

APOLLO

Ideal gases

SL

Chemistry

First assessment 2025

6 questions | mark schemes

Mark-scheme answers

Chemistry SL | Paper 1A | May 2025 TZ1 | Q4 | 1 marks

4. A

Chemistry SL | Paper 1A | May 2025 TZ1 | Q6 | 1 marks

6. D

Chemistry SL | Paper 1A | Nov 2025 TZ1 | Q5 | 1 marks

5. C

Chemistry SL | Paper 1A | Nov 2025 TZ3 | Q5 | 1 marks

5. C

1.	(a)	Any one of: forms nitrous acid / HNO_2 / nitric acid / HNO_3 ✓ contributes to acid rain ✓ catalyses decomposition of ozone / contributes to ozone hole/depletion ✓ «respiratory» irritant/toxic ✓	Accept suitable equations showing acid rain formation or ozone depletion. Accept photochemical smog/forms NO_2.	1 max						
1.	(b)	$T = 200 + 273$ «K» ✓ «$n = PV/RT$» «$n = \frac{(1.0 \times 10^5)(1.0 \times 10^{-3})}{8.31(200 + 273)}$» «$n =$» 0.025 «mol» ✓ «$0.10\% \times 0.025 =$» 2.5×10^{-5} «mol» ✓	Award [3] for correct final answer.	3						
1.	(c)	<table border="1"><thead><tr><th>Element</th><th>Initial oxidation state</th><th>Final oxidation state</th></tr></thead><tbody><tr><td>N/Nitrogen</td><td>+2</td><td>0</td></tr></tbody></table> N/nitrogen AND +2 → 0 ✓	Element	Initial oxidation state	Final oxidation state	N/Nitrogen	+2	0	Accept II but not 2 or 2+ instead of +2.	1
Element	Initial oxidation state	Final oxidation state								
N/Nitrogen	+2	0								

Question	Answers	Notes	Total
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Mark-scheme answers

Chemistry SL | Paper 1A | Specimen 2025 | Q5 | 1 marks

5. C