higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

PLANT AND EQUIPMENT
NQF LEVEL 2

(12030052)

9 March 2020 (X-paper)
09:00–12:00

This question paper consists of 5 pages.

343Q1S2009

Copyright reserved

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 section on a new page.
5. Use only a black or blue pen.
6. Make all drawings with a pencil.
7. Write neatly and legibly.

Copyright reserved

QUESTION 1: INTRODUCTION TO PLANT AND MACHINERY

Complete the following paragraph about the Stone, Copper and Bronze Ages by writing only the missing word or words next to the question number (1.1–1.10) in the ANSWER BOOK.

When people learned to farm and (1.1) … animals around (1.2) …, they started building permanent settlements. As a result they began to (1.3) … copper and later bronze in an area known as the (1.4) … This new technology soon spread through Asia and into Africa. It allowed people to make better, stronger tools such as (1.5) …

(5 × 1) **[5]**

QUESTION 2: LEGISLATION AND SAFETY REGULATIONS

2.1 Explain how each of the following problems can cause a construction site to be unsafe:

2.1.1 Unsafe working conditions

2.1.2 Physical hazards

2.1.3 Unsafe temperatures

2.1.4 Poor or insufficient lighting

2.1.5 Unsafe or insufficient ventilation

(5 × 2) (10)

2.2 List FIVE headings under which an investigation report should be written. (5)

[15]

QUESTION 3: FIRST AID

3.1 Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (3.1.1–3.1.4) in the ANSWER BOOK.

3.1.1 Artificial respiration is a technique to provide air to a person who is breathing on his/her own.

3.1.2 The heartbeats per minute of a child should be at a rate of 80 to 100.

3.1.3 Swelling and bruising are not symptoms of a closed fracture.

3.1.4 According to Plant and Equipment Level 2 ABC means airway, breathing and circulation.

(4 × 1) (4)

3.2 Give the logical and progressive meaning of each H in the abbreviation HHH. (3)

3.3 List FIVE emergency services that will assist when an accident occurs. (5)

3.4 State THREE questions that a first aider will ask to ensure that an injured person can understand a conversation. (3)

[15]

QUESTION 4: HAND TOOLS

4.1 List SIX categories of hand tools. (6)

4.2 Give the correct category of each of the following tools:

4.2.1 Spring dividers

4.2.2 Hand hawk

4.2.3 Rivet gun

4.2.4 Spades

4.2.5 Joint rulers

4.2.6 Putty knife

(6 × 1) (6)

4.3 Explain how precision holes can be drilled without the drill moving away from the hole to be drilled. (7)

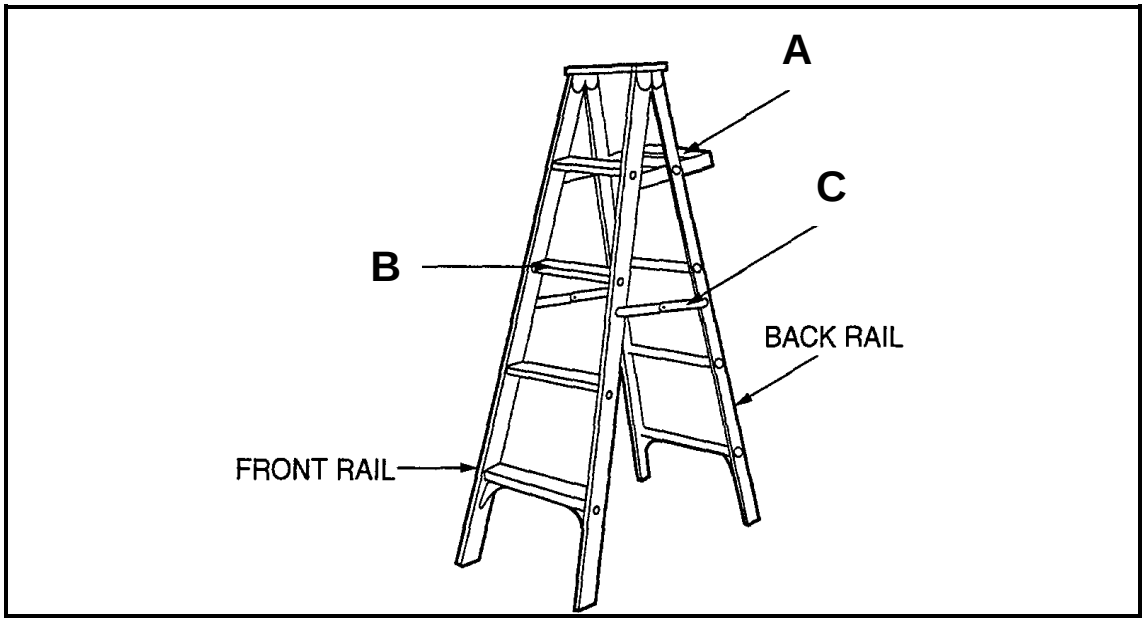
4.4 Explain the process of sharpening a blade or a plane. (10)

4.5 Write the abbreviation HSS in full. (1)

[30]

QUESTION 5: LADDERS

5.1 Below is a diagram of a ladder.



5.1.1 Name the type of ladder shown in the diagram. (1)

5.1.2 List the correct terms for parts A, B and C. (3)

5.1.3 Is it safe to stand on the part labelled C? (1)

5.2 State FIVE dangerous practices to avoid when working with ladders. (5)
[10]

QUESTION 6: TRESTLES, SCAFFOLDING AND MOBILE TOWERS

6.1 List THREE proprietary mobile towers. (3)

6.2 Explain how the platform height of a tubular mobile tower is measured. (2)

6.3 State SIX requirements that access ladders must comply with. (6)

6.4 List EIGHT training modules the scaffolding team leader must complete. (8)

6.5 Define each of the following terms:

6.5.1 Trestle working platform

6.5.2 Toe boards

6.5.3 Mobile tower

(3 × 2) (6)
[25]

TOTAL: 100

Copyright reserved