

# Chem!stry

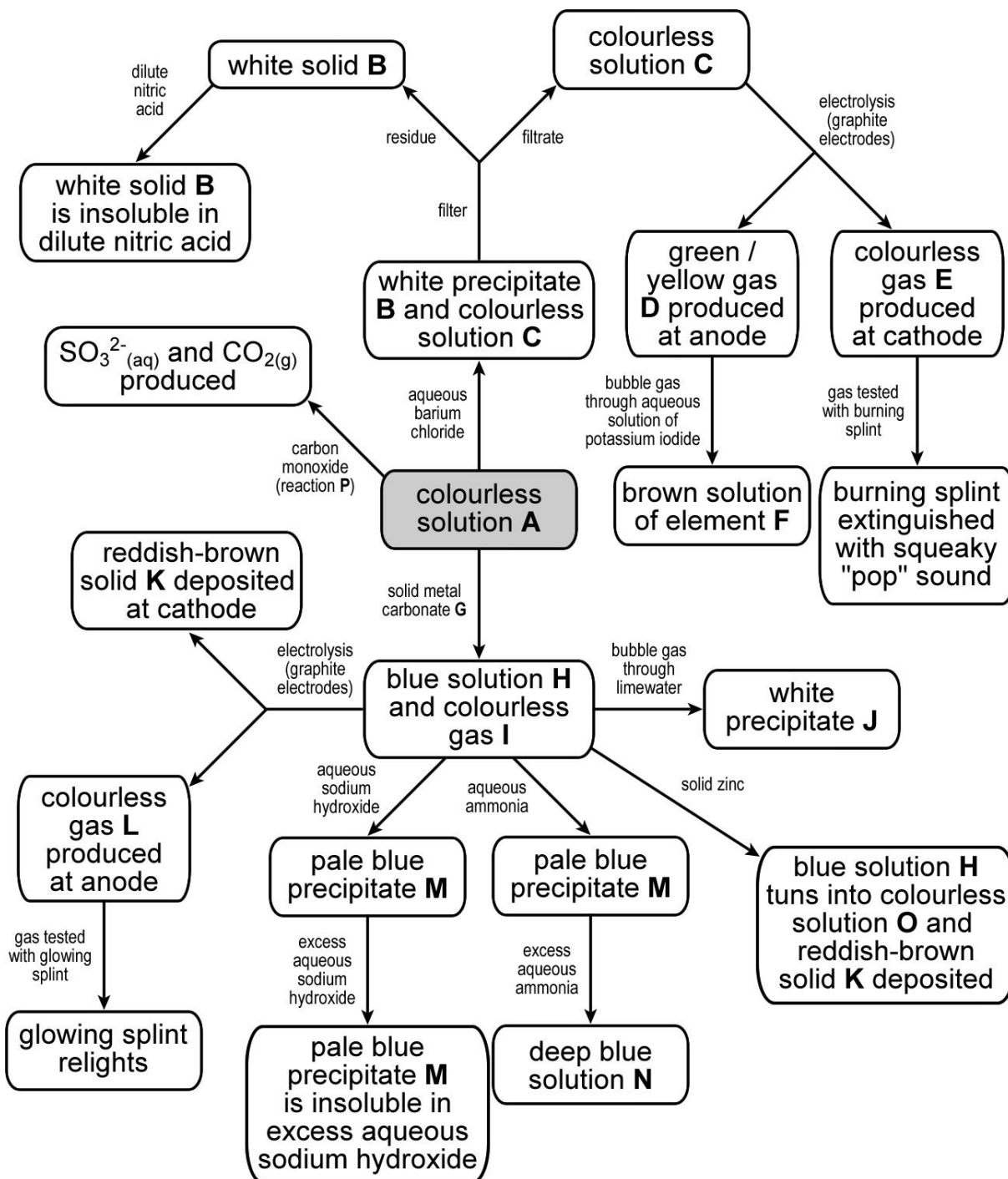
Name: ..... ( )

Class: .....

Date: ..... / ..... / .....

## Revision of Qualitative Analysis, Redox and Electrochemistry #1

Study the reaction sequence below, and then answer the questions on page 2.



**Question 1:**

Using chemical formulae, identify all of the chemicals **A** to **O**:

<b>A</b> is .....	<b>B</b> is .....	<b>C</b> is .....
<b>D</b> is .....	<b>E</b> is .....	<b>F</b> is .....
<b>G</b> is .....	<b>H</b> is .....	<b>I</b> is .....
<b>J</b> is .....	<b>K</b> is .....	<b>L</b> is .....
<b>M</b> is .....	<b>N</b> is .....	<b>O</b> is .....

**Question 2:**

Write ionic half-equations to describe the electrolysis of colourless solution **C**:

Anode: .....

Cathode: .....

**Question 3:**

Write ionic half-equations to describe the electrolysis of blue solution **H**:

Anode: .....

Cathode: .....

**Question 4:**

Write the ionic equation for the reaction between blue solution **H** and solid zinc:

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**Question 5:**

- a) Write the balanced chemical equation that describes the reaction between green / yellow gas **D** and aqueous potassium iodide:

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- b) Write the ionic half-equation that describes what happens to the green / yellow gas **D**:

.....

- c) Write the ionic half-equation that describes the formation of element **F**:

.....

- d) i) What has been oxidised? .....

ii) What has been reduced? .....

- e) i) What is the oxidising agent? .....

ii) What is the reducing agent? .....

**Question 6 (Advanced):**

- a) For reaction **P**, write the ionic half-equation that describes the formation of  $\text{SO}_3^{2-}(\text{aq})$ :

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- b) For reaction **P**, write the ionic half-equation that describes the formation of  $\text{CO}_2(\text{g})$ :

.....

- c) Combine your answers to **6 a)** and **6 b)** together and hence write the overall ionic equation to describe reaction **P**:

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- Click on the QR code given below to view the answers to this assignment.



[http://www.chemist.sg/electro\\_chem/electro\\_chem\\_and\\_qa/electro\\_chem\\_qa\\_1\\_ans.pdf](http://www.chemist.sg/electro_chem/electro_chem_and_qa/electro_chem_qa_1_ans.pdf)