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# higher education & training

Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

**T40(E)(A16)T  
APRIL EXAMINATION**

**NATIONAL CERTIFICATE**

**BRICKLAYING AND PLASTERING THEORY N1**

**(11010091)**

**16 April 2015 (Y-Paper)  
13:00–16:00**

**This question paper consists of 4 pages.**

**DEPARTMENT OF HIGHER EDUCATION AND TRAINING  
REPUBLIC OF SOUTH AFRICA**

**NATIONAL CERTIFICATE  
BRICKLAYING AND PLASTERING THEORY N1**

**TIME: 3 HOURS**

**MARKS: 100**

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**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**

- 1.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'true' or 'false' next to the question number (1.1.1–1.1.5) in the ANSWER BOOK.
- 1.1.1 Bricks should have a high water absorption capacity.
- 1.1.2 No-fines concrete means concrete without fine aggregate.
- 1.1.3 The centre is the permanent formwork on which arch bricks are supported during construction.
- 1.1.4 Reveals are the vertical sides of an opening.
- 1.1.5 Course aggregate is material that passes through a 4.75 mm sieve. (5 x 1) (5)
- 1.2 Describe how you would check a spirit level for vertical accuracy. (5)
- 1.3 List FIVE main points to consider when choosing a spirit level. (5 x 2) (10)  
[20]

**QUESTION 2**

- 2.1 Name FIVE plastering tools. (5)
- 2.2 Make neat sketches, to a scale of approximately 1 : 10, of two bricks walls to show the differences between an unbonded brick wall and a bonded brick wall.
- The wall must be THREE bricks long and TEN courses high. (10)
- 2.3 Name FIVE different bricklaying tools. (5)  
[20]

**QUESTION 3**

3.1 Briefly explain the use of the following tools:

- 3.1.1 Long jointers
- 3.1.2 Short jointers
- 3.1.3 Pointing trowel
- 3.1.4 Scraper

(8)

3.2 Illustrate, by means of neat sketches, the following jointing methods:

- 3.2.1 Flush struck
- 3.2.2 Weather struck
- 3.2.3 Raked out
- 3.2.4 Bastard tuck pointed
- 3.2.5 Hollow key
- 3.2.6 Square recessed

(12)  
[20]

**QUESTION 4**

4.1 Briefly describe how a slump test should be carried out on a construction site.

(14)

4.2 Name THREE types of slump that might occur.

(6)  
[20]

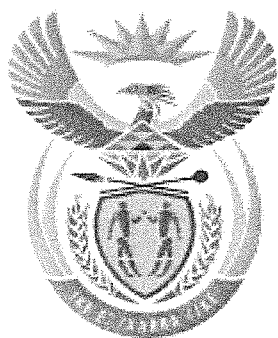
**QUESTION 5**

Draw, to a scale of approximately 1 : 10, the alternate plan course of a one-brick corner in English bond.

[20]

**TOTAL: 100**

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## **MARKING GUIDELINE**

**NATIONAL CERTIFICATE**

**APRIL EXAMINATION**

**BRICKLAYING AND PLASTERING THEORY N1**

**16 APRIL 2015**

**This marking guideline consists of 6 pages.**

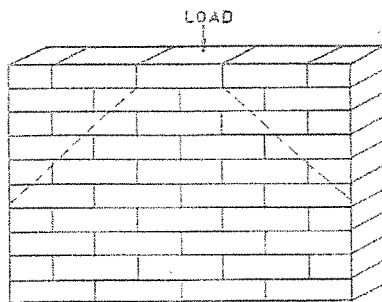
**QUESTION 1**

- 1.1      1.1.1      False
- 1.1.2      True
- 1.1.3      False
- 1.1.4      True
- 1.1.5      False
- (5 x 1)      (5)
- 1.2
  - Place the spirit level in an upright position against a straight object.
  - Mark the position of the level with a clear pencil mark.
  - Turn the level over so that the other side is now against the straight surface.
  - If the bubble comes to rest in the same place as before then the spirit level is still true.
- (5)
- 1.3
  - Choose the longest possible level suitable for the task.
  - It must be strongly made in order to withstand any rough handling.
  - The bubble should respond quickly when the level is disturbed.
  - The vial should be visible from two sides of the level.
  - The vial should be straight with two gradation marks indicating the centre position.
  - The vial should be adjustable to allow for minor adjustments.
- (Any 5 x 2)      (10)  
[20]

**QUESTION 2**

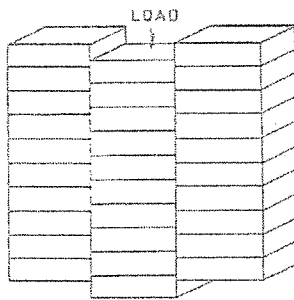
- 2.1
  - Plastering trowel
  - Spirit level
  - Wooden float
  - Straight edge
  - Gauging trowel
  - Corner tools
  - Block rush
- (Any 5 x 1)      (5)

2.2

*BONDED WALL*

Bonded wall 3

Load distribution 2

*UNBONDED WALL*

Unbonded wall 3

Load distribution 2

(5 x 2) (10)

2.3

- Brick trowel
- Bolster
- Brick hammer
- Line
- Wooden blocks
- 2kg hammer
- Jointers
- Tingle

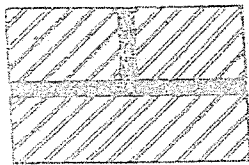
(Any 5 x 2) (5)  
[20]

**QUESTION 3**

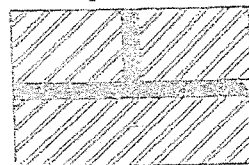
- 3.1 3.1.1 Long jointers are used to finish off the horizontal joints in face brickwork.
- 3.1.2 Short jointers are used to finish off the perpendicular joints in face brickwork.
- 3.1.3 Pointing trowels are used with long jointers to finish off the jointing.
- 3.1.4 Scrapers are used to rake out the mortar joint to an even depth before the square jointer is applied.

(4 x 2) (8)

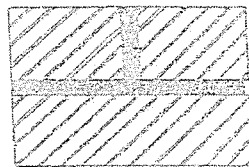
3.2 3.2.1

**FLUSH STRUCK**

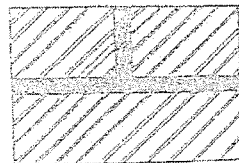
3.2.2

**WEATHER STRUCK**

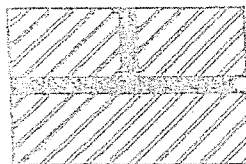
3.2.3

**RAKED OUT**

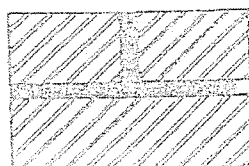
3.2.4

**BASTARD TUCK POINTED**

3.2.5

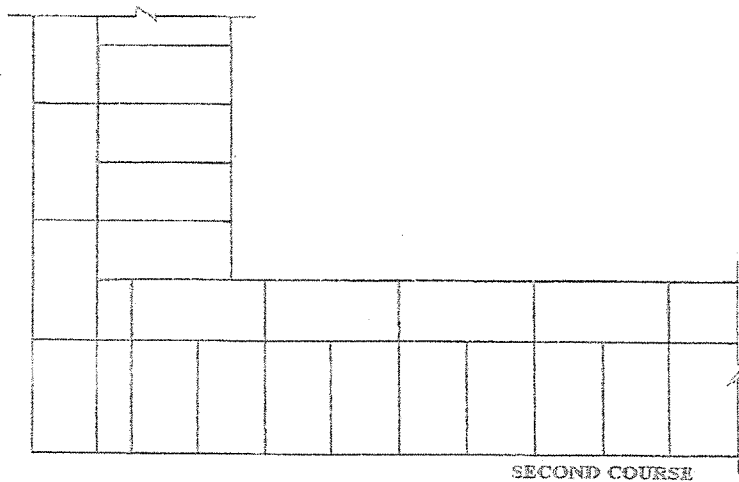
**HOLLOW KEY**

3.2.6

**SQUARE RECESSED**(6 x 2) (12)  
[20]





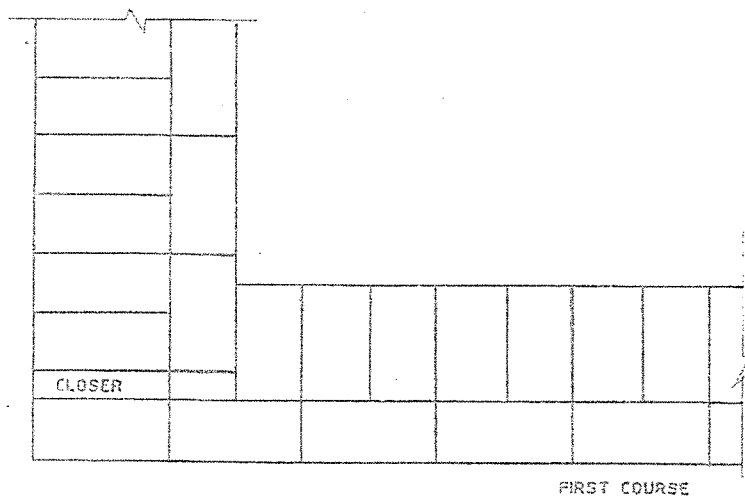
**QUESTION 5**

Scale 2

One and half brick wall 2

Bond 4

Shape 2



Scale 2

One and half brick Wall 2

Bond 4

Shape 2

(10 x 2) [20]

**ALTERNATE PLAN COURSES OF A ONE-AND-A HALF CORNER IN ENGLISH BOND****TOTAL: 100**