



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
BUILDING ADMINISTRATION N4

(4090034)

7 April 2021 (X-paper)
09:00–12:00

Drawing instruments may be used.

This question paper consists of 6 pages.

052Q1A2107

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
BUILDING ADMINISTRATION N4
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. Only use a black or blue pen.
 6. Write neatly and legibly.
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SECTION A**QUESTION 1**

Various options are given as possible answers to the questions. Choose the answer and write the letter (A–D) next to the question number (1.1–1.10) in the ANSWER BOOK.

1.1 Lifts for workers can be defined as ...

- A elevators that convey loads upwards.
- B hoists that transport a load vertically by means of a moving platform.
- C transportation between sites.
- D belts that transport a load horizontally. 

1.2 Builders' cranes can be defined as ...

- A devices supplying building sites with temporary water.
- B equipment that can reach higher places.
- C devices that can lift loads by means of a hook on a rope.
- D power-driven plumber's equipment named after a bird.

1.3 Cantilever cranes consist of a/an ...

- A expandable hydraulic boom stabilised by outriggers.
- B rotating jib on top of the tower.
- C fly jib fixed to the top of the main boom.
- D self-propelled cranes.

1.4 Tower cranes are ... 

- A cantilever cranes.
- B placed on top of towers.
- C derrick cranes.
- D mobile.

1.5 Telescopic cranes ...

- A can extend its lifting capacity.
- B are wheel or track mounted.
- C operate on cranes.
- D can be easily dismantled.

1.6 Static cranes are also called ... cranes.

- A transport
- B mobile 
- C Scotch derrick
- D stationary

1.7 Mobile cranes move on:

- A Feet
- B Wheels 
- C Chains
- D Ropes

1.8 Derrick cranes consist of a large vertical slewing ...

- A mast.
- B rope.
- C chain.
- D wire.

1.9 Mast cranes consist of a vertical mast and a high-pivot lifting ...

- A brick.
- B material.
- C jib.
- D hoist.

1.10 A pulley consists of the ..., ropes, chain, slings, eyebolts and bulldog grips.

- A fly
- B boom
- C hook
- D stays

(10 × 1) [10]



QUESTION 2

Indicate whether the statements are TRUE or FALSE by writing 'True' or 'False' next to the question number (2.1–2.10) in the ANSWER BOOK.

2.1 Material must not be stored according to various special needs.

2.2 Material must be placed near the gate to ease deliveries.

2.3 Double handling of material should be avoided.

2.4 Enough space for off-loading deliver vehicles must be avoided.

2.5 Public roads must be duplicated.

2.6 Every invoice must be paid twice and double its price to avoid arrears.

2.7 Two entrances to and an exit from the site must be planned. 

2.8 A competent person must inspect the covered walkways at regular intervals.

2.9 A rail should be attached to the roof to prevent accumulated debris from falling.

- 2.10 Demolition of an existing building is a skilled occupation and should not be tackled only by competent contractors. 

(10 × 1)

[10]**QUESTION 3**

Choose a term from COLUMN B that matches a description in COLUMN A. Write the letter (A–J) next to the question number (3.1–3.10) in the ANSWER BOOK.

COLUMN A		COLUMN B
3.1	Qualified person who does the actual construction work with the help of apprentices	A trades foreperson
3.2	In charge of a site 	B project manager
3.3	Finds the levels and pegs of the premises and sees that the building is set out correctly	C contract manager
3.4	Represents the contractors on site and is accountable to the architect and engineers	D subcontractor
3.5	Specialises in a certain trade and works independently	E tradesperson
3.6	Drives cranes and earth-moving plants	F operator
3.7	Works under command of tradespersons	G general foreperson
3.8	Heads a team	H storeperson
3.9	Follows the blueprint, inspects work being done, ensures compliance with safety regulations	I labourer
3.10	Accepts delivery of incoming materials, checking it and signing the delivery notes	J land surveyor

(10 × 1)

[10]**QUESTION 4**

- 4.1 Define the term *hoarding*. (3)
- 4.2 State FIVE important rules regarding hoarding. (5)
- 4.3 Which important factors must be considered when planning to incorporate sheds and storage areas on a building site?  (2)

[10]**TOTAL SECTION A: 40**

SECTION B**QUESTION 5**

- 5.1 Draw neat, labelled sketches to show how each of the methods are used to support weak structures:
- 5.1.1 Flying shore
- 5.1.2 Dead shore
- (2 × 6) (12)
- 5.2 Define and give the use of each of the items as it relates to dead shores and flying shores:
- 5.2.1 Wall plate
- 5.2.2 Dog
- 5.2.3 Sole plate
- 5.2.4 Folding wedges
- 5.2.5 Cleat
- (5 × 2) (10)
[22]

QUESTION 6

Give SIX reasons why it could become necessary to deviate from the originally planned programme. [6]

QUESTION 7

- 7.1 Give FOUR reasons why underpinning is necessary. (4)
- 7.2 Which SIX procedures must be carried out before underpinning is done? (6)
[10]

**QUESTION 8**

Mr and Mrs Erickson's construction firm in the far north wishes to tender for a duplex unit housing scheme. The project should take between 15 to 20 months to complete.

Prepare a pre-tender programme for their construction firm. [10]

**QUESTION 9**

Make a labelled single-line sketch of a truss-out scaffold. [12]

TOTAL SECTION B: 60
GRAND TOTAL: 100