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~~GCSE Chemistry, AQA, OCR, EDEXCEL. The development of the model of the atom - Answers~~

AQA, OCR, Edexcel

GCSE Science

GCSE Chemistry

Compounds and Mixtures Answers

Includes:

Atoms, elements and compounds

Mixtures

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Total Marks: /29

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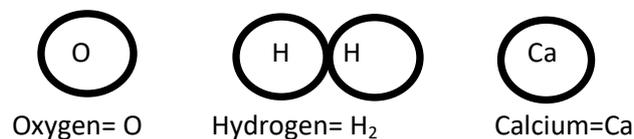
Atoms, elements and compounds

Q1: What is an atom?

A= A substance made up of only one type of atom.

(1 mark)

Q2: Atoms in elements are represented by a chemical symbol. For example, O represents an atom of oxygen. Fill in the atoms with a chemical symbol.



(2 marks)

Q3: Some elements, for example hydrogen, exist as two atoms together. What are these called?

A= Molecules

(1 mark)

Q4: How are compounds formed?

A= From elements by a chemical reaction/ 2 or more elements chemically combined

(1 mark)

Q5: How can it be determined if a chemical reaction has occurred?

A= 1 mark for each of the following:

- Detectable energy change
- Formation of a new substance

(2 marks)

Q6: Give the chemical equation for the following compounds.

A= 1 mark for each of the following:

Water – H₂O

Carbon Dioxide – CO₂

Sodium Chloride – NaCl

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(3 marks)

Q7: How are compounds separated into elements?

A= Chemical reactions

(1 mark)

Mixtures

Q8: Circle the definition of a mixture.

2 or more elements
or compounds not
chemically bonded
together

Combination of 2
elements by chemical
reaction

(1 mark)

Q9: Give 3 ways of physically separating a mixture.

A= Accept any 3 of the following:

- Filtration
- Crystallisation
- Distillation (Simple/ Fractional)
- Chromatography

(3 marks)

Q10: Give two differences between a compound and a mixture

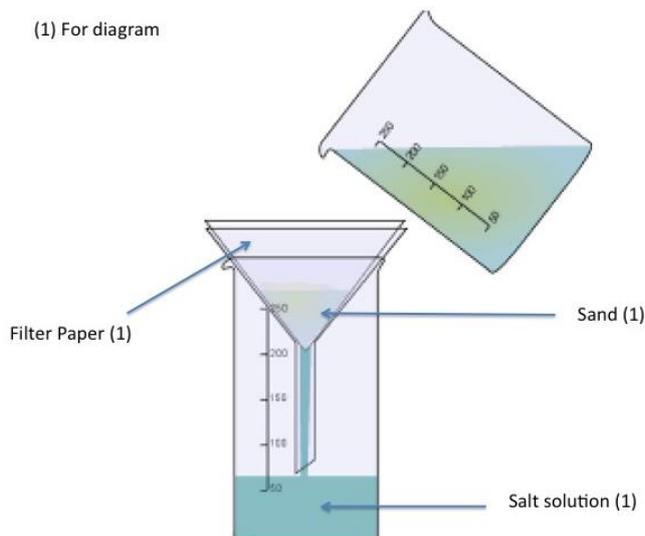
Accept any two of the following:

- New substances are formed when compounds are made from elements, no new substances are formed in a mixture.
- Compounds are made through a chemical reaction. There are no chemical reactions in the formation of a mixture.
- Mixtures are separated by physical processes. Compounds are separated by chemical reactions.

(2 marks)

Q11: i) Students want to separate a mixture of sand, salt and water. Draw and label a simple apparatus set up to filter the sand from the mixture.

(1) For diagram



(4 marks)

ii) How could the students separate the remaining salt from the water?

A= Crystallisation

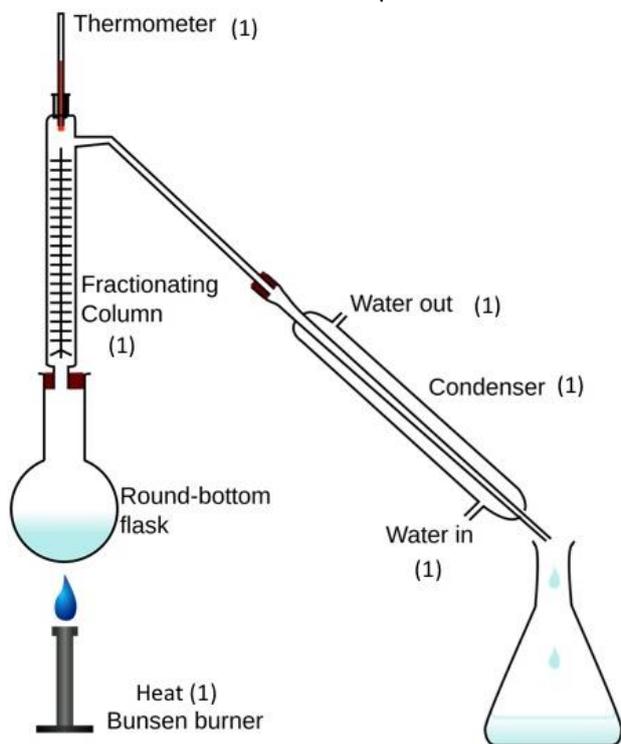
(1 mark)

Q12: How can scientists collect a solvent when separating it from the solid?

A= Distillation

(1 mark)

Q13: Label the distillation set up shown below.



(6 marks)