

YEAR 7 SCIENCE  
CHEMICAL SCIENCES (MODIFIED)  
TEST

NAME: SOLUTIONS

CLASS: \_\_\_\_\_

Mark: 24

**Achievement standards being tested**

Mixtures, including solutions, contain a combination of pure substances that can be separated using a range of techniques.

Mark	ND	NW	C	HC	O
Mark Range	0-4	5-8	9-13	14-17	18-24

**Multiple Choice** Write the answer to each question in the appropriate box at right.

1. Water is a **solvent** for alcohol. This means that alcohol:

- A will not dissolve in water.
- B will dissolve in water.
- C will react chemically with water.
- D will dissolve only in water.

2. Which mixture could be separated using a **magnet**?

- A Nails and paperclips.
- B Iron filings and sulphur.
- C Iron filings and paperclips.
- D Sand and sulphur.

3. A solid which dissolves in another substance is called a:

- A solvent.
- B solution.
- C solute.
- D sediment.

4. Which one of the following is **incorrect**? An **insoluble substance** may:

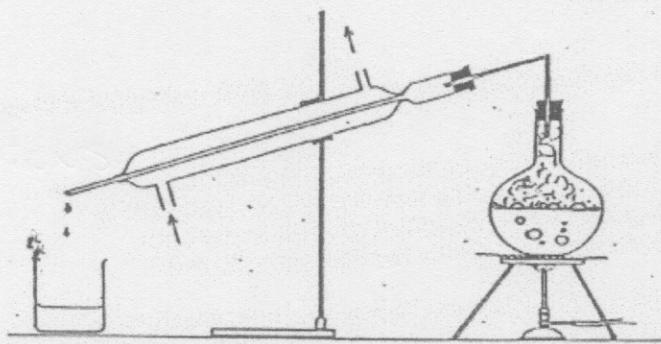
- A form a solution.
- B form a suspension.
- C form a sediment.
- D float on top of a liquid.

5. Suppose you were given a white powder and told to stir it into a beaker of water. You would know that the powder had dissolved in the water if:

- A the powder settled to the bottom of the beaker and left the water clear.
- B the powder floated on top of the water and did not mix.
- C the powder disappeared and left the water clear.
- D the powder disappeared and made the water cloudy.

QUESTION	ANSWER
1	B
2	B
3	C
4	A
5	C
6	C
7	B
8	A
9	B

6.



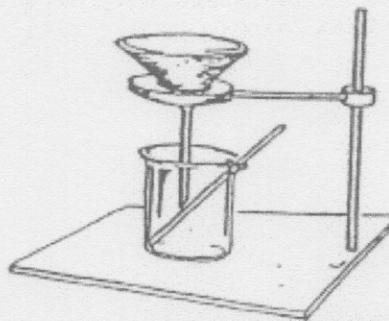
The process shown in the diagram above is called:

- A evaporation.
- B solidification.
- C distillation.
- D decantation.

7. Inks can be separated into their coloured components by:

- A filtration.
- B chromatography.
- C crystallisation.
- D distillation.

8.



The apparatus shown above could be used to separate:

- A sand from water.
- B salt from sugar.
- C salt from water.
- D iron from iron sulphide.

9. What is the best way to obtain sugar from a sugar solution?

- A Condensation.
- B Evaporation.
- C Sieving.
- D Filtration.

**Short Answer**

Write the answer to the questions in the spaces provided.

1. Choose the correct definition for the term in the first column of the table below. Write the ***correct letter*** in the second column.

TERM	CORRECT LETTER	DEFINITION
solvent	F	A: substances that cannot dissolve.
saturated solution	D	B: the solid that settles on the bottom of a container of water.
sediment	B	C: pouring water off the top, leaving a solid behind.
sieving	G	D: no more solid is able to dissolve in a liquid.
insoluble	A	E: small particles that float in a liquid, making it cloudy.
suspension	E	F: the substance that dissolves a solid.
decanting	C	G: small particles pass through and large ones remain behind.

(7)

2. To make a chocolate milkshake ***more concentrated***, should you add ***more milk*** or ***more flavouring?***

More flavouring. (1)

(1)

3. A squeeze of **lemon juice** is mixed with a glass of **cold water** to make a home-made **lemon drink**. Put the underlined words into the correct spaces below.

(a) solute      lemon juice (1)

(b) solvent      water (1)

(c) solution      lemon drink (1)

(3)

4. Tom has a mixture of small pebbles and some iron nails. He has to separate them and realises that iron has a special property that he can use.

- (a) Which of the following methods of separating substances would he use?

- decanting
- magnetic
- filtering
- sieving
- evaporating
- distillation

Magnetic (1)

(1)

- (b) Why would he use this method?

Iron nails are magnetic,  
Pebbles are not magnetic } (1)

(1)

- (c) Mary has a solution of blue copper sulphate in a beaker. She wants to have the copper sulphate by itself in the beaker.

- (i) Which of the above separation methods would she use?

Evaporation or distillation (Either - 1 mark) (1)

- (ii) Explain how this method works.

Water evaporates off.  
Copper sulphate stays behind. } (1)

(1)