YEAR 7 SCIENCE
CHEMICAL SCIENCES
REVISION - TEST 1

1. Replace each of the following expressions with a single word. Choose from:

   Solute Solvent Solution Emulsion Mixture Colloid Sediment Suspension Filtrate

   (a) Liquid in which a substance dissolves.
   (b) Insoluble particles dispersed in a liquid.
   (c) Liquid passing through filter paper.
   (d) Substance that dissolves in a liquid.
   (e) What is formed when a solute dissolves in a solvent?
   (f) An insoluble substance that sinks to the bottom.

2. (a) Is fizzy soft drink a solution, solvent or solute?

   (b) List the solutes likely to be found in a bottle or can of fizzy soft drink.

3. (a) What is the difference between a ***dilute*** and ***concentrated*** solution?

   Dilute:

   Concentrated:

   (b) What substance should you add to salt water to make it:

      (i) more concentrated?

      (ii) less concentrated?

4. (a) What is the difference between a ***pure substance*** and a ***mixture***?

(b) Which of the following are ***pure substances***? (Underline them.)

Sea water Air Ice Coca Cola Plastic in a chair

5. (a) Define the terms ***solute*** and ***solvent***.

Solute:

Solvent:

(b) Apply your definitions to a cup of black tea. i.e. Name the solute and the solvent.

Solute: Solvent:

6. Summarise the following separating processes briefly, stating when to use each one and what is separated.

- Sieving

- Filtering

- Magnetic

- Decanting

- Evaporating

- Distilling

- Chromatography

7. Describe a possible method to separate the following mixtures.

   (a) Sand and silt in water.

   (b) Iron filings in sand.

(c) Sugar dissolved in water.

(d) Dust from air.

(e) Oil and water.

8. A student is given a mixture of iron filings in a beaker of copper sulphate ($CuSO_4$) solution. Her teacher has asked her to separate each of the components (iron filings, $CuSO_4$ and water) and collect them.

   Describe (in dot-point form) how she should do this, listing each separation technique required. At each step, list the substance recovered.

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