higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T90**(E)**(J30)T

NATIONAL CERTIFICATE

BUILDING ADMINISTRATION N4

(4090034)

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09:00–12:00

This question paper consists of 7 pages.

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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. Write neatly and legibly.

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QUESTION 1

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

1.1 The vertical main parts are the ...

A frames.
B legs.
C droppers.
D stiles.
E standards.

1.2 Scaffolding which consists of a single row standards with the transome supported in the wall are called ... scaffolds.

A cantilever
B mobile
C hanging
D independent
E putlog-pipe

1.3 The horizontal main parts which run parallel to the building are the ...

A transomes.
B ledgers.
C braces.
D sills.
E rails.

1.4 Regulations regarding scaffolding are laid down by the ...

A contractors.
B law.
C SABS.
D local authority.
E architect.

1.5 The member at the top that prevents tools from dropping down is the ...

A baluster.
B toe board.
C kick plate.
D transome.
E guard rail.

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1.6 The parts which fit into the feet of the vertical members to enlarge the area thus preventing these members from slipping are the ...

A platforms.
B foundations.
C base plates.
D grillages.
E sole boards.

1.7 Spacing of planks should be ...

A at a minimum.
B at least at 250 mm centres.
C left to the foreman's discretion.
D done so that 2 mm gaps are formed.
E done so that no gaps are formed.

1.8 Scaffolding used to erect a double-storey structure could easily sink into the ground especially during rainy weather.

This is prevented by ...

A casting a sturdy concrete footing.
B using scaffolding secured to the roof.
C placing long boards on the ground to distribute the mass.
D pumping out all excess water.
E covering the scaffolding with a temporary roof.

1.9 Inspection of scaffolding after bad weather ...

A should be done by each worker before using the scaffold.
B is only necessary if damage is suspected.
C must be reported to the clerk of works.
D should be done by a competent person.
E is not necessary because of weekly routine inspection.

1.10 Scaffolding is used to ...

A give workers a temporary platform to work above ground/floor level.
B secure the sides of excavations against collapse.
C secure the site by means of a temporary fence.
D give existing structures additional support by strengthening the foundation.
E protect workers against severe weather conditions.

(10 × 1) **[10]**

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QUESTION 2

Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (2.1–2.10) in the ANSWER BOOK.

2.1 An invoice is a request for payment.

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

2.3 The contractor must insist on receiving receipts.

2.4 It is good practice to request regular statements on which most recently invoiced items and payments must be listed.

2.5 Invoices must be checked against the orders from the buying departments.

2.6 Invoices must be kept for any queries during the final account stage.

2.7 A copy of the invoice should not accompany the payment.

2.8 Receipts are not valuable documents and should not be kept on file.

2.9 A receipt is proof issued by the supplier that payments must not be paid in advance.

2.10 Receipts must never be compared with subsequent invoices or any other contract documents.

(10 × 1) **[10]**

QUESTION 3

Fully differentiate between each of the following types of building firms:

3.1 Large firms (4)

3.2 Small firms (4)

3.3 Medium firms (2)

[10]

QUESTION 4

Access to a site is important as it links to the progress of the construction. In one of the biggest cities in South Africa a building site has to be established.

Which important considerations must be taken into account when planning to incorporate each of the following:

4.1 Site offices (4)

4.2 Sheds and storage areas (4)

4.3 Access roads (4)

4.4 Plant and machinery (3)
[15]

QUESTION 5

5.1 Give SIX guidelines to consider when arranging woodworking machines in a workshop layout. (6)

5.2 State the function of each of the following pieces of equipment:

5.2.1 Belt sander

5.2.2 Spindle moulder

5.2.3 Tenoner

5.2.4 Cross-cut saw

5.2.5 Extraction unit

(5 × 2) (10)
[16]

QUESTION 6

6.1 Use a full page to sketch the side elevation of a mobile scaffold and label the various parts. (8)

6.2 Give SIX regulations prescribed for erecting and maintaining scaffolds. (6)
[14]

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QUESTION 7

Use clear, labelled sketches to show how each of the following methods of shoring provides support on weak structures:

7.1 Dead shore

7.2 Raking shore

7.3 Flying shore

(3 × 5) **[15]**

QUESTION 8

8.1 Underpinning is a construction technique whereby an existing building is given additional support using a deeper foundation.

Give FOUR reasons why underpinning should be done. (4)

8.2 Which procedures should be carried out/considered before any underpinning is done? (6)

[10]

TOTAL: 100

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