



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE CHEMICAL PLANT OPERATION N5

(8050015)

**24 November 2022 (X-paper)
09:00–12:00**

Drawing instruments and nonprogrammable calculators may be used.

**This question paper consists of 5 pages, 1 periodic table, 1 steam table
and 2 information sheets.**

191Q1E2224

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
CHEMICAL PLANT OPERATION 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.
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QUESTION 1

Give ONE word/term for each of the following descriptions. Write only the word/term next to the question number (1.1–1.5) in the ANSWER BOOK.

- 1.1 Energy possessed because of movement (velocity) of matter.
- 1.2 A turbine in which the energy is received from an external source.
- 1.3 A material of necessity inert or unreactive which passes through a system from a single input stream to a single output stream and remains completely unchanged during the process.
- 1.4 The reaction from SO_2 to SO_3 .
- 1.5 A mixer for light powders such as insecticides.

(5 × 1)

[5]**QUESTION 2**

Choose a/an word/item from COLUMN B that matches a description in COLUMN A. Write only the letter (A–H) next to the question number (2.1–2.5) in the ANSWER BOOK.

COLUMN A		COLUMN B	
2.1	Energy due to motion	A	heat
2.2	Mixer for heavy, stiff or gummy materials	B	fishtail blade
2.3	It is also called a double naben blade	C	oxygen
2.4	Can be used in food processing industries	D	nitrogen
2.5	It is colourless, odourless and tasteless gas with 79% of air by volume	E	hydrochloric acid
		F	potential energy
		G	bunbury mixer
		H	ribbon mixer

(5 × 1)

[5]