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Department:
Education
PROVINCE OF KWAZULU-NATAL

GENERAL EDUCATION AND TRAINING

GRADE 8

NATURAL SCIENCES PRACTICAL TASK MARKING GUIDELINES TERM 2 2025

MARKS: 20
DURATION: 1 hour

N.B. This Memorandum consists of 2 pages (excluding cover page)

PART A

1. Bubbles / gas formed on the eggshell. ✓ (1)
2. Any relevant investigative question, that tries to establish a causal relationship, e.g.:
 - What products will form when eggshell/calcium carbonate reacts with white vinegar? ✓
 - Will the reaction between eggshell/calcium carbonate and white vinegar produce carbon dioxide gas? (1)
3. A ✓ (1)
4. Calcium carbonate / eggshell reacting with white vinegar / acetic acid ✓ (1)
5. Any TWO relevant observations, e.g.
 - The egg feels soft and wobbly. ✓
 - The shell disappeared because the hard calcium carbonate has reacted with the vinegar. ✓
 - In its place is a powdery coating. (2)
6. A chemical reaction ✓ took place between the calcium carbonate (eggshell) and the acetic acid (the vinegar), causing the eggshell to break down ✓, forming new substances. (2)
- 7.1 The experiment is repeated to ensure reliability of results / conclusion. ✓ (1)
- 7.2 Any ONE relevant answer, e.g.
 - The amount of vinegar used (should be enough to cover the eggshell) ✓
 - Vinegar should not be diluted (1)
- 7.3 The vinegar might have been diluted so much that there was not enough to completely react with the eggshell, ✓ thereby producing a different outcome. ✓ (2)

TOTAL PART A: [12]

PART B

1.1 Magnesium ✓
Oxygen ✓ (2)

1.2 Oxygen / O₂ ✓

There will be fewer oxygen particles compared to magnesium particles when occupying the same amount of space(volume)✓.

OR

Oxygen particles are spread much further apart compared to magnesium particles when occupying the same volume. (2)

1.3 Solid phase✓
Particles are close together (attracted to each other)✓ (2)

1.4 There are the same number of atoms before and after the reaction. ✓✓ (2)

TOTAL PART B: [8]

TOTAL: [20]