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**

Mark Schemes

Q1.

Mark Range	The marking scheme for this part of the question includes an overall assessment for the Quality of Written Communication (QWC). There are no discrete marks for the assessment of QWC but the candidates' QWC in this answer will be one of the criteria used to assign a level and award the marks for this part of the question **Descriptor** an answer will be expected to meet most of the criteria in the level descriptor
4-5	– claims supported by an appropriate range of evidence – good use of information or ideas about chemistry, going beyond those given in the question – argument well structured with minimal repetition or irrelevant points – accurate and clear expression of ideas with only minor errors of grammar, punctuation and spelling
2-3	– claims partially supported by evidence – good use of information or ideas about chemistry given in the question but limited beyond this – the argument shows some attempt at structure – the ideas are expressed with reasonable clarity but with a few errors of grammar, punctuation and spelling
0-1	– valid points but not clearly linked to an argument structure – limited use of information or ideas about chemistry – unstructured – errors in spelling, punctuation and grammar or lack of fluency

(a) Kills bacteria / prevents bacterial diseases QWC **1**

Chlorine is a toxic substance **1**

$Cl_2 + H_2O \rightarrow HCl + HClO$ **1**

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(b) $Cl_2(aq)$ to $Br^-(aq)$; yellow-orange or yellow-red or QWC
yellow-brown solution

1

$2Br^- + Cl_2 \rightarrow 2Cl^- + Br_2$
or molecular equation

1

$Cl_2(aq)$ to $I^-(aq)$; brown/black solution formed or QWC
black/brown/grey ppt/solid

1

$2I^- + Cl_2 \rightarrow 2Cl^- + I_2$
or molecular equation

1

(c) Bromide: Brown/orange fumes

1

Bromine produced

1

Sulphur dioxide produced

1

Iodide: Purple fumes or black/brown/grey solid QWC
or smell of bad eggs

1

Iodine produced

1

SO_2, S, H_2S produced (one mark each)

3

Half-equations $2Br^- \rightarrow Br_2 + 2e^-$1
OR $2I^- \rightarrow I_2 + 2e^-$

1

$H_2SO_4 + 2e^- + 2H^+ \rightarrow SO_2 + 4H_2O$
OR $H_2SO_4 + 6e^- + 6H^+ \rightarrow S + 4H_2O$
OR $H_2SO_4 + 8e^- + 8H^+ \rightarrow H_2S + 4H_2O$

1

Overall equation Any correct equation based on half-equations QWC

1

[18]

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