

Name of the Student: _____

Max. Marks : 17 Marks

Time : 17 Minutes

Mark Schemes

Q1.

(a) sulfuric acid / H_2SO_4 1

(b) hydriodic acid / HI **OR** hydrobromic acid / HBr 1

(c) add **dilute** ammonia solution

Notes

* *do not allow 'concentrated ammonia' or 'ammonia'* 1

precipitate / ppt disappears / dissolves **OR** colourless solution forms 1

(d) would react with the acid / no gas evolved in tests 1

[5]

Q2.

Add (hydrochloric) acid to the mixture;

Allow correct acid eg nitric acid.

1

Filter to isolate strontium sulphate;

Do not allow 'drain' or decant'

1

[2]

Q3.

(a) *Trend: increases*

Wrong trend CE = 0 and in (b)

1

Reason: More electron shells

OR implies more shell / sub-shells / levels

1

(b) *Trend: decreases*

1

Explanation: Metallic bonds weaker
OR weaker attraction between ions (or nuclei) &
delocalised electrons

1

Atoms (ions) larger

*This mark is only scored if previous mark given. **CE if mention molecules, intermolecular forces ionic bonding***

1

(c) *Trend: increases*

1

Equation for magnesium: $\text{Mg} + \text{H}_2\text{O} \rightarrow \text{MgO} + \text{H}_2$

1

Equation for strontium: $\text{Sr} + 2\text{H}_2\text{O} \rightarrow \text{Sr}(\text{OH})_2 + \text{H}_2$

1

(d) *Formula:* BaSO_4

1

Use: Test for sulfate ion
OR Pigment, for x-rays, barium meal, paint

1

[10]