Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Q1.

The following pairs of compounds can be distinguished by simple test−tube reactions.

For each pair of compounds, give a reagent (or combination of reagents) that, when added separately to each compound, could be used to distinguish between them.
State what is observed in each case.

(a) Butan−2−ol and 2−methylpropan−2−ol

Reagent _____

Observation with butan−2−ol

_____

_____

Observation with 2−methylpropan−2−ol

_____

_____

(3)

(b) Propane and propene

Reagent _____

Observation with propane

_____

_____

Observation with propene

_____

_____

(3)

(c) Aqueous silver nitrate and aqueous sodium nitrate

Reagent _____

Observation with aqueous silver nitrate

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_____

_____

Observation with aqueous sodium nitrate

_____

_____

(3)

(d) Aqueous magnesium chloride and aqueous barium chloride

Reagent _____

Observation with aqueous magnesium chloride

_____

_____

Observation with aqueous barium chloride

_____

_____

(3)

(Total 12 marks)

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Q2.

The elements in Group 2 from Mg to Ba can be used to show the trends in properties down a group in the Periodic Table.

(a) State the trend in atomic radius for atoms of the elements down Group 2 from Mg to Ba
Give a reason for this trend.

Trend _____

Reason _____

_____

_____

_____

_____

(2)

(b) The Group 2 elements react with water.

(i) State the trend in reactivity with water of the elements down Group 2 from Mg to Ba

_____

(1)

(ii) Write an equation for the reaction of strontium with water.

_____

(1)

(c) Give the **formula** of the hydroxide of the element in Group 2 from Mg to Ba that is most soluble in water.

_____

(1)

(Total 5 marks)

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