

BA SANGAM COLLEGE

YEAR 11

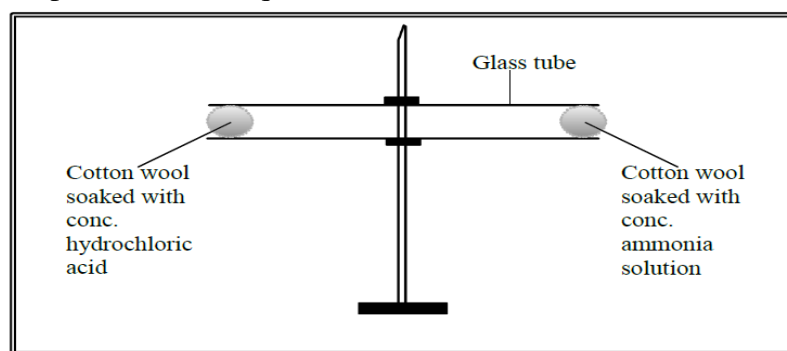
CHEMISTRY

WORKSHEET 3

STRAND 2

INVESTIGATING MATTER

1. Name a quantity that needs to be kept constant when studying the relationship between pressure and volume of a fixed mass of gas.
2. Using kinetic theory of gases, explain how a dented, uncracked table tennis ball can be brought back into its original shape.
3. The following set-up was done by a group of students to demonstrate and compare the rates of diffusion of gases. Use this set-up to answer the questions that follow.



- (a) Make an illustration in the set-up given, for the observation in this experiment which shows that a chemical reaction has occurred.
 - (b) Identify an important factor that needs to be considered during this experiment and state a reason for its importance.
4. Aluminium is a soft, silvery-white chemical element with the atomic symbol.
 - (a) Write the electron configuration of an aluminium atom.
 - (c) Draw the electron structure diagram of an aluminium atom.
 - (c) State how many electrons the aluminium atom must lose to gain stability.
 5. Some elements exist as isotopes.
 - (a) Define isotopes.
 - (b) State an example of isotopes.
 6. Write the formula of the following ions.

2.

(a) Calcium ion

(b) Oxygen ion

7. Two types of chemical bonds are ionic and covalent bonds.

(a) Describe how an ionic bond is formed.

(b) State the type of elements that make up covalent bonds.

8. Consider the elements given in the key list below and answer the questions that follow.

Na	H	Mg	O
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Using any two elements, write the formula of:

(a) an ionic substance

(b) a covalent substance

9. Consider the substances given in the key list below and answer the questions that follow.

Tea	Mg	H ₂ O	NaCl
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From the key list identify a/an:

(a) Pure element (b) Impure mixture

(c) Pure compound (ionic nature) (d) Pure compound (covalent nature)

THE END