

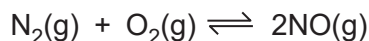
GCSE Chemistry B (Twenty First Century Science)
J258/01 Breadth in Chemistry (Foundation Tier)

Question Set 23

Multiple Choice Questions

1

An industrial firm makes nitrogen oxide, NO, by the following reaction:



(a)

The \rightleftharpoons sign shows that the reaction is 'in equilibrium'.

Which two statements are correct at equilibrium?

Tick (✓) **two** boxes.

The reaction $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{NO}(\text{g})$ has stopped.

There is a mixture of N_2 , O_2 and NO.

The reaction $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{NO}(\text{g})$ goes in both directions.

The reaction $2\text{NO}(\text{g}) \rightarrow \text{N}_2(\text{g}) + \text{O}_2(\text{g})$ does not happen.

[2]

(b)

The NO then reacts with air and water to form nitric acid. Nitric acid is an ingredient used to make fertilisers.

Why is nitric acid not used as a fertiliser on its own?

Tick (✓) **one** box.

It contains nitrogen.

It is not an ammonium compound.

It is too acidic.

[1]

(c)

In theory, 28 g of nitrogen makes a maximum of 60 g of NO.

However, in a reaction, 28 g of nitrogen makes 9.0 g of NO.

Calculate the percentage yield of the reaction.

Percentage yield =% [2]

Total Marks for Question Set 23: 5

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