



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

PLANT AND EQUIPMENT NQF LEVEL 2

(12030052)

**8 March 2018 (X-Paper)
09:00–12:00**

This question paper consists of 6 pages.

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. ALL drawings must be neat and well-balanced.
 5. ALL work you do not want to be marked must be clearly crossed out.
 - 6.. Write neatly and legibly.
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QUESTION 1

- 1.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (1.1.1–1.1.3) in the ANSWER BOOK.

Revolution changed how industry and society was organised. It changed the basic way work was done.

1.1.1 Coal replaced humans, water and animals as the source of power to run machines.

1.1.2 Machinery replaced human crafts.

1.1.3 Factories replaced home-based crafts.

(3 × 1) (3)

- 1.2 State any TWO effects of tool mechanisation in terms of progress and productivity.

(2)
[5]

QUESTION 2

- 2.1 There are many different types of health and safety acts and regulations in the construction industry. Different types of acts have different purposes.

Give TWO main purposes of the following Acts.

2.1.1 Compensation for Occupational Injuries and Diseases Act

2.1.2 Occupational Health and Safety Act

(2 × 2) (4)

- 2.2 State any FOUR unsafe conditions that may lead to an accident in the workplace.

(4)

- 2.3 Choose the correct word(s) from those given in brackets. Write only the word(s) next to the question number (2.3.1–2.3.5) in the ANSWER BOOK.

A safe erection method statement must include 2.3.1 (a description/ideas) of the general site 2.3.2 (conditions/tolerances). It is important for construction workers who have to do site 2.3.3 (erect/inspections) to know the general site environment so that they can take the necessary 2.3.4 (precautions/regulations) in order to avoid accidents on site. Therefore construction workers who have to erect scaffolding need to know what types of 2.3.5 (soil/materials) there are on site to enable them to make the necessary allowances when they erect the scaffolding. (5 × 1) (5)

- 2.4 Name TWO types of personal protective equipment that workers may use to protect them while working on heights. (2)

[15]

QUESTION 3

- 3.1 State FOUR symptoms of shock because of blood loss. (4)

- 3.2 Name the TWO main types of fractures. (2)

- 3.3 Briefly define the following terms:

3.3.1 Cardiac arrest

3.3.2 Artificial respiration

(2 × 2) (4)

- 3.4 Name FIVE emergency institutions/people that can be contacted during an emergency situation at a construction site. (5)

[15]

QUESTION 4

- 4.1 State the use of each of the following tools:

4.1.1 Combination pliers

4.1.2 Jack plane

4.1.3 Notched trowel

4.1.4 Pipe vice

4.1.5 Dagma board

4.1.6 Block brush

4.1.7 Spirit level

(7 × 1) (7)

4.2 Name ONE category of the trade in which each of the following tools are used:

4.2.1 Tile cutter

4.2.2 Scriber

4.2.3 Corner trowel

4.2.4 Wooden mallet

4.2.5 Monkey wrench

4.2.6 Glass cutter

4.2.7 Raking tool

(7 × 1) (7)

4.3 Tools need to be taken good care of and kept in a good condition so that they last longer.

State ONE way in which the following tools can be cleaned after being used:

4.3.1 Tile cutter

4.3.2 Spanners

4.3.3 Common trowel

4.3.4 Block brush

4.3.5 Utility lock knife

4.3.6 Spirit level

4.3.7 Rip saw

(7 × 1) (7)

- 4.4 State SIX rules that need to be followed to ensure safety when using a drilling machine. (6)
- 4.5 Name THREE components/parts of a drilling machine. (3)
- [30]**

QUESTION 5

- 5.1 Give THREE reasons why so many people get hurt while using ladders. (3)
- 5.2 Name THREE types of ladders which are commonly used in building construction. (3)
- 5.3 State TWO of the dangers of overreaching when working on a ladder. (2)
- 5.4 Name TWO components/parts that need to be inspected before using a step ladder. (2)
- [10]**

QUESTION 6

- 6.1 Define the term *scaffolding*. (3)
- 6.2 Briefly explain the correct procedure to follow when dismantling trestle scaffolding. (5)
- 6.3 Give FOUR points to consider before erecting scaffolding to ensure safety. (4)
- 6.4 Give TWO reasons why folding steel trestles can be easily transported. (2)
- 6.5 Name SEVEN components/parts of an independent scaffold. (7)
- 6.6 State TWO functions of castors on mobile towers. (2)
- 6.7 State TWO purposes of brakes on wheeled mobile towers. (2)
- [25]**

TOTAL: 100