higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

CHEMISTRY N5

(15040015)

19 April 2021 (X-paper)
09:00–12:00

This question paper consists of 6 pages and 1 periodic table.

231Q1A2119

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

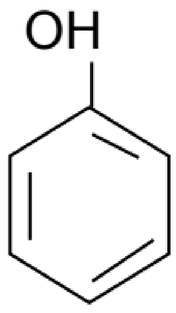
NATIONAL CERTIFICATE
CHEMISTRY N5
TIME: 3 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Start each question on a new page.
5. Use only a black or blue pen.
6. Write neatly and legibly.

QUESTION 1

The table below represents six organic compounds.

A	$CH_2 = CH_2 – CH_3$	**B**	
C		**D**	$CH_3(CH_2)_4CH_3$
E	$CH_3 – C \equiv C – CH_3$	**F**	$CH_3 – \overset{\overset{O}{\|\|}}{C} – CH_3$

1.1 Which compound is classified as heterocyclic? (1)

1.2 Which compound is classified as a saturated hydrocarbon? (1)

1.3 To which functional group does compound F belong to? (1)

1.4 Write the general formula of compound D. (1)

1.5 Write the IUPAC names of compounds A, B and F. (3 × 2) (6)

1.6 Draw and name all possible structural isomers of compound D. (3 × 2) (6)

1.7 Write a balanced reaction equation for the combustion of compound E. (4)

1.8 Give the type of reaction that occurs when compound A reacts with bromine. (1)

1.9 Give the type of hybridisation that occurs at C1 and C2 at compound E. (2)

1.10 Which compound is soluble in water? Explain the answer. (2)

[25]