



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

PLANT AND EQUIPMENT NQF LEVEL 2

(12030052)

**10 December 2020 (X-paper)
09:00–12:00**

This question paper consists of 4 pages.


515Q1N2010

<p>TIME: 3 HOURS MARKS: 100</p>

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: INTRODUCTION TO PLANT AND MACHINERY

- 1.1 State FOUR consequences thereof if construction tools and equipment are not selected correctly.  (3)
- 1.2 State ONE economic benefit of the care and maintenance for equipment. (2)
[5]



QUESTION 2: LEGISLATION AND SAFETY REGULATIONS



- 2.1 List the FIVE headings that an investigation report must contain. (5)
- 2.2 List 10 personal protective equipment that will effectively prevent bodily harm. (10)
[15]

QUESTION 3: EXPLAIN AND RENDER BASIC FIRST AID


- 3.1 Explain the correct way of disposing of plastic gloves.  (3)
- 3.2 State the FIVE steps in which a person with no suspected head or spinal injuries should be turned. (10)
- 3.3 Explain the term *cardio pulmonary resuscitation*. (2)
[15]

QUESTION 4: HAND TOOLS


- 4.1 Explain how to drill precision holes in mild steel.  (5)
- 4.2 State TWO ways on how the following tools should be maintained and cared for.
 - 4.2.1 Gauging trowel
 - 4.2.2 An industrial wheelbarrow
 - 4.2.3 Hand hawk 
 - 4.2.4 Radius tool
 - 4.2.5 Pipe vice(5 × 2) (10)

- 4.3 Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (4.3.1–4.3.6) in the ANSWER BOOK.
- 4.3.1 Plywood cannot be used for shutters to make formwork. 
- 4.3.2 A polygon steel plate is marked out, cut and assembled to create a simple shutter.
- 4.3.3 A simple oilstone box is made from two pieces of plastic using a plane and wooden chisel.
- 4.3.4 A blunt tool is more dangerous than a sharp tool.
- 4.3.5 A masonry rubbing stone is regarded as a tilling tool.
- 4.3.6 High speed steel drill bits are sharpened by using ordinary sand paper.  (6 × 1) (6)
- 4.4 List FOUR common types of cold chisels. (4)
- 4.5 State SIX consequences of working with a blunt tool. (5)
- [30]**

QUESTION 5: LADDERS

- 5.1 Explain the consequences of over-reaching when using a ladder.  (5)
- 5.2 Explain the importance of ensuring that ladders are set up properly as stipulated by SABS and OHSA. (4)
- 5.3 Define the term *transom*. (1)
- [10]**

QUESTION 6: TRESTLES, SCAFFOLDING AND MOBILE TOWERS

- 6.1 Explain the application of SANS 10085-1 which stipulates the use of tubing and fittings as bracing for part walk-through frame scaffolding used as a mobile tower.  (6)
- 6.2 Explain the factors to consider when installing a ladder in a mobile tower. (10)
- 6.3 List the FIVE progressive stages in the training of a scaffolding inspector. (5)
- 6.4 State FOUR guidelines to adhere to when moving a tower. (4)
- [25]**

TOTAL: 100

