higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T30(E)(J22)T
AUGUST EXAMINATION

NATIONAL CERTIFICATE

BRICKLAYING AND PLASTERING THEORY N2

(11010102)

22 July 2014 (Y-Paper)
13:00–16:00

This question paper consists of 4 pages.

ENGINEERING

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
BRICKLAYING AND PLASTERING THEORY N2
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

1.1 Name THREE accessories that are used with metal laths. (3)

1.2 What is the difference between metal laths used *internally* and *externally*? (1)

1.3 Name the material that used to manufacture the following blocks:

1.3.1 Breeze blocks

1.3.2 Pumice blocks

1.3.3 Wood-wool slab

1.3.4 Cork slabs

(4 × 1) (4)

1.4 Name SIX different parts of a running mould. (6 × 1) (6)
[14]

QUESTION 2

Draw, to an approximate scale of 1 : 10, the alternate plan course of a two-brick corner in English bond. Show a stopped end on one wall. **[20]**

QUESTION 3

3.1 Explain the correct procedure for tiling a dry plastered wall. (12)

3.2 Name TWO bonds that are commonly used for clay pavers. (2 × 1) (2)
[14]

QUESTION 4

Draw, to an approximate scale of 1:20, the alternate plan courses of a single-breasted fireplace in English bond.
Show projections only on one side of the wall. **[20]**

QUESTION 5

5.1 Name THREE means by which arches are classified. (3 × 1) (3)

5.2 Explain what is meant by the term *relieving arch*. (3)

5.3 State FOUR requirements for laying floor boards. (4 × 2) (8)
[14]

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QUESTION 6

6.1 Briefly explain how a ladder should be climbed. (8)

6.2 Explain the correct procedure for erecting a trestle scaffold. (10)
[18]

TOTAL: 100

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MARKING GUIDELINE

NATIONAL CERTIFICATE

AUGUST EXAMINATION

BRICKLAYING AND PLASTERING THEORY N2

22 JULY 2014

This marking guideline consists of 6 pages.

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QUESTION 1

1.1
- Base screeds ✓
- Corner beads ✓
- Metal casings ✓ (3)

1.2 The wire for exterior use must be of a thicker gauge✓ than laths for interior use. (1)

1.3 1.3.1 Breeze blocks – Furnace klinker, Portland cement ✓

1.3.2 Pumice blocks – Broken bricks, Portland cement ✓

1.3.3 Wood-wool slabs – Wood shavings bonded✓ with magnesite fibres or cement

1.3.4 Cork slabs – Bark of trees✓, natural resin acts as bonding agent (4 × 1) (4)

1.4
- Plate✓
- Stock✓
- Shoes✓
- Muffle plate✓
- Stays✓
- Cleats ✓ (6 × 1) (6)

[14]

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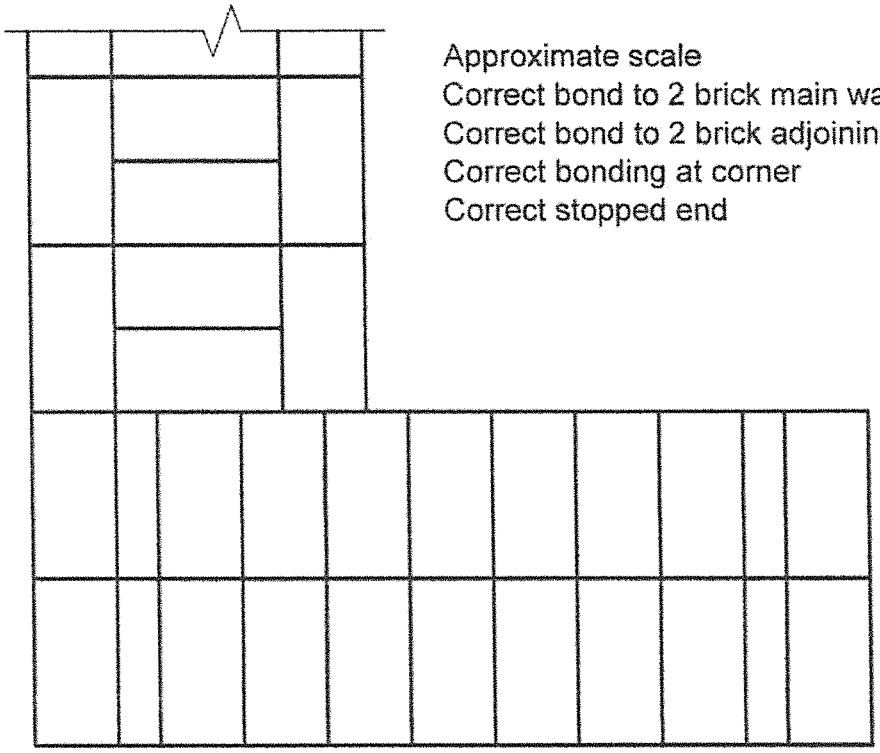
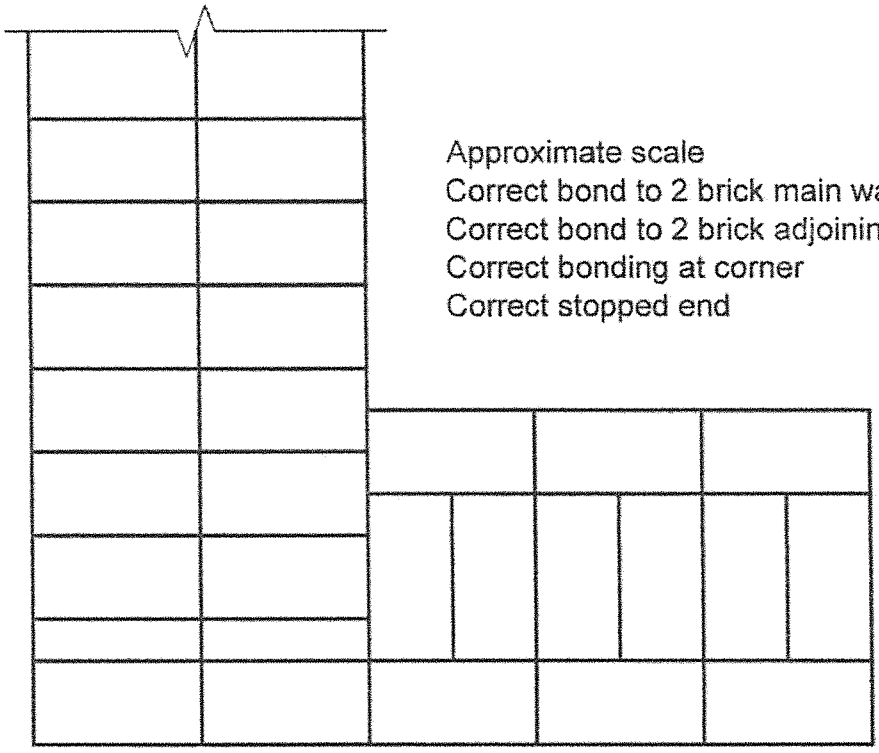
QUESTION 2



Approximate scale =2
Correct bond to 2 brick main wall =2
Correct bond to 2 brick adjoining wall =2
Correct bonding at corner =2
Correct stopped end =2
10



Approximate scale =2
Correct bond to 2 brick main wall =2
Correct bond to 2 brick adjoining wall =2
Correct bonding at corner =2
Correct stopped end =2
10

ALTERNATE PLAN COURSES OF A TWO BRICK CORNER IN ENGLISH BOND WITH STOPPED END AT ONE WALL END.

[20]

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QUESTION 3

3.1 Fix a batten with the top edge the height of one tile from the floor✓
Determine the centre line of the wall and draw a plumb line✓
Nail a batten to one side of the centre line✓
Use a notched trowel and apply adhesive to the wall✓
Start laying the tiles by positioning the first tile on the horizontal batten against the vertical batten✓
Fill the one half with tile using spacers✓, maintaining plumb vertical and horizontal joints✓
Remove the vertical batten and lay the remaining half using spacers✓
Measure, cut and lay the cut tiles around the edge ✓
Remove the horizontal batten✓ and lay the bottom row✓
Remove the spacers✓
Fill all the joints with grout
Remove the excess and clean the tile with a dry cloth (Any 12 × 1) (12)

3.2
- Basket weave✓
- Herringbone✓
- Basket weave variation
- Stretcher or running bond
- Stack and running bond

(Any 2 × 1) (2)
[14]

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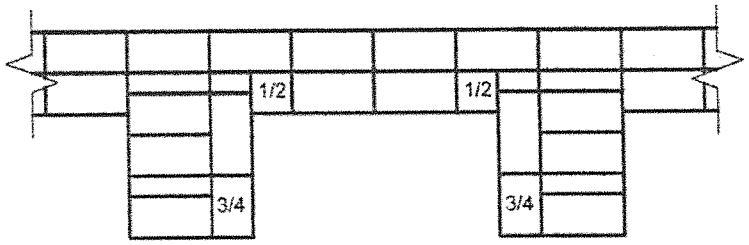
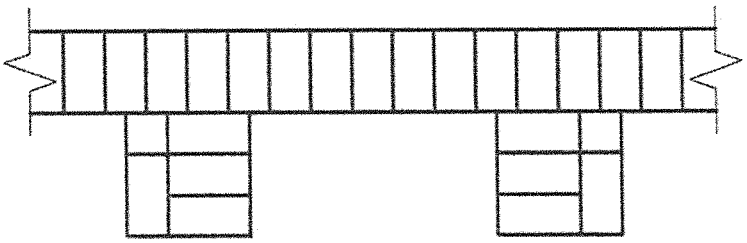
QUESTION 4



Approximate scale	= 2
Correct bonding to external wall	= 3
Correct bonding to internal projection	= 3
Correct bonding to main wall	= 2
	10

Course 1 of alternate plan course of a single-breasted fireplace in English bond with projection to only one side of the wall.



Approximate scale	= 2
Correct bonding to external wall	= 3
Correct bonding to internal projection	= 3
Correct bonding to main wall	= 2
	10

Course 2 of alternate plan course of a single-breasted fireplace in English bond with projection to only one side of the wall.

[20]

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QUESTION 5

5.1
- The method of cutting and fixing✓
- Their shape camber✓
- The number of centre (point) from which the arches are set out. ✓ (3 × 1) (3)

5.2 This is a form of ringed arch✓, built over a lintel✓ on a shaped brick core✓. (3)

5.3
- End joints should be made on joists✓ and adjoining boards should not be jointed on the same joist✓.
- Boards should be well cramped✓ up to close joints before nailing✓.
- Or alternative provision✓ is to be made to ensure stability✓.
- Each board✓ should be nailed with two nails to each joist✓.
- Nails should be well punched home. (Any 4 × 2) (8)

[14]

QUESTION 6

6.1 Face the ladder. ✓
Place the ball of the foot✓ on the rungs. ✓
Always have one hand free✓ when mounting a ladder. ✓
Climb only one rung at a time✓ and keep the free hand on the stile ✓to prevent falling backwards. ✓
The body should be kept centred between the stiles. (Any 8 × 1) (8)

6.2 Ensure that the area is level✓ and free of obstructions. ✓
Open the trestle legs✓ and ensure that the collapsible stays are firmly in position. ✓
Position the trestles the permissible distance apart✓.
Once positioned check the trestles for levelness and stability. ✓
Ensure that the space between the trestle and the structure does not exceed 75 mm. ✓
Remove the locating pins. ✓
Adjust the trestle to the required working height✓ and insert the locating pins.✓
Inspect the scaffolding planks for damage, projecting nails or any other obstruction.
Position the scaffolding planks to form a working platform.
Ensure that the end projection is correct, (10)
Inspect the erected scaffold to ensure that it is safe to use. (Any 10 × 1) **[18]**

TOTAL: 100

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