higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

CONSTRUCTION PLANNING
NQF LEVEL 3

(12010253)

2 December 2024 (X-paper)
09:00–13:00

REQUIREMENTS: A3 drawing sheet

Drawing instruments may be used.

This question paper consists of 5 pages and 1 diagram sheet.

579Q1N2402

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)
CONSTRUCTION PLANNING
NQF LEVEL 3
TIME: 4 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. Answer QUESTION 2.2 and QUESTION 2.3 on the DRAWING SHEET.
5. Answer all other questions in the ANSWER BOOK.
6. Produce drawings, sketches and diagrams in pencil.
7. Sketches and/or diagrams must be neat, reasonably large, in proportion and fully labelled.
8. Rule off across the page on completion of each question.
9. Clearly cross out all work you do not want to be marked.
10. All abbreviations and symbols must comply with the latest National Building Regulations and all relevant SANS (SABS) codes.
11. Use only a blue or black pen for written answers.
12. Write neatly and legibly.

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QUESTION 1: COMMUNICATION IN THE CONSTRUCTION INDUSTRY

1.1 List FIVE ways in which language barriers can create an obstruction to the flow of communication on a construction site. (5)

1.2 Feedback is one of the important elements of communication.

Briefly explain why feedback from the receiver should be encouraged. (3)

1.3 Monitoring work is one example of how verbal communication can be used in the construction industry.

Name TWO advantages of monitoring. (2)

[10]

QUESTION 2: TECHNICAL DRAWINGS

2.1 Briefly explain the benefits of freehand drawing to communicate effectively. (4)

2.2 FIGURE 1, DIAGRAM SHEET 1 (attached) shows the front and top views of a square pyramid.

Draw, to scale 1:1, the given views and draw the development of the pyramid. Insert the given dimensions and print the title and scale below the drawing. (13)

NOTE: This drawing must be done on the A3 DRAWING SHEET provided.

2.3 In a cavity wall the stepped damp-proof course is required to prevent rising damp at ground level.

Draw, to scale 1:10, a vertical cross-sectional view through the cavity wall concrete strip foundation according to prescribed national standards, clearly showing the following construction details: (13)

SPECIFICATIONS

Wall:	Double leaf 270 mm cavity wall. NOTE: The brick wall must be eleven courses high from the top of the concrete foundation.
Concrete floor slab:	75 mm thick
Foundation:	800 mm x 300 mm strip foundation
Hardcore:	150 mm thick
Plaster:	15 mm internally only
Floor screed:	20 mm on top of concrete floor
Wall tie:	Show at least ONE wire tie
Clearly show the following:	DPC, weep hole and ground level

NOTE: Insert any FOUR labels.
This drawing must be done on the A3 DRAWING SHEET provided.

[30]

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QUESTION 3: THE SOUTH AFRICAN CONSTRUCTION INDUSTRY

3.1 The clerk of works is one of the personnel that makes the construction project flow smoothly.

Give a brief description of the clerk of works. (4)

3.2 What is the main function of the regulatory bodies in the South African construction industry? (2)

3.3 What are the roles of the Construction Industry Development Board (CIDB) as a regulatory body? (4 × 2) (8)

3.4 Complete the following paragraph by choosing a word or words from the list below. Write only the word or words next to the question number (3.4.1–3.4.7) in the ANSWER BOOK.

specification; owner; documented; industry; highlight; inspect; construction; protects; approved; National Building Regulations; standards; building; supporting

Local government authorities employ building inspectors to (3.4.1) … building projects under their jurisdiction to ensure that they are built according to (3.4.2) … plans and that the requirements of the (3.4.3) … have been complied with. If the (3.4.4) … is erected without approved plans, a legal notice will be issued to the (3.4.5) … demanding that the approved plans be produced. And any alterations to the building must be (3.4.6) … in a separate set of approved plans that (3.4.7) … the alterations. (7)

3.5 The South African Institute of Steel Construction (SAISC) is one of the trade organisations in the South African construction industry. Answer the following questions regarding SAISC:

3.5.1 What is the main aim of this trade organisation? (3 × 2) (6)

3.5.2 When was the institute founded? (1)

3.6 Define the term *stakeholder*. (2)

[30]

QUESTION 4: CONSTRUCTION LEGISLATION AND REGULATIONS

4.1 There are THREE ways to demonstrate compliance with the South African Building Regulations. Identify each of the following regarding the acceptance criteria used in the construction industry. Write only the answer next to the question number (4.1.1–4.1.3) in the ANSWER BOOK.

4.1.1 Design involving a process of reasoning and calculation based on the use of a good practice.

4.1.2 Non-mandatory requirements defining a method of design that is judged to comply with a particular functional regulation.

4.1.3 Technical document that describes a product and lists the details about that particular product.

(3 × 2) (6)

4.2 Give the requirements for a competent person in terms of the Housing Consumers Protection Measures Act 95 of 1998. (2 × 2) (4)

4.3 Indicate whether each of the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (4.3.1–4.3.5) in the ANSWER BOOK

4.3.1 Eight of the 282 laws in the Code of Hammurabi address the subject of construction.

4.3.2 The Code of Lipit-Ishtar was written in about 1760 BC by the king of Babylon.

4.3.3 The Great Fire of London burnt for three days.

4.3.4 There are three historical events that have a direct bearing on the development of the built environment.

4.3.5 The Code of Hammurabi is a well-preserved ancient Babylonian law code, dating back to around 1754 BC.

(5)

4.4 Explain the importance of the Building Standards Acts 103 of 1977. (3 × 2) (6)

4.5 Discuss in detail what should be done if there is a difference between a specification on a drawing and the prescribed national standards. (3 × 2) (6)

4.6 Explain the purpose of the National Building Regulation. (3)

[30]

TOTAL: 100

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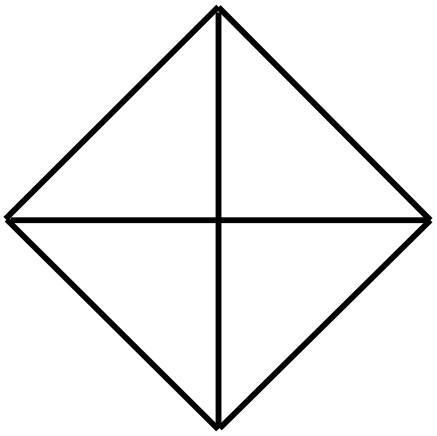
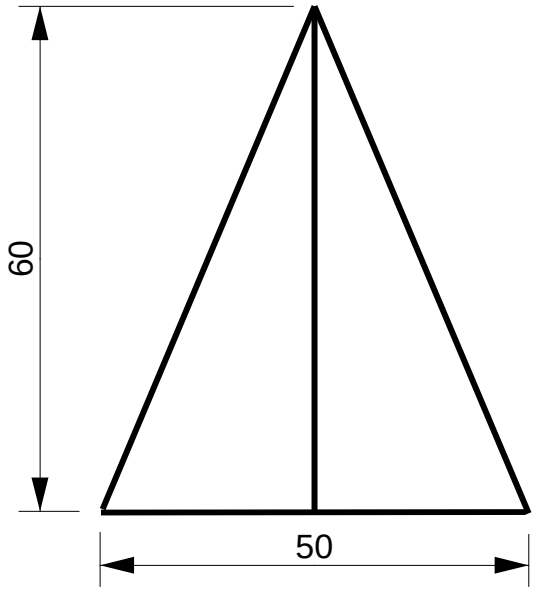
DIAGRAM SHEET 1



TOP VIEW



FRONT VIEW

FIGURE 1

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