

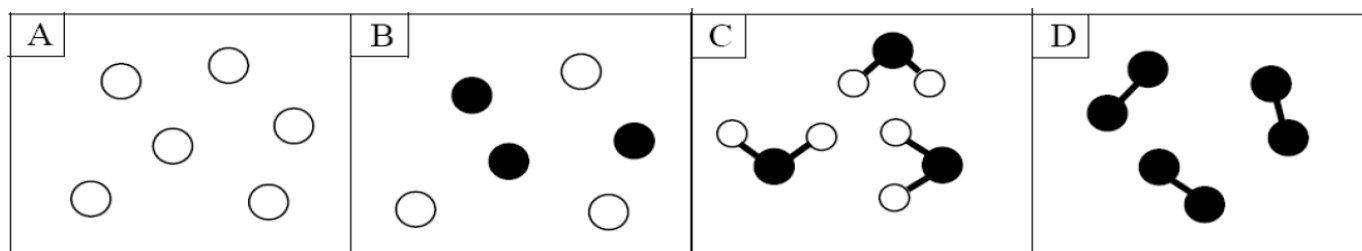


St. Ninian's High School
Science Department



S1 Chemistry
Substances Homework 1 (12 Marks)

1. The diagrams below can be used to represent elements, mixtures and compounds.



- (a) Which diagram could be used to represent a mixture? 1 mark
- (b) Explain your choice. 1 mark
2. State the term used to describe a substance that dissolves. 1 mark
3. State the term used to describe a substance that does not dissolve. 1 mark
4. Using your knowledge of chemistry, describe how you would separate a mixture of sand and copper chloride (salt) and then prepare a solid sample of the salt.
You should discuss the separation techniques required and you may wish to use diagrams in your answer. 3 marks
5. The table below shows how the mass of salt dissolved in water is affected as a result of changing the temperature. Using the information in the table, answer the questions below.

Temperature (°C)	Mass of salt dissolved in 100 cm ³ of water (grams)
20	27
40	29
60	31
80	33

- (a) At which temperature is the highest mass of salt dissolved? 1 mark
- (b) Write a statement to explain the effect of temperature on the mass of salt dissolved in 100 cm³ of water. 1 mark

*****YOU MUST COLLECT GRAPH PAPER FROM YOUR TEACHER TO ANSWER THIS QUESTION*****

6. A separating technique called distillation can be used to form alcoholic drinks containing a high alcohol content. Some examples can be found in the table below.

Alcoholic Drink	Alcohol Content (%)
Whiskey	45
Port	20
Vodka	38
Gin	40

Present the information from the table in the form of a bar graph.

3 marks

