

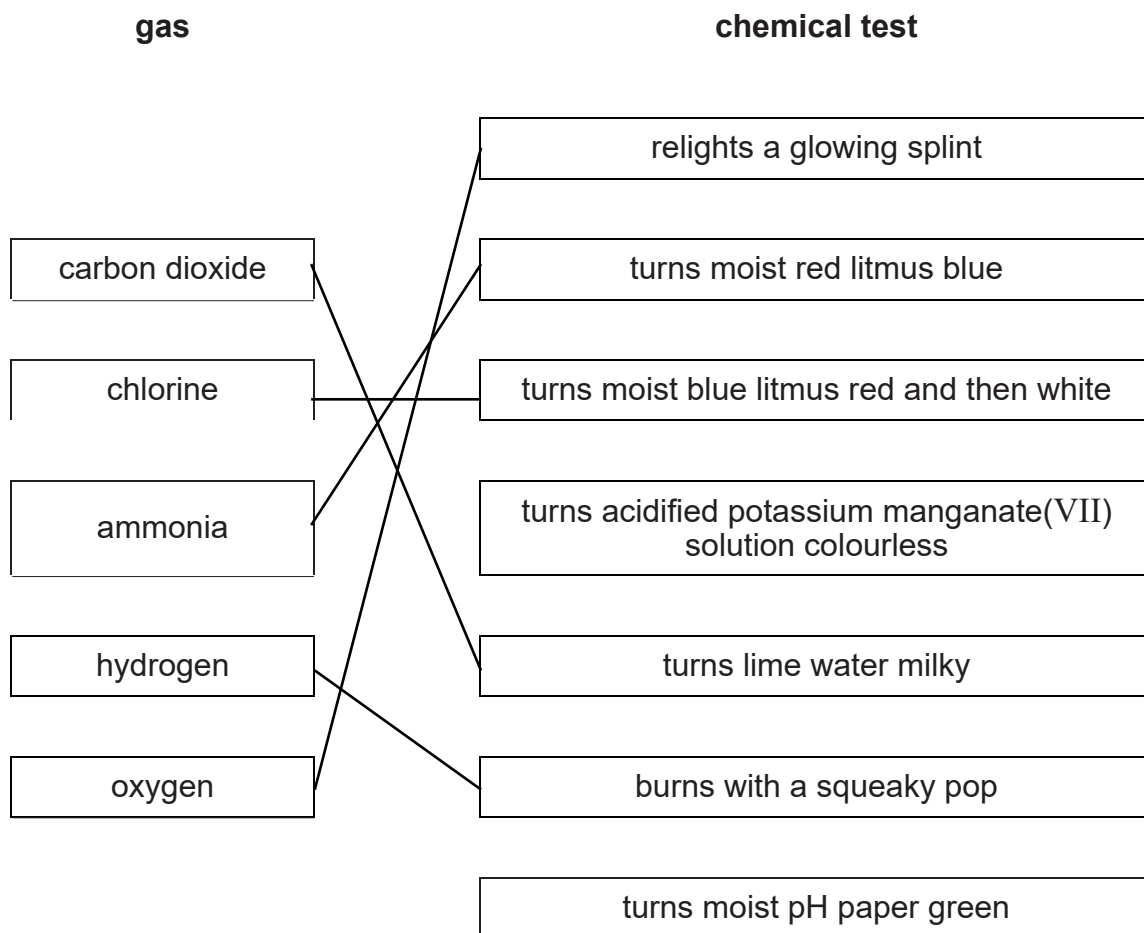
GCSE Chemistry A (Gateway Science)

J248/02 C4-C6 and C7 Foundation (Foundation Tier)

Question Set 11

1 Chemical tests are used to identify gases, anions and cations.

(a) Draw lines to match the **gas** to the correct **chemical test**.



[5]

(b) A student uses the flame test to identify the cations in a solid.

Describe how she should do a flame test.

Moisten nichrome wire and dip into sample
Introduce the sample into blue flame of
Bunsen burner.

[3]

(c) The student does three chemical tests on an unknown solution.

Look at her results.

Chemical test	Result
pH probe	pH value is 3
dilute hydrochloric acid followed by barium chloride solution	white precipitate
dilute nitric acid followed by silver nitrate solution	white precipitate

Which ions are present in the solution? Choose from:

calcium

hydrogen

iron(II) chloride

sulfate

Explain your answer.

- Hydrogen ions cause the solutions to have pH 3 [4]
- sulfate because white precipitate with barium chloride
- Iron(II) chloride because white precipitate with silver nitrate

Total Marks for Question Set 11: 12

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