higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

CONSTRUCTION PLANNING
NQF LEVEL 3

(12010253)

04 November 2022 (X-paper)
09:00–12:00

REQUIREMENTS: A3 drawing sheet.

Drawing instruments may be used.

This question paper consists of 6 pages and 2 diagram sheets.

049Q1N2204

Copyright reserved

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. Start each question on a new page.
5. Use only a blue or black pen.
6. The drawings, sketches and diagrams must be done in pencil.
7. The sketches and/or diagrams must be neat, reasonably large, in proportion and fully labelled.
8. Rule off across the page after each competed question.
9. All work you do NOT want to be marked must be clearly crossed out.
10. All the abbreviations and symbols must comply with the latest National Building Regulations and all relevant SANS (SABS)-codes.
11. QUESTION 2.2 and QUESTION 2.3 must be answered on the drawing paper. All the other answers must be done in the ANSWER BOOK.
12. Write neatly and legibly.

Copyright reserved

QUESTION 1: COMMUNICATION IN THE CONSTRUCTION INDUSTRY

1.1. It is important to communicate well when one is involved in a construction project

1.1.1 What is verbal communication?

A When more than one person speaks
B When you guess what someone is trying to say
C When someone speaks and someone else listens

1.1.2 What needs to be complete for a message to be an effective communication?

A Both the sending and receiving of the message
B Written communication
C Turning away from the speaker

1.1.3 Name the type of communication when you speak directly to a person who you can see before you.

A Body language
B Face-to-face communication
C Electronic communication

1.1.4 Speaking on a phone is which method of communication?

A Verbal communication and body language
B Non-verbal communication
C Verbal communication and tone of voice

1.1.5 What is the term for the emotion or feeling in someone's voice?

A Tone
B Tempo
C Gestures

1.1.6 What should you remember when you use sign language?

A Signs vary from country to country
B Use your left hand
C Written signs

(6 × 1) (6)

1.2 Although workers on a building site communicate in many ways each day, not all communication is effective.

Briefly explain the following types of communication barrier:

1.2.1 Physical barriers

1.2.2 Emotional barriers

(2 × 2) (4)
[10]

QUESTION 2: TECHNICAL DRAWINGS

2.1 Brickwork shows how bricks are joined by mortar. Name THREE types of bonds used in the construction industry. (3)

2.2 **FIGURE 1, DIAGRAM SHEET 1** (attached) shows the front, side, and top views of a simple dwelling. Do NOT copy the given view, but draw the following views in first-angle orthographic projection:

- Front view in the direction of arrow G
- Left view in the direction of arrow K
- Top view in the direction of arrow F (13)

NOTE: This drawing must be done on the A3 drawing sheet.

2.3 **FIGURE 2, DIAGRAM SHEET 2** (attached) shows a vertical cross section of a foundation. Use only a pencil and eraser to draw a neat and large free-hand sketch in the correct proportion according to the given dimensions. Label all the parts in your sketch. (14)
[30]

QUESTION 3: THE SOUTH AFRICAN CONSTRUCTION INDUSTRY

3.1 What is the role of regulatory bodies in the construction industry? (3)

3.2 List FIVE regulatory bodies in the South African construction industry. Give their names in full. (2 × 5) (10)

3.3 Briefly explain the importance of stakeholders on a construction site. (4)

3.4 Write brief notes about the functions of the following stakeholders in the South African construction industry:

3.4.1 Client or employer

3.4.2 Architect

3.4.3 Mortgage lender

(3 × 3) (9)

Copyright reserved

3.5 Choose a role of an organisation from COLUMN B that matches the trade organisation in COLUMN A. Write only the letter (A–D) next to the question number (3.3.1–3.3.4) in the ANSWER BOOK.

COLUMN A		COLUMN B	
3.3.1	MBA	A	represents people who produce and supply concrete products
3.3.2	SAFCEC	B	improves the standard of timber products
3.3.3	CMA	C	this association regulates relationships between its members, their employees and trade unions
3.3.4	ITC	D	this federation promotes engineering and improves infrastructure

(4 × 1) (4)

[30]

QUESTION 4: CONSTRUCTION LEGISLATION AND REGULATION

4.1 Soil composition is a key factor in any building project.

Briefly explain the responsibilities of the competent person who classifies soil at a building site. (3)

4.2 Briefly describe TWO ways to appoint a competent person.

(2 × 3) (6)

4.3 A local authority has the power to issue a demolition order if a building is deemed to be non-compliant or dilapidated.

Briefly describe how the following structures are demolished:

4.3.1 A building of which the construction has just started.

4.3.2 An existing building.

(2 × 2) (4)

4.4 Contractors must ensure that their work complies with the by-laws of the local authority of the area in which they work.

Name THREE obligations contractors have to comply with. (2 × 3) (6)

4.5 Mention FOUR guidelines that were followed to promulgate building regulations and legislation for the construction industry. (4 × 2) (8)

4.6 The national regulations for the construction industry protect people and ensure that construction is executed in accordance with town planners' vision.

Name THREE factors that had been considered before a regulation was approved. (3)

[30]

TOTAL: 100

Copyright reserved

DIAGRAM SHEET 1

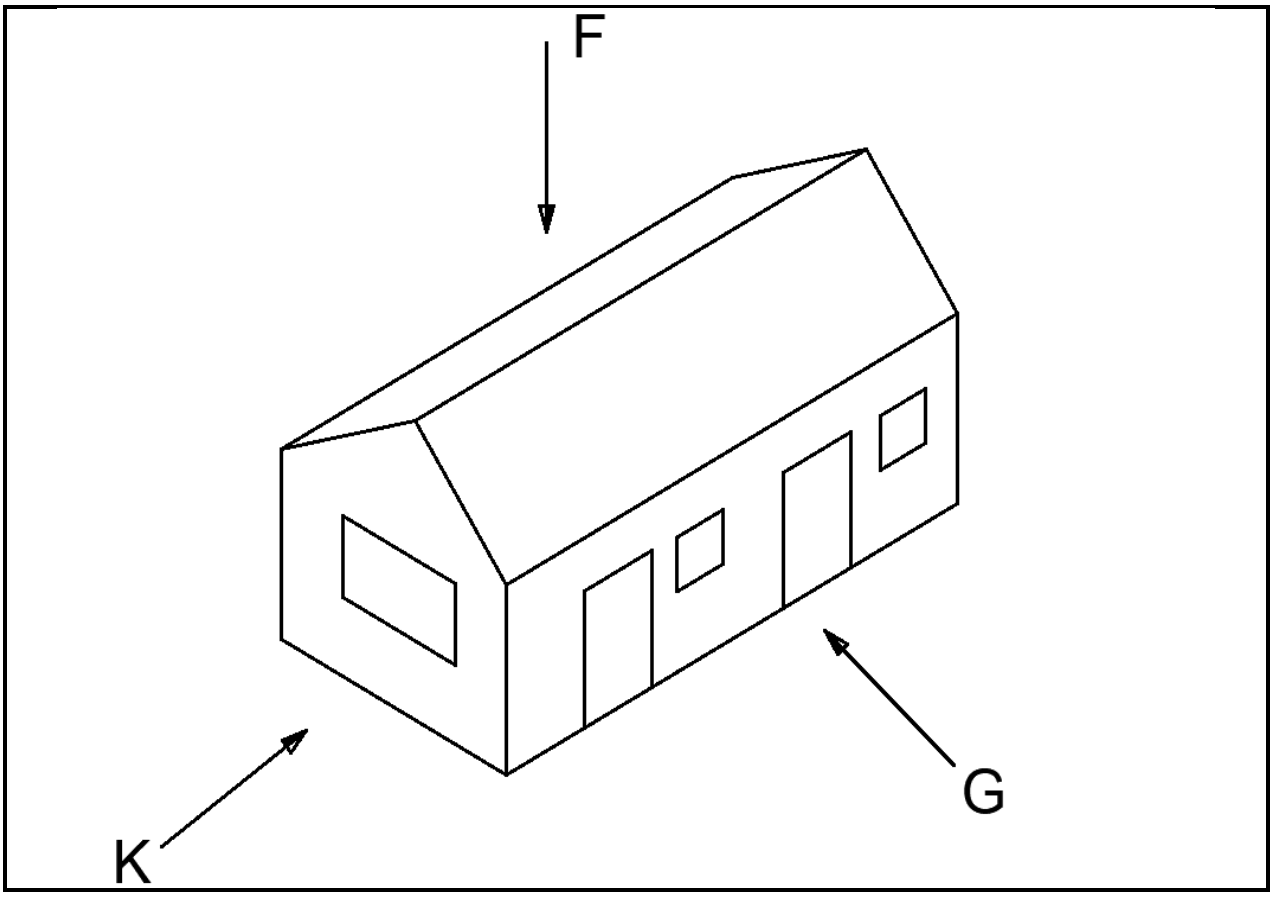
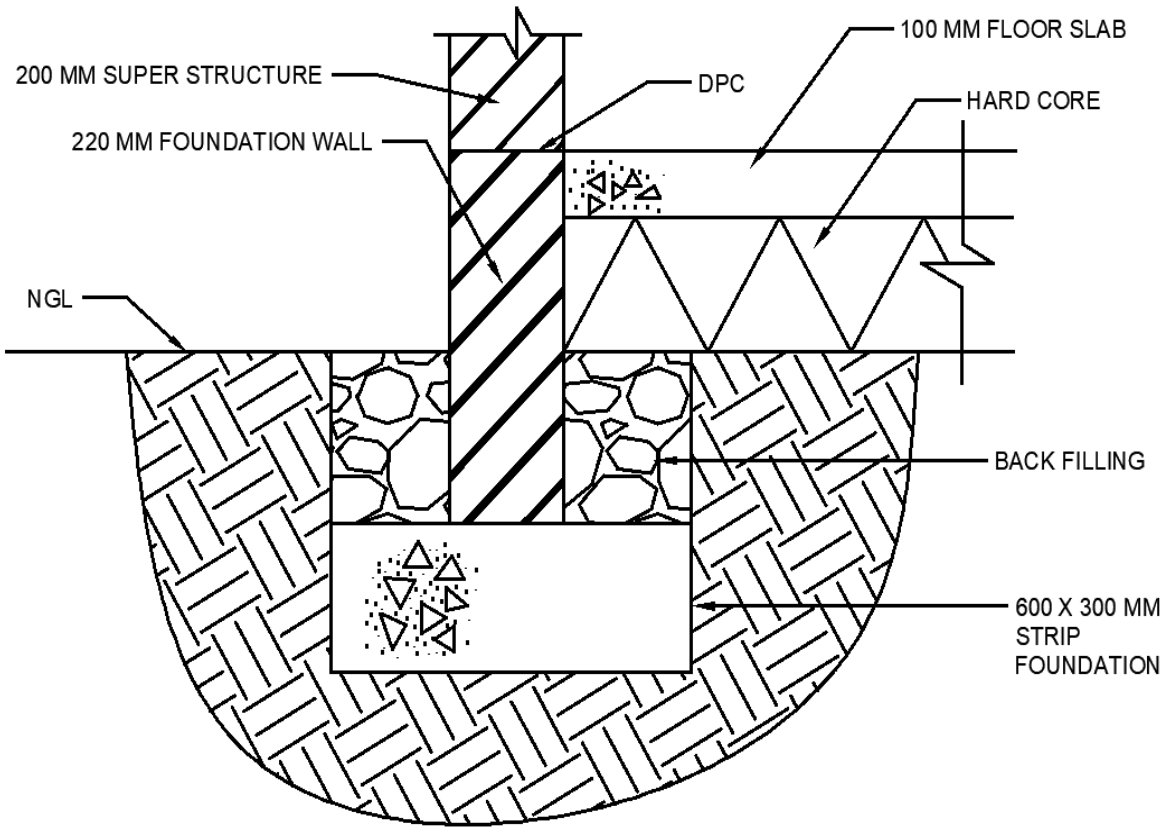


FIGURE 1

Copyright reserved

DIAGRAM SHEET 2



A VERTICAL CROSS SECTION OF A FOUNDATION

FIGURE 2

Copyright reserved