

Name:



Chemistry 91167

Level 2

Demonstrate understanding of oxidation-reduction

**Practice task**

Redox Reactions

Credits: 3

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of oxidation-reduction.	Demonstrate in-depth understanding of oxidation-reduction.	Demonstrate comprehensive understanding of oxidation-reduction.

### Introduction

Three redox reactions are described with expected observations.

For EACH reaction:

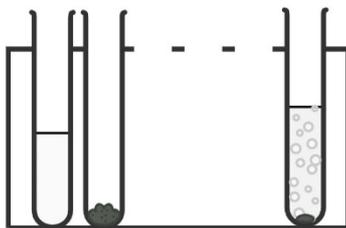
- Identify the redox reactants and products by name or formulae
- Explain the observations by linking them to the appearance (colour and state) of the species involved
- Write balanced half equations and a balanced full redox reaction
- Identify the oxidation and reduction process and justify your choices using oxidation numbers or electron transfer

A resource sheet of the formula and appearance of redox reactants and products is provided.

You have 50 minutes to do this task in closed book, test conditions.

**REACTION A:**

A piece of zinc metal was placed in some dilute hydrochloric acid, HCl. Bubbles of a colourless gas were seen, and the piece of metal disappeared after a few minutes.



Redox reactants formulae:

--

Redox products formulae:

--

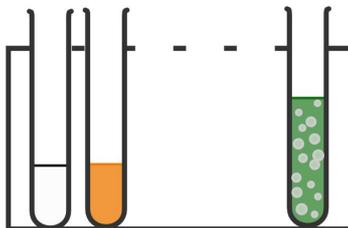
Explanation of the observations:


Oxidation Half Equation
Reduction Half Equation
Full Redox equation

Explanation of the oxidation-reduction processes:


**REACTION B:**

When hydrogen peroxide solution is added to acidified potassium dichromate solution, the orange colour disappeared, the solution turned green and bubbles of a colourless gas were seen. This gas relit a glowing splint.



Redox reactants formulae:

--

Redox products formulae:

--

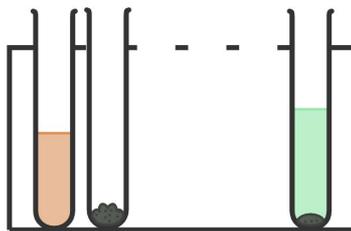
Explanation of the observations:


Oxidation Half Equation
Reduction Half Equation
Full Redox equation

Explanation of the oxidation-reduction processes:


### REACTION C:

When a solution of iron(III) sulfate is added to zinc powder, the solution turned a pale green.



Redox reactants formulae:

--

Redox products formulae:

--

Explanation of the observations:


Oxidation Half Equation

--

Reduction Half Equation

--

Full Redox equation

--

Explanation of the oxidation-reduction processes:
