

Q5. Sulfuric acid is a strong acid.

(a) (i) What is meant by the term *strong acid*?

.....[1]

(ii) Describe how you could measure the pH of dilute sulfuric acid.

.....  
.....[1]

(b) Many plants cannot grow in soils which are too acidic.

Describe and explain how soils which are too acidic can be treated to reduce the acidity.

.....  
.....  
.....[2]

Q6: Sodium and rubidium are alkali metals.

(a) Explain how metals conduct electricity.

.....[1]

(b) State **two** trends in the properties of the alkali metals.

.....  
.....[2]

(c) Name the products formed when rubidium reacts with water.

..... and ..... [2]

Q7. Dry air contains nitrogen, oxygen, argon and other gases.

(a) State the percentage compositions by volume of nitrogen and oxygen present in dry air.

oxygen .....%      nitrogen .....%      [1]

(b) The formula for oxygen gas is O<sub>2</sub>.

(i) Draw a 'dot-and-cross' diagram of an oxygen molecule.  
Show only the outer shell electrons.

(ii) What is the formula of argon gas?      [1]

.....[1]

(c) State one other use of argon.

.....[1]