

## UNIT 5B FOUNDATION PRACTICE QUIZ 1 – OXIDATION AND REDUCTION

Consider the following reactions and use them to answer Questions 1 – 7:

Reaction W	$\text{H}_2 + \text{Br}_2 \rightarrow 2\text{HBr}$ 0 0 +1,-1 - H is oxidized and Br is reduced
Reaction X	$\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$ 0 +1,-1 +2,-1 0 – Mg is oxidized and H is reduced
Reaction Y	$\text{CaO} + 2\text{HCl} \rightarrow \text{CaCl}_2 + \text{H}_2\text{O}$ +2,-2 +1,-1 +2,-1 +1,-2 – there is no oxidation or reduction
Reaction Z	$\text{Mg} + \text{CuO} \rightarrow \text{MgO} + \text{Cu}$ 0 +2,-2 +2,-2 0 – Mg is oxidized and Cu is reduced

1.	In Reaction W, what is the charge on H in $\text{H}_2$ ? 0
2.	In Reaction W, what is the charge on H in HBr? +1
3.	In Reaction Y, what is the charge of the Ca in $\text{CaCl}_2$ ? +2
4.	In Reaction X, what is oxidized? Mg
5.	In Reaction X, what is reduced? H
6.	What is the reducing agent in Reaction Z? Mg because it is oxidized

7.	Which of the following is a correct oxidation half-equation?	
	A	$\text{Zn}^{2+} + 2\text{e}^- \rightarrow \text{Zn}$ This is reduction
✓	B	$\text{Zn} \rightarrow \text{Zn}^{2+} + 2\text{e}^-$ This is oxidation
	C	$\text{Zn}^{2+} \rightarrow \text{Zn} + 2\text{e}^-$ this is nonsense (the electrons are on the wrong side)

8.	Which of the following is a correct reduction half-equation?	
✓	A	$\text{Zn}^{2+} + 2\text{e}^- \rightarrow \text{Zn}$ This is reduction
	B	$\text{Zn} \rightarrow \text{Zn}^{2+} + 2\text{e}^-$ This is oxidation
	C	$\text{Zn}^{2+} \rightarrow \text{Zn} + 2\text{e}^-$ this is nonsense (the electrons are on the wrong side)

[Here is the link to the answer sheet](#)