrate KNO₃ and Calcium nitrate Ca(NO₃)₂, decomposes when heated.
- a) Write an equation for the decomposition of potassium nitrate.
- b) Write an equation for the decomposition of Calcium nitrate.
- Q5: Barium nitrate solution can be used to detect the presence of sulfate ions. Explain why dilute nitric acid is added to the test solution before adding Barium Nitrate.
- Q6: Barium hydroxide solution is used in titrations.
- a) Write equations for reactions of Barium Hydroxide with:
 - i) Hydrochloric acid
 - ii) Sulfuric acid
- b) Out of above two reactions which one will be forming a precipitate. Give the name and colour of the precipitate.
- Q7: Describe how you would carry flame tests for solid compounds.
- Q8: Why group1 chlorides produced coloured flames while magnesium chloride cant be detect using flame test.
- Q9: State the flame tests for Calcium compounds and Barium compounds.