Practice Question Set For A-Level
Subject : Chemistry
Paper-1 Topic: Inorganic 1

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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Q1.

The following tests were carried out to identify an unknown green salt **Y**.

An aqueous solution of **Y** gave a cream precipitate of compound **A** when reacted with silver nitrate solution.

Compound **A** gave a colourless solution when reacted with concentrated ammonia solution.

Another aqueous solution of **Y** gave a green precipitate **B** when reacted with sodium carbonate solution.

The green precipitate **B** was filtered and dried and then reacted with sulfuric acid to give a pale green solution containing compound **C** and a colourless gas **D**.

(a) Identify by name or formula the compounds **A**, **B**, **C**, **D** and **Y**.

Identity of **A** _____

Identity of **B** _____

Identity of **C** _____

Identity of **D** _____

Identity of **Y** _____

(5)

(b) Write the simplest ionic equation for the reaction of silver nitrate solution with the anion that is present in compound **Y**.

_____

(1)

(c) Write the simplest ionic equation for the reaction that occurs between the green precipitate **B** and sulfuric acid.

_____

(1)

(Total 7 marks)

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Q2.

This question is about the chemical properties of chlorine, sodium chloride and sodium bromide.

(a) Sodium bromide reacts with concentrated sulfuric acid in a different way from sodium chloride.

Write an equation for this reaction of sodium bromide and explain why bromide ions react differently from chloride ions.

Equation _____

Explanation _____

_____

_____

_____

(3)

(b) A colourless solution contains a mixture of sodium chloride and sodium bromide.

Using aqueous silver nitrate and any other reagents of your choice, develop a procedure to prepare a pure sample of silver bromide from this mixture.
Explain each step in the procedure and illustrate your explanations with equations, where appropriate.

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(6)

(c) Write an ionic equation for the reaction between chlorine and cold dilute sodium hydroxide solution.
Give the oxidation state of chlorine in each of the chlorine-containing ions formed.

_____

_____

_____

(2)

(Total 11 marks)

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