



KEC

# K Education Centre



## AS Chemistry

C4: Inorganic Chemistry and Periodic Table -1

Assignment Questions

©KEducationCentre  
Year 2024

## Inorganic Chemistry and Periodic Table -1

Q1: Explain the trend in first ionisation energy down group 2 .

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  $\text{KNO}_3$  and Calcium nitrate  $\text{Ca}(\text{NO}_3)_2$  , 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 group 1 chlorides produced coloured flames while magnesium chloride cant be detect using flame test.

Q9: State the flame tests for Calcium compounds and Barium compounds.