



Year 9 Science

End of Unit
25 marks

Chemical Reactions I

Instructions: 1. Answer all questions on this paper.

Date _____

Name _____

Class _____

- 1 a) In the chemical reaction $X + Y \rightarrow XY$,
which are the reactants and which are the products?

_____ (2)

- b) Write symbolic equations for the following atomic equations:



- 2 Which of the following chemical reactions are balanced (Circle correct answer)?

a) $Zn + HCl \rightarrow ZnCl_2 + H_2$ Balanced Unbalanced (½)

b) $2S + 3O_2 \rightarrow SO_2$ Balanced Unbalanced (½)

c) $C_2H_6 + 5O_2 \rightarrow 3CO_2 + 4H_2O$ Balanced Unbalanced (½)

d) $H_2SO_4 + 2NaOH \rightarrow Na_2SO_4 + 2H_2O$ Balanced Unbalanced (½)

- 3 Balance each of the following chemical equations:

(1 each)

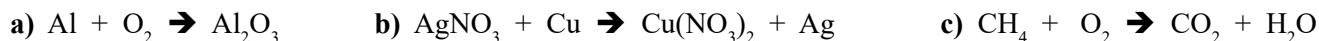
a) $Cu + O_2 \rightarrow CuO$

b) $NaCl \rightarrow Na + Cl_2$

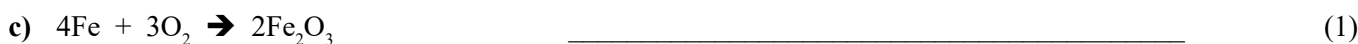
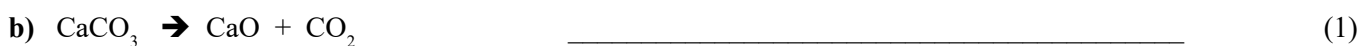
c) $NaCl \rightarrow Na + Cl_2$



4 Balance each of the following chemical equations: (2 each)



5 Classify each of the following chemical reactions as one of combination, decomposition, single replacement, or double replacement.



6 Copy and complete the following double replacement reaction:



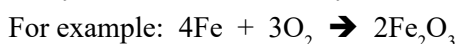
7 Given the following acids and bases:

Acid	Base
HCl	NaOH
HNO_3	$\text{Ca}(\text{OH})_2$
H_2SO_4	$\text{Mg}(\text{OH})_2$

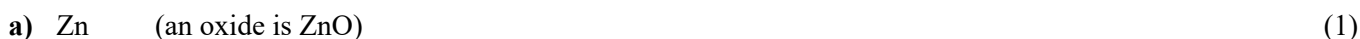
Which acid and which base would you mix together to produce the following salts?



8 Many metals will chemically combine with oxygen in the air to form oxides.



Attempt to write balanced symbolic equations for each of the following metals combining with oxygen.



Did you find your silly mistakes?

