

0 1

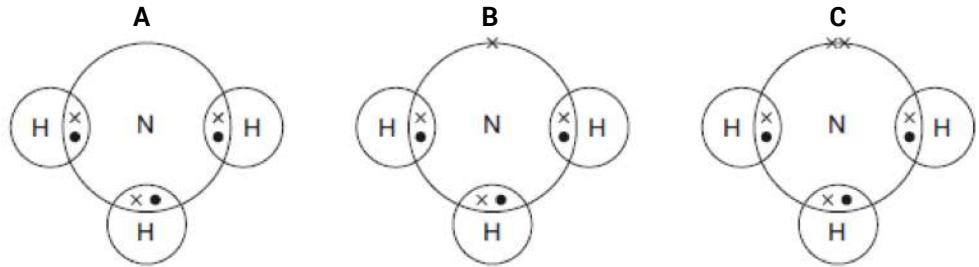
Fertilisers contain elements that plants need.

Fertilisers can be made from ammonia.

0 1 . 1

Which diagram, A, B, or C, represents the electronic structure of an ammonia molecule?

[1 mark]



The electronic structure of an ammonia molecule is shown in diagram .....

0 1 . 2

What is the correct formula of ammonia?

Draw a ring around the correct answer.

[1 mark]



0 2

A student made ammonium nitrate by reacting ammonia solution with an acid.

0 2 . 1

Name the acid used to make ammonium nitrate.

[1 mark]

.....

0 2 . 2

Complete the sentence.

[1 mark]

The student added a few drops of ....., which changed colour when the ammonia solution had neutralised the acid.

0 2 . 3

The student added charcoal and filtered the mixture.

This produced a colourless solution of ammonium nitrate.

How is solid ammonium nitrate obtained from the solution?

[1 mark]

.....

0 2 . 4

A farmer put ammonium nitrate fertiliser onto a field of grass.

Suggest what would happen to the grass.

[1 mark]

.....

.....

0	3
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Ammonia is used to make ammonium nitrate.

0	3	.	1
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Calculate the relative formula mass (Mr) of ammonium nitrate,  $\text{NH}_4\text{NO}_3$

[2 marks]

Relative atomic masses (Ar): H = 1; N = 14; O = 16

.....

.....

Relative formula mass = .....

(Total 8 marks)

**End of Question**  
**See next page for Data Sheet**

