

Past-paper walk-through

Elements, compounds and mixtures ■ 2.1

eXercise

Questions in this set

- 0620/22 N25 Q4 ■ 1 mark
- 0620/41 J25 Q1 ■ 10 marks

Reading the mark scheme

- **B1** a mark that stands on its own – the point is either made or not.
- **M1** a *method* mark: the right approach, even if the number is wrong.
- **A1** an *answer* mark, and it usually needs its M mark first.
- **C1** a working mark on the way to the answer.
- **//** separates answers the examiner accepts equally.
- **ecf** = error carried forward: a later part is marked on your own earlier answer.
- **owtte** = “or words to that effect” – the wording need not match.

Question 4

0620/22 N25 ■ Q4 ■ 1 mark

4 Which row describes elements, compounds and mixtures?

	elements	compounds	mixtures
A	all the atoms are the same type	contain different atoms chemically joined together	can be separated using physical processes
B	all the atoms are the same type	can be separated into new substances using chemical processes	contain different atoms chemically joined together
C	can be separated into new substances using chemical processes	all the atoms are the same type	contain different atoms chemically joined together
D	contain different atoms chemically joined together	all the atoms are the same type	can be separated using physical processes

Question 4

Solution 4

Answer: **A**

Why

- An element contains only one type of atom.
- A compound contains different atoms *chemically joined* in fixed proportions.
- A mixture is not chemically joined, which is why physical methods can separate it.

Question 1

0620/41 J25 ■ Q1 ■ 10 marks

- 1 A list of substances is shown.

bauxite

calcium oxide

ethanol

graphite

methane

nitrogen

oxygen

propane

propene

sulfur dioxide

Answer the questions using the list of substances.

Each substance may be used once, more than once, or not at all.

State which of the substances:

(a) is a basic oxide

Question 1

(b) contains carbon atoms only

Question 1

(c) is manufactured by fermentation

Question 1

(d) is produced by the decomposition of vegetation

Question 1

(e) contains aluminium oxide

Question 1

(f) causes acid rain

Question 1

(g) is a simple molecule with 11 atoms

Question 1

(h) is produced when limestone thermally decomposes in the blast furnace

Question 1

- (i) is a gas that is approximately 21% of clean, dry air

Question 1

(j) is a monomer in addition polymerisation.

Question 1

[Total: 10]

Solution 1

(a)

Mark scheme

- calcium oxide
- 1

Solution 1

(b)

Mark scheme

- graphite
- 1

Solution 1

(c)

Mark scheme

- ethanol
- 1

Solution 1

(d)

Mark scheme

- methane
- 1

Solution 1

(e)

Mark scheme

- bauxite
- 1

Solution 1

(f)

Mark scheme

- sulfur dioxide
- 1

Solution 1

(g)

Mark scheme

- propane
- 1

Solution 1

(h)

Mark scheme

- calcium oxide
- 1

Solution 1

(i)

Mark scheme

- oxygen
- 1

Solution 1

(j)

Mark scheme

- propene
- 1