



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
BUILDING ADMINISTRATION N5
TIME: 3 HOURS
MARKS: 100

T100(E)(M25)T
APRIL EXAMINATION

NATIONAL CERTIFICATE
BUILDING ADMINISTRATION N5

(4090045)

25 March 2013 (X-Paper)
09:00–12:00

This question paper consists of 7 pages.

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 in full sentences where applicable and in your own words. Incomplete, cryptic phrases will be penalised.
5. Write neatly and legibly.

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QUESTION 1

A few paragraphs on the general foreman regarding some of his/her qualification, personal characters and duties are given below.

Complete the following sentences/paragraphs by filling in the missing word(s). Write only the words next to the question number (1.1–1.10) in the ANSWER BOOK.

Depending on the size of the project, the general foreman should be a fully qualified (1.1) ... or should have a technical diploma/degree in construction management or similar qualification.

He/she must be able to work under extreme pressure and must be able to identify and solve (1.2) ... He/She should be flexible, practical and helpful.

Although he/she must (1.3) ... work to various trade foreman, the storekeeper sub-contractors and others, the ultimate (1.4) ... for the smooth running of the project lies with him/her.

He/she must see to it that all activities run according to the master (1.5) ..., that all labour is utilized and that the required equipment and material is always available, various trade teams and sub-contractors have to be (1.6) ... to ensure smooth interaction.

It is his/her duty to make sure that construction is carried out according to the contract (1.7) ..., that the architect's site instruction are incorporated and that (1.8) ... for any changes are issued and authorized.

He/she is responsible for all (1.9) ... precautions, that means he/she has to check for example if hard hats are worn.

He/she must maintain a neat site office, and has to keep the drawing register and progress (1.10) ... up to date.

(10 x 1) [10]

QUESTION 2

Give ONE word/term for each of the following quality requirements by choosing a word/term from the list below. Write only the word/term next to the question number (2.1–2.10) in the ANSWER BOOK.

water; bricks; structural timber; cement; stone; ceramic sanitary fittings; steel frames; glass pane; sand; hardcore filling; reinforcing steel; iron mogery; ready mixed concrete; paint; PVC pipes; putty

2.1 It should be prime coated and should be stacked vertically to prevent twisting and for easy access.

2.2 It should be free of knots and each member must be a continuous length without laps.

2.3 It should give a clear (not hollow) sound when lightly knocked with a metallic object such as a screw driver.

- 2.4 When packed in sacks and store under good condition, it is expected to lose its strength slowly.
- 2.5 Its workability is tested by slump test.
- 2.6 It should clear (not hollow) sound when two of its kind are knocked against each other.
- 2.7 It should consist of well graded and smooth rounded particles.
- 2.8 It should consist of single size and smooth rounded particles.
- 2.9 If not immediately used, it should be spread out on a site across poles with colour tags for easy identification.
- 2.10 If it is taken from municipal source, it can be accepted as suitable.

(10 x 1) [10]

QUESTION 3

Indicate whether the following statements are TRUE or FALSE. Choose the answer and write 'true' or 'false' next to the question number (3.1–3.10) in the ANSWER BOOK. Correct the statement if it is FALSE.

- 3.1 Variation orders could be savings or extras.
- 3.2 Variation orders are site instructions.
- 3.3 Additions are variations orders.
- 3.4 Extensions of time are calculated by day works.
- 3.5 Day works are day to day happenings on site.
- 3.6 Day works are all works above the natural ground level.
- 3.7 The contingency sum provides money for extras.
- 3.8 One speaks of day work as if it is the measured labour and material per day.
- 3.9 Variation orders are issued by the clerks of works.
- 3.10 Omissions are savings.

(10 x 1) [10]

QUESTION 4

- 4.1 List FIVE different earthwork categories in which mechanical plant may be grouped with ONE type Of mechanical plant in each of the categories. (5)
- 4.2 Explain the following in modern road construction:
 - 4.4.1 THREE advantages of mechanisation. (3)
 - 4.4.2 TWO advantages of labour intensive methods. (2)

QUESTION 5

In the principal building agreement (basic contract) a number of clauses regulate the handing over of completed work. Describe the following key terms used in these clauses.

- 5.1 Final completion list
 - 5.2 Certificate of final completion
 - 5.3 Final account
 - 5.4 Final payment certificate
 - 5.5 Patent defect liability period
 - 5.6 Latent defect liability
 - 5.7 Liability insurance
 - 5.8 Release of the retention or release of the construction guarantee
 - 5.9 Penalty for non-completion
 - 5.10 Extension of construction period
- (10 x 1) [10]

QUESTION 6

Fully explain how the following is incorporated in a building contract:

- 6.1 Nominated sub-contractors. (5)
 - 6.2 Selected sub-contractors. (5)
- [10]

QUESTION 7

Define the role played by the following people or professionals in construction site:

- 7.1 Agent
- 7.2 Architect
- 7.3 Engineer
- 7.4 Office manager
- 7.5 Building control officer

(5 x 2) [10]

QUESTION 8

8.1 What is meant by:

- 8.1.1 Planning (1)
- 8.1.2 Programming (1)
- 8.1.3 Progress (on a programme) (1)
- 8.1.4 Administration (1)

8.2 Name THREE types of detail programmes. (2)

- 8.2.1 Why are they used? (1)
 - 8.2.2 Where are they used? (1)
 - 8.2.3 How are they used? (1)
- [10]

QUESTION 9

Prepare a complete agenda for the contractor's site meeting where you will be the chairperson. [10]

QUESTION 10

10.1 Draw a mass-haul diagram using the tabulated figures below:

CHAINAGE	CROSS-SECTIONAL AREA IN m ²
0	0
100	1000
200	2500
300	800
400	0
500	- 1600
600	- 3200
700	- 400
800	- 1800
900	0
1000	1300
1100	3600
1200	4000
1300	2000
1400	0
1500	-1800
1600	- 3600
1700	-1600
1800	0

(6)

10.2 Show the following features to the mass diagram:

- 10.2.1 Cut (1)
- 10.2.2 Fill (1)
- 10.2.3 Balance points (1)
- 10.2.4 Direction of haul. (1)

[10]

TOTAL: 100