higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

CARPENTRY AND ROOF WORK
NQF LEVEL 4

17 November 2022

This marking guideline consists of 6 pages.

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QUESTION 1

1.1 1.1.1 True✓ (1)

1.1.2 True✓ (1)

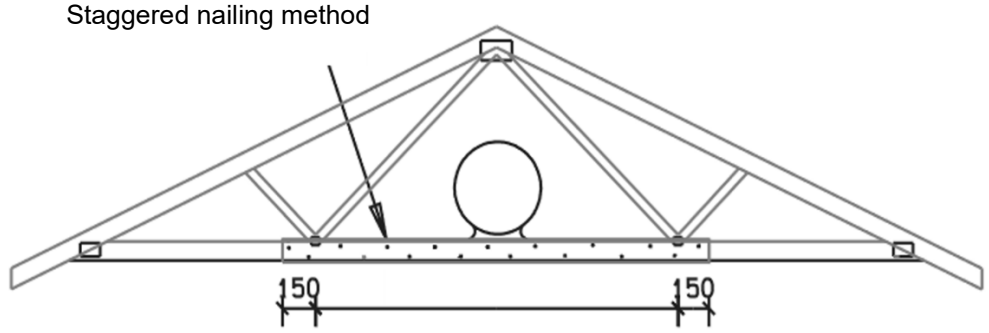
1.1.3 False✓
A carpenter needs a signed off design by an engineer for all geyser support decks when the geyser capacity is larger than 250 ℓ ✓and for roof truss design bigger than 8 m.✓ (3)

1.1.4 False✓
SANS 10400 state that you are not allowed to remove or cut any member of a roof truss to make space for a geyser support deck.✓✓ (3)

1.1.5 True✓ (1)

1.2
- The geyser will quickly lose temperature during cold weather.
- The geyser can be damaged by harsh weather.
- The plumbing can be complicated and can have an effect on the cost of installation due to long distances. (Any 2 × 1) (2)

1.3



Staggered nailing:	2
Distance past the truss nodes:	2
Total:	4

(4)

[15]

QUESTION 2

2.1
- Ceilings would increase the overall value of the home.
- Ceilings would enhance the appearance of the room.
- Ceilings will help to limit temperature change.
- Ceilings will reduce the transfer of sound.
- Ceilings will prevent dust that is blown in under the roof.

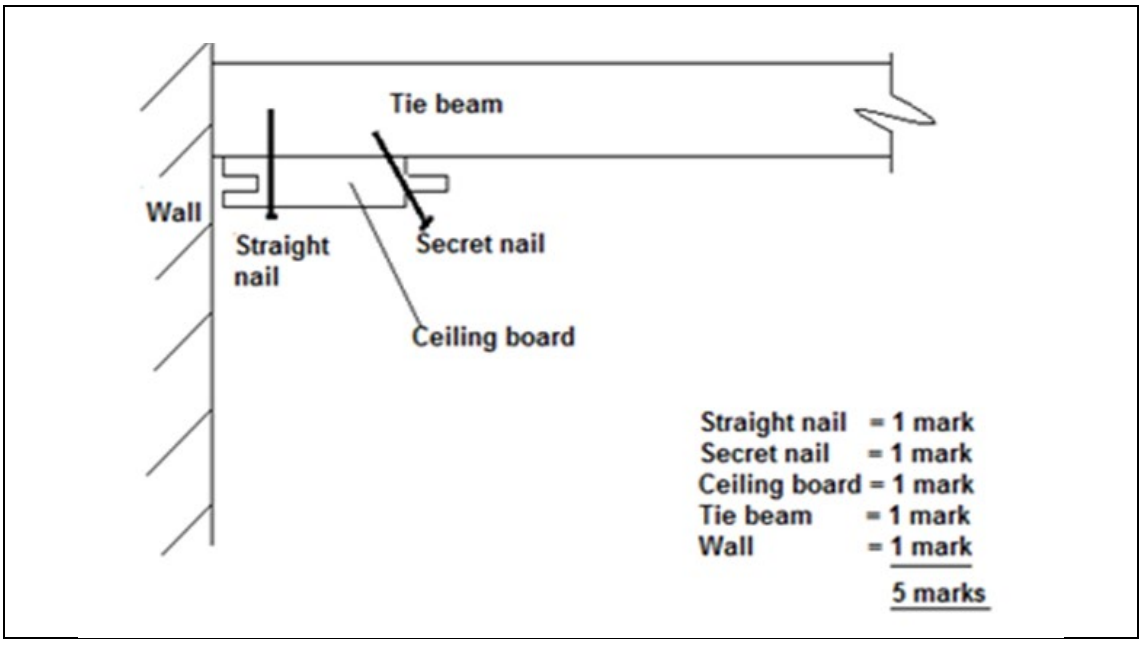
Note: Not stability (Any 3 × 1) (3)

2.2
- Check that the walls and bottom of the tie beams are parallel.
- A difference of less than 15 mm can be adjusted by fanning the members slightly.
- Loosely fix a nail on the first bottom chord about 10 mm away from the wall.
- Repeat the process on the opposite side of the same wall 90º with the trusses.
- String a line between the two nails.
- Fix nails loosely in the rest of the bottom chords to form a straight row of nails parallel with the wall.
- Open a bundle of boards and choose one that is straight.
- Cut the ends of the board square and place the grove end against the nails.
- The first member will have TWO nails per bottom chord.
- One nail will go straight through the board next to the wall and the second nail will be on an angle. (Any relevant 10 × 1) (10)

2.3 It is short lengths of brandering✓that is fitted at an angle of 90º✓ between the longitudinal brandering, creating squares of 300 mm × 300 mm.✓
It is seldom used today as the latest ceiling material is more rigid and does not require extra support.✓ (4)

2.4
2.4.1 38 mm × 38 mm✓ 75 mm nails✓
2.4.2 38 mm × 75 mm✓ 100 mm nails✓ (4)

2.5



(5)

2.6 In a tiled roof, the trusses are about 760 mm apart✓ which is an ideal size for a trapdoor. The tie beams can therefore be used for TWO sides of the trapdoor opening.✓ In a roof covered with corrugated iron sheets, the truss spacing will be at least 1 200 meters✓ which is too big for a trapdoor, therefore FOUR pieces of timber will have to be used✓ for the trapdoor opening. (4)
[30]

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QUESTION 3

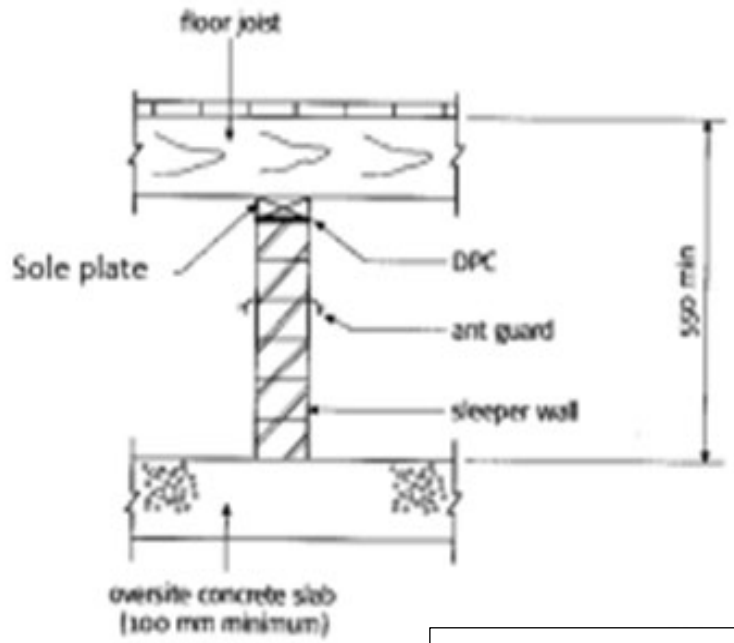
3.1 3.1.1

- 5400 ÷ 1800
  = 3 ✓
- 120 mm – 8 mm
  = 112 mm ✓
- 3360 ÷ 112
  = 30 ✓
- 3 × 30
  = 90 boards ✓✓ (5)

3.1.2 5400 ÷ 415 ✓
= 13 floor joists ✓ (2)

3.1.3 Bearing length 75 mm ✓
Clearance 10 mm ✓ (2)

3.1.4



Sketch (6 × ½)	3
Label (Any 4 × ½)	2
Total	5

(5)

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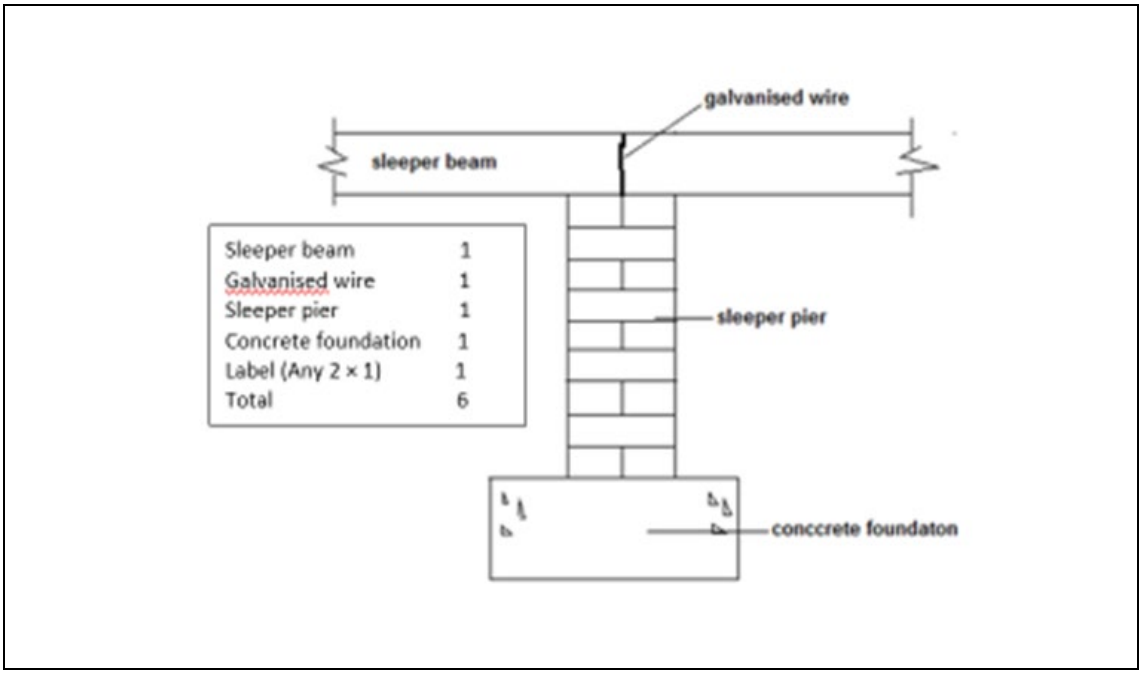
3.2



(6)
[20]

QUESTION 4

4.1
4.1.1 4
4.1.2 open into
4.1.3 panel doors
4.1.4 after
4.1.5 floor

(5 × 1) (5)

4.2 Misaligned jambs mean that the jambs are twisted out of the same plane✓ and will not align vertically.✓ (2)

4.3
- Assess the doorframe.✓
- Mark the door✓ and doorframe together.✓
- Fit the door.✓
- Trim and ease the door.✓
- Fit the lock and handles.✓ (6)

4.4
- Ratchet brace
- 12 mm auger bit
- 12 mm chisel
- 25 mm chisel
- Bradawl
- Wheel-brace
- Screwdriver
- Claw hammer
- Mallet
- Try/Combination square
- Measuring type (Any 5 × 1) (5)

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4.5 4.5.1 Prevents rainwater from entering underneath the door.
4.5.2 Allows a door to be fixed in a partially open position.
(2 × 1) (2)
[20]

QUESTION 5

5.1
- Vulnerable to water damage
- Requires edging
- Poor screw-holding ability (Any 2 × 1) (2)

5.2
- Mark the position of the holes on the fixing cleat.
- Position the cupboard correctly.
- Drill through the fixing cleat and into the wall to the correct depth.
- Insert the nail anchor.
- Drive the nail anchor firmly into the wall. (5)

5.3
- Prevents warping
- Ensures a tight fit against the wall (2)

5.4
- Fix a cleat to the back of the recess.
- Fix cleats to the sides of the recess.
- Measure the required size of the shelf.
- Cut the shelf to size.
- Screw the shelf on top of the cleats.
- Screw a batten on edge to the front of the shelf to strengthen the shelf. (6)

[15]

TOTAL: 100

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