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)

21 November 2018 (X-Paper)
09:00–12:00

This question paper consists of 5 pages.

NCV

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. Do all drawings, sketches and diagrams in pencil.
5. Freehand drawings, sketches and diagrams must be neat, reasonably large, in proportion and fully labelled.
6. Rule off across the page after each completed 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.

NCV

QUESTION 1: PLANNING AND DESIGN SPECIFICATIONS

1.1 What are the FOUR dimensions of the average male? (8)

1.2 Make a neat freehand drawing of an average male in good proportion and dimension the drawing. (6)

1.3 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (1.3.1–1.3.2) in the ANSWER BOOK.

1.3.1 Architects need to consider anthropometrics when designing a building.

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

(2 × 1) (2)

1.4 Name the THREE most widely used mobility devices. (3)

1.5 Choose the correct word from those given in brackets. Write only the word next to the question number (1.6) in the ANSWER BOOK.

(Slopes/Ramps) are used to allow wheeled vehicles such as trolleys and wheelbarrows to change levels. (2)

1.6 Complete the following sentence by using the words in the list below. Write only the missing words next to the question number (1.6) in the ANSWER BOOK.

architect; artisan; toilet; sink; manoeuvre; mobility; comfortably; doorways; corridors

An access-friendly environment will allow the wheelchair to fit (a) … and allow the user to (b) … around the toilet and basin easily. (2 × 2) (4)

[25]

QUESTION 2: DRAWING OFFICE ORGANISATION

2.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (2.1.1–2.1.4) in the ANSWER BOOK.

2.1.1 Where a large number of draughtspersons are employed, it is possible to divide them into groups or sections.

2.1.2 The aim of an interview for the position of a trainee in the drawing office should be to discover the initiative and attitude of the applicant.

2.1.3 The external division of the office organisation concerns the issue of information entering and leaving the office.

2.1.4 The size of the drawing office is the only factor that decides the most suitable form of organisation.

(4 × 1) (4)

2.2 Make a freehand drawing of a simplified drawing office organisational chart. (8)

2.3 Give any FOUR of the main functions of a draughtsperson. (8)

[20]

QUESTION 3: HEALTH AND SAFETY FOR A DRAUGHTSPERSON

3.1 What does NOSA stand for? (4)

3.2 Give any FIVE services and types of advice that NOSA supplies to industrial or commercial concerns. (5)

3.3 Name any FOUR pieces of personal protective equipment (safety clothing and protective gear). (4)

3.4 Name any FIVE possible emergencies that could occur in the workplace. (5)

3.5 What is the significance of the colours listed below in safety signs:

3.5.1 Green

3.5.2 Light orange

3.5.3 Red

3.5.4 Yellow

(4 × 1) (4)

3.6 Make freehand drawings in good proportion of the following safety signs:

3.6.1 Respiratory protection must be worn

3.6.2 Warning of electric shock hazard

3.6.3 Fire extinguisher

3.6.4 Electric isolator switch

(4 × 2) (8)
[30]

QUESTION 4: MEASURING INSTRUMENTS AND EQUIPMENT

4.1 Make well-proportioned, labelled freehand drawings of THREE common micrometres. (6)

4.2 What is measured with a depth micrometre? (5)

4.3 Give FOUR uses of a vernier caliper. (4)

4.4 Make a well-proportioned freehand drawing of a vernier caliper and label the component parts. (10)
[25]

TOTAL: 100

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