

Question 16 (Answer: **A**)

- Both NO and NO₂ take part in photochemical smog, cycling in sunlight with unburnt hydrocarbons.
- Both are also oxidised in the air and end up as nitric acid, which falls as acid rain.
- So both oxides are involved in both processes.

Question 24 (Answer: **A**)

- An ammonium salt releases ammonia when warmed with any *base*.
- Sodium hydroxide, barium hydroxide and sodium oxide are all bases, so 1, 2 and 3 all work.
- Hydrochloric acid is an acid, so mixture 4 gives no ammonia.

Question 23 (Answer: **C**)

- Statement 1 is right: the nitrogen oxides end up as nitric acid in rain.
- Statement 3 is right too: they catalyse the oxidation of SO₂ to SO₃ in the atmosphere.
- Statement 2 is wrong – photochemical smog forms with unburnt *hydrocarbons*, not with carbon monoxide.

Question 24 (Answer: **C**)

- An ammonium salt gives off ammonia when warmed with a base.
- Calcium hydroxide is the only base among the four reagents.
- Hydrochloric acid, bromine water and acidified dichromate are not bases.