



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

BUILDING ADMINISTRATION N4

28 July 2021

This marking guideline consists of 6 pages.

QUESTION 1

- 1.1 bill of quantities
- 1.2 contract
- 1.3 description
- 1.4 price
- 1.5 working drawing
- 1.6 quantity surveyor
- 1.7 interim valuation
- 1.8 architect
- 1.9 owner
- 1.10 contractor

(10 × 1) (10)
[10]

QUESTION 2

- 2.1 2.1.1 Deliveries must be checked according to the relevant document to avoid shortages,✓ and damage must be supervised by a storekeeper or by the foreman. Haulage tippers with aggregates must be spot-checked regularly to ensure that they are loaded to the capacity being paid for.✓
- 2.1.2 Haulage tippers with aggregates must be spot-checked regularly to ensure that they are loaded to the capacity being paid for. Any goods not examined should be marked as such and checked by the receiver,✓ and the driver should sign the documents (delivery documents).
- 2.1.3
- The store should be theft proof and clean.✓
 - Different materials must be stored according to different rules, and proper storage methods should be studied and followed.✓
- 2.1.4 Invoices are compared with the original order to confirm that the correct materials have been supplied at the agreed prices✓ and can be authorized for payments.✓

(4 × 2) (8)

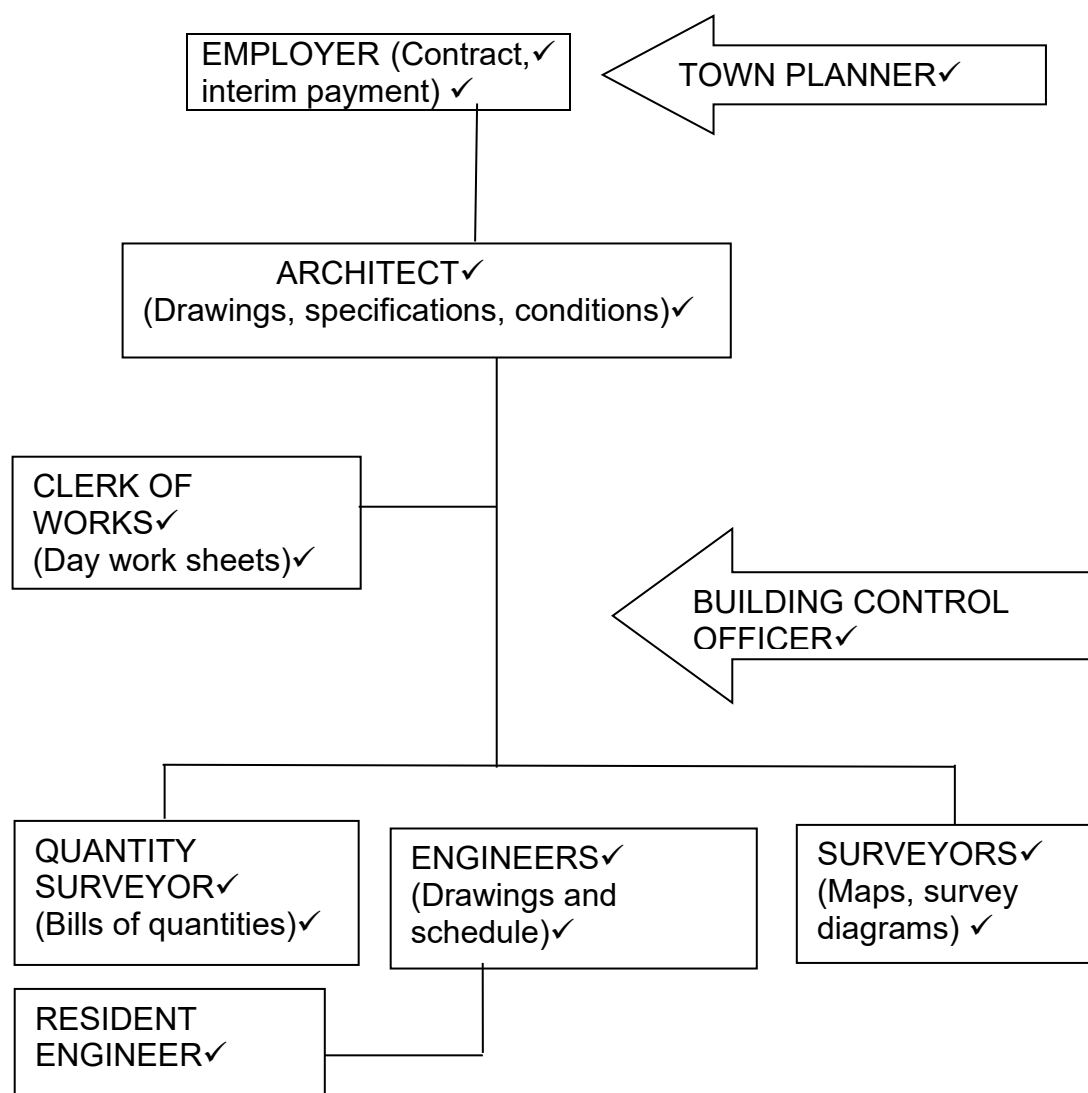
- 2.2
- To act solely as inspector on behalf of the employer under direction of the architect
 - To keep a diary that will be valuable in case of any dispute
 - To act as secretary at site meetings and record the minutes
 - To collect the data for the quantity surveyor
 - To make regular reports to the architect
 - To advise head office of any labour requirements
 - To examine all materials delivered on site and to approve them

(7)
[15]

QUESTION 3

- 3.1 A proof of payment.
- 3.2 The document compared to the invoice to verify the material ordered.
- 3.3 Documents kept for any queries during the final account.
- 3.4 Description of the goods, stating the delivery date and the method of transport and offloading.
- 3.5 Document made out in triplicate – one copy for the supplier, one to the site and one for head office.
- 3.6
- Used to inform the storeman of some needed goods.
 - The internal form used to order material from the main depot.

(6 × 2) (12)
[12]

QUESTION 4

Design team of a building project

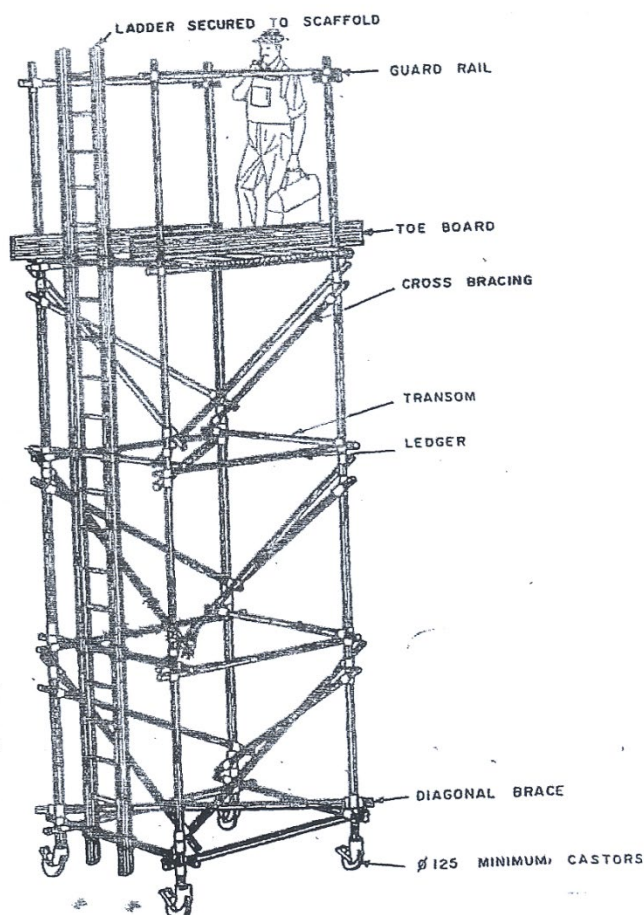
[15]

QUESTION 5

- 5.1
- To support during the period of danger
 - To prevent subsidence and failure of sound walls by the removal of subjacent supports
 - To support the roof or floor during the removal of any supporting wall or partition
 - The formation of small openings in walls
 - To support a structure during the demolition of an adjacent structure
- (5)

- 5.2
- Independent scaffolding✓ does not depend on the building. It consists of two rows of standards that are connected with transoms and are stabilised by diagonal braces.✓
 - Putlog scaffolding✓ can easily be identified by the single row of standards.✓
 - Mobile scaffolding✓ is a square tower constructed from tubes mounted on wheels fitted with brakes.✓
- (Any 2 × 3) (6)

5.3



MOBILE SCAFFOLD

Sketch	5
Labels (Any 5 × 1)	5

(10)

- 5.4
- Only competent workers may erect the scaffolding.
 - Scaffolds must be built according to the SABS standards.
 - The condition must be recorded and reported to the general foreman.
 - Putlogs must be properly rested onto the brickwork.
 - The minimum thickness of the timber scaffold board should be 38 mm.
 - Gaps between the boards may only be a few millimetres.
- (Any relevant answers)

(6)

[27]**QUESTION 6**

- 6.1
- Fence the site.
 - Horizontal side piles may be used.
 - Use planking and excavation.
 - Ensure sloping sides to excavation.
 - Get rid of ground- and rainwater immediately by pumping and bailing.
 - Excavate by hand. Do not use a machine, especially for final touches.
- (Any 5 × 1)
- 6.2
- The method of excavation can be problematic.
 - Nearby plant and vehicles on busy roads can cause collapses because of vibration.
 - The nature of the soil may cause collapse.
 - The weight of materials placed too near on the edge of the trenches could be too great.
 - Weather conditions could be another problem. Heavy rains erode sides of trenches.
 - Trenches that are open for a long time will collapse eventually.
 - When excavation is very deep, the steep sides cannot carry their own weight.
- (Any 6 × 1)

(5)

(6)
[11]**QUESTION 7**

- 7.1 A climbing crane is a supported cantilever crane with a short tower that is fixed into a lift shaft.
- 7.2 A self-propelled crane is a mobile crane where the driver has only one cab position for both driving and operating the crane.
- 7.3 A gantry crane is an overhead travelling crane that is mounted onto rails.
- 7.4 A derrick crane consists of a large vertical slewing mast and a derricking jig, which is connected at the foot of the crane.
- 7.5 Scotch derrick cranes consist of sturdy latticed stays that can turn together with the mast, and have a larger slewing range.

- 7.6 Mast cranes consist of a vertical mast and a high pivot luffing jib.
- 7.7 A tower crane consists of a long vertical part, the tower, and a fully rotating horizontal cantilever, the slewing jib.
- 7.8 Travelling cranes can move a short distance on site on rails.
- 7.9 Static cranes are fixed to a base at their working position, and after completion of the works it is dismantled, transported and re-erected on another site.
- 7.10 Building cranes are power-operated lifting tackles with jibs that can move loads a considerable distance horizontally as well as lift and lower them by means of a hook on a rope.

(10 × 1) (10)
[10]

TOTAL: 100