

Past-paper walk-through

Fertilisers ■ 10.2

eXercise

Questions in this set

- 0620/21 J25 Q30 ■ 1 mark
- 0620/22 J25 Q18 ■ 1 mark

Question 30

0620/21 J25 ■ Q30 ■ 1 mark

30 Nitrogen, phosphorus and potassium are essential elements for improved plant growth.

Which mixture provides all **three** essential elements?

	mixture	formulae
A	ammonium phosphate + potassium chloride	$(\text{NH}_4)_3\text{PO}_4$ + KCl
B	ammonium phosphate + ammonium nitrate	$(\text{NH}_4)_3\text{PO}_4$ + NH_4NO_3
C	ammonium phosphate +	$(\text{NH}_4)_3\text{PO}_4$ +

Question 30

	ammonium chloride	NH_4Cl
D	ammonium nitrate + potassium chloride	NH_4NO_3 + KCl

Solution 30

Answer: **A**

Why

- Nitrogen must come from an ammonium or a nitrate ion.
- Phosphorus must come from a phosphate ion, and potassium from a potassium salt.
- Ammonium phosphate supplies N and P, and potassium chloride supplies K – all three.

Question 18

0620/22 J25 ■ Q18 ■ 1 mark

18 A farmer incorrectly adds two substances to the soil at the same time.

They react together to form a gas which turns damp red litmus paper blue.

What are the two substances?

- A** a basic oxide and a potassium salt
- B** a basic oxide and an ammonium salt
- C** an acidic oxide and a potassium salt
- D** an acidic oxide and an ammonium salt

Solution 18

Answer: **B**

Why

- A gas that turns damp red litmus blue is ammonia – the only common alkaline gas.
- Ammonia is released when an ammonium salt meets a base.
- So a basic oxide has been mixed with an ammonium fertiliser, losing the nitrogen to the air.