



NATIONAL
SENIOR CERTIFICATE

GRADE 11

NOVEMBER 2020

PHYSICAL SCIENCES P2
(CHEMISTRY)
EXEMPLAR

MARKS: 100
TIME: 1 hour



The question paper consists of 10 pages, including 4 extra sheets.
Use permanent marker for writing and drawing.

QUESTION 3

PHYSICAL SCIENCES PAPER 2

INTERMOLECULAR FORCES

GRADE 11

NOVEMBER 2020

Examiner's use: _____ Physical Sciences P2

QUESTION 3 starts on a NEW page.

- 3.1 The boiling points in the table below were obtained during an investigation carried out to measure the boiling points of pure 1-hexanol. The table also lists the ΔH_{vap} and ΔH_{fusion} for 1-hexanol in kJ mol⁻¹ and 1 mol of 1-hexanol.

Compound	Molecular mass (M _r)	Boiling point (°C)
A	102	16,2
B	102	21

- 3.1.1 Define the term boiling point. (2)
- 3.1.2 Is pure 1-hexanol only composed of A and B? at 0 °C and 101 kPa of external pressure? (2)
- 3.1.3 Name the type of intermolecular force that exists between molecules of both compounds A and B and its relative value of these molecules. (2)
- 3.1.4 What kind of the compound A or B is 1-hexanol? Explain based on structural formula? (2)
- 3.1.5 What compound B or A is not the higher vapor pressure? (2)
- 3.1.6 What compound B or A is not the higher vapor pressure? (2)
- 3.1.7 Explain why the boiling point of compound B is higher than that of compound A. (2)

Compound B (M_r 102) is shown in the table. Use a suitable molecular mass that both compounds A and B for the 1-hexanol boiling point of 16,2 °C.

- 3.1.8 Explain why the boiling point of compound B is higher than that of compound A. (2)

- 3.2 Add table 3.2 is added to each column of pure substances (100) and water. It is added to each column of pure substances (100) and water. It is added to each column of pure substances (100) and water.



- 3.2.2 Explain the process in QUESTION 3.2.1 about the solution in the intermolecular forces between. (2)

Physical Science Paper 2 Intermolecular Forces Investigation

Daniela Niemeyer



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