higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

BUILDING ADMINISTRATION N4

(4090034)

23 November 2023 (X-paper)
09:00–12:00

Drawing instruments may be used.

This question paper consists of 6 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. Use only a black or a blue pen.
5. Write neatly and legibly.

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QUESTION 1

Complete the following sentences by writing only the missing word(s) next to the question number (1.1–1.10) in the ANSWER BOOK.

1.1 Attending all … with the project manager and taking a leading part in discussions.

1.2 Becoming familiar with all the relevant … and written instructions, checking them and using them as a reference when inspecting work.

1.3 Reviewing … and architectural drawings and ensuring that the contractor fully understands the content of these documents.

1.4 Making regular visual ….

1.5 Providing … on all on-site matters, inspections, progress, safety concerns and causes for delay.

1.6 Maintaining job-site files, documents, reports, the daily log and preparing periodic reports for the ….

1.7 Ensuring that construction work ... are maintained.

1.8 Coordinating, monitoring and inspecting the work of contractors, making sure that it is carried out according to the client's standards with regard to specification, materials and …

1.9 Having a working knowledge of health and safety legislation and bringing any shortfalls observed to the … engineer's attention.

1.10 Reviewing requests for progress payments submitted by … and forwarding them with recommendations to the architect.

(10 × 1) **[10]**

QUESTION 2

Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–J) next to the question number (2.1–2.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
2.1	Use the wall as part of the support system, the flattened end of each transom, called the putlog, rests on an opening in the brickwork	A	mobile scaffold
2.2	Is free-standing in that it is erected 'independently' from the building structure, but it is tied to the structure at suitable intervals through window or door openings to stabilise the scaffold	B	hanging or suspended scaffold
2.3	Is an independent, tied, standing scaffold that is constructed on a beam	C	truss-out scaffold
2.4	Is an independent, tied, scaffold that is not built up from ground level. Instead, the working platform is supported by transoms protruding through a, window or similar opening of the building	D	cantilever scaffold
2.5	Is secured to the roof of the building and hangs from the building by means of tubes, wire ropes or chains	E	independent scaffold
2.6	Is a type of free-standing scaffold supported on wheels or castors fitted with brakes for ease of movement	F	putlog scaffold
2.7	Is a temporary structure erected to provide workers with a safe, stable work platform when working at a height above ground	G	braces
2.8	The upright members that transmit the load from the working platforms to the base of the scaffolding	H	standards
2.9	Members placed in between ledgers to hold standards in position and provide support for the working platform	I	transforms
2.10	Members that run diagonally between ledgers and attach to standards to increase the structure's overall rigidity	J	scaffold

(10 × 1) **[10]**

QUESTION 3

3.1 Make labelled, isometric sketches to clearly show the construction of the planking and strutting in trench excavations of approximately one metre deep in the following formation:

3.1.1 Soft ground (loose, wet)

3.1.2 Loose ground (loose, dry)

(2 × 5) (10)

3.2 Use clear, labelled sketches to show how the following supports weak structures:

3.2.1 Single flying shore

3.2.2 Raking shore

(10 × 2) (20)

3.3 State SIX general causes why trenches could collapse. (6)

3.4 Briefly explain FOUR safety precautions to prevent the collapse of trench excavations. (4)

[40]

QUESTION 4

4.1 Define the terms, *planking* and *strutting.* (2)

4.2 State FOUR main reasons for using planking and strutting. (4)

4.3 List FOUR different soil types that will require different types of planking and strutting methods. (4)

[10]

QUESTION 5

Name the use of the following equipment:

5.1 Power floats

5.2 Submersible pump

5.3 Cross-cut saw

5.4 Belt sander

5.5 Ripsaw

(5 × 2) **[10]**

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QUESTION 6

6.1 As a general foreman, how would one solve the following problems regarding the delivery of building materials?

6.1.1 To cut down on wastage

6.1.2 To prevent theft

(2 × 5) (10)

6.2 Production depends on the right quantity of components being delivered on time. It is essential to organise prompt receipt by follow-up and processing orders.

Discuss the following:

6.2.1 Follow-up operations

6.2.2 Processing orders

(2 × 5) (10)
[20]

TOTAL: 100

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