higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

# NATIONAL CERTIFICATE (VOCATIONAL)

# DRAWING OFFICE PROCEDURES AND TECHNIQUES

(First paper)

**NQF LEVEL 3**

(12050713)

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

**This question paper consists of 4 pages.**

381Q1S2010

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**TIME: 3 HOURS**
**MARKS: 100**

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**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. Produce drawings, sketches and diagrams in pencil.
5. Freehand drawings, sketches and/or diagrams must be neat, reasonably large, in proportion and fully labelled.
6. Rule off across the page after each question.
7. Clearly cross out all work you do not want to be marked.
8. All abbreviations and symbols must comply with the latest National Building Regulations and all relevant SANS (SABS) codes.
9. Write neatly and legibly.

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## QUESTION 1: PLANNING AND DESIGN SPECIFICATIONS

1.1 Choose the correct term from those in brackets. Write only the answer next to the question number (1.1) in the ANSWER BOOK.

(Ergonomics/Anthropometrics) is the discipline that deals with the dimensions of people at work, including activities not directly related to earning a living. (2)

1.2 Make a freehand drawing in good proportion to show SIX of the mean dimensions of adult females. (6 + 2) (8)

1.3 Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (1.3.1–1.3.3) in the ANSWER BOOK.

1.3.1 The mean height of females is greater than the mean height of males.

1.3.2 Architects must consider anthropometrics when designing buildings.

1.3.3 An access-friendly environment will allow a wheelchair to fit comfortably, which will help the user to manoeuvre around the toilet and basin easily.

(3 × 1) (3)

1.4 Give the THREE main categories of wheelchairs. (3 × 2) (6)

1.5 Give FOUR categories of worktops. (4)

1.6 Give the minimum width, in mm, of an internal door used in most buildings. (2)

**[25]**

## QUESTION 2: DRAWING OFFICE ORGANISATION

2.1 Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (2.1.1–2.1.2) in the ANSWER BOOK.

2.1.1 The aim of an interview should be to discover the initiative and attitude of the applicant.

2.1.2 A drawing office manager must be able to make decisions.

(2 × 1) (2)

2.2 Make a labelled freehand drawing in good proportion (A5-sized) to illustrate the drawing office internal lines of communication from the board of directors at the top down to the drawing office. (12)

2.3 Give THREE administrative tasks of a drawing office manager. (3 × 2) (6)

**[20]**

## QUESTION 3: HEALTH AND SAFETY FOR A DRAUGHTSPERSON

3.1 What does the acronym NOSA stand for? (4)

3.2 List EIGHT fundamentals regarding health and safety in the workplace as contained in the basic health and safety induction course. (8)

3.3 List, in order, TEN steps to follow when dealing with choking – either with the casualty being conscious or unconscious. (10)

3.4 Make freehand drawings in good proportion to illustrate each of the following safety hazard signs:

3.4.1 Warning of suspended load

3.4.2 Warning of methane

3.4.3 Warning of slippery steps

3.4.4 Warning of workers overhead

(4 × 2) (8)
**[30]**

## QUESTION 4: MEASURING INSTRUMENTS AND EQUIPMENT

4.1 Make well-proportioned, labelled freehand drawings of TWO views. One must show a firm-joint inside calliper and the other must show the measurement transfer. (7)

4.2 Make well-proportioned, labelled freehand drawings of TWO views. One must show a spring-type inside calliper and the other must show the method of entering the calliper into the bore. (12)

4.3 List THREE uses of both inside and outside callipers. (3 × 2) (6)
**[25]**

**TOTAL: 100**

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