higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

CARPENTRY AND ROOFING THEORY N2

6 APRIL 2018

This marking guideline consists of 7 pages.

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NOTE: Alternate relevant answers not covered by this marking guideline must be considered by markers.

QUESTION 1: SETTING OUT OF BUILDINGS

1.1 Designated line set by the municipality beyond which no building may extend to ensure that streets appear uniformly

1.2 Mark set by the local authority which determines the level of the site. It should be permanent and easy to find in relation to other nearby permanent building structures, landmarks, drain covers, etc

1.3 Temporary benchmark or an imaginary level surface of the site, which is expressed as the level or elevation of any point as the vertical distance of the point above or below the definite datum

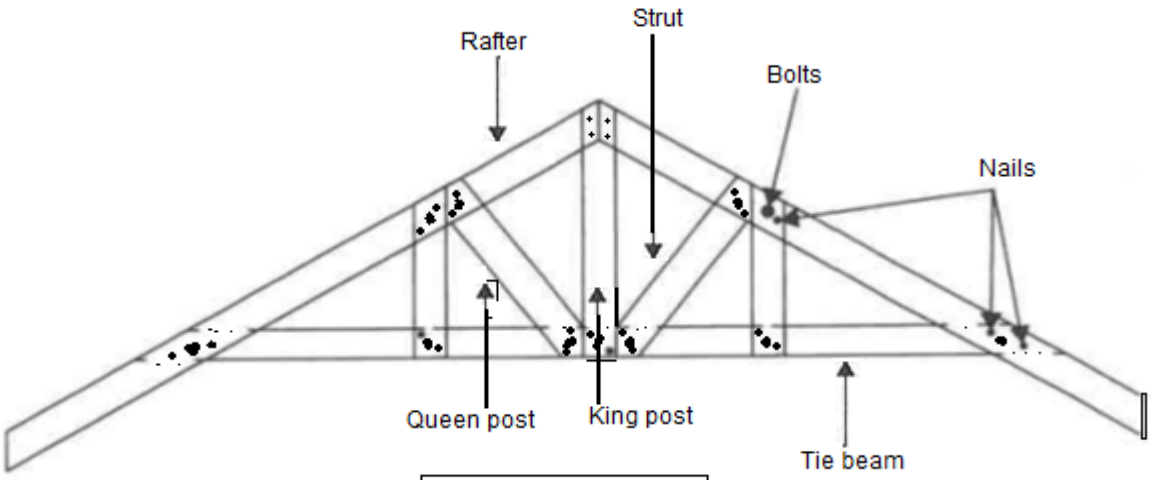
1.4 Temporary boards nailed horizontally to vertical wooden pegs driven into the ground about 1 metre away from the excavation line to ensure the accurate setting out of the foundation and the walls

1.5 Representation of a project but more detailed and formal, done with instruments and including dimensions

(5 × 2) **[10]**

QUESTION 2: ROOF CONSTRUCTION

2.1



Sketch:	3
Correctness:	1
Labels:	7
Quality of sketch:	1
Total:	12

(12)

2.2 2.2.1 Timber member laid flat on the inner leaf of the external walls to provide a level bearing surface and to spread the load of the trusses

2.2.2 Part of the roof where the rafter extends a certain distance from above the external walls on the outside of a building

2.2.3 Usually a 50 × 76 timber member nailed across the top of the rafters at spacings of up to 1150 mm to support metal sheeting or fibre cement sheeting

2.2.4 Galvanised metal plate punched to form a nail pattern used as a connector to assemble a roof truss

(4 × 2) (8)
[20]

QUESTION 3: ROOF COVERING

	Roof covering	Minimum slope	Fixing Method
3.1.1	Natural slate	20° with underlay or 30° without underlay✓	Secured with nails at the head or centre onto the tile battens✓
3.1.2	Fibre cement slate	10° with underlay or 17° without underlay✓	Fixed twice, first in the centre with 32 mm copper nails and then secured at the tail with copper disk rivets✓
3.1.3	Clay tiles	17° with underlay or 26° without underlay✓	Fixed with nails onto tile battens✓
3.1.4	Metal tiles	Minimum of 10°✓	Secured with corrosion-resistant self-drilling screws to the battens which are sometimes fixed directly onto an existing roof✓
3.1.5	Secret fixed sheets	As low as 1°✓	Fixed by means of a clip system which is fixed to the purlins and the clips are completely covered by the roof sheets✓

(5 × 2) (10)

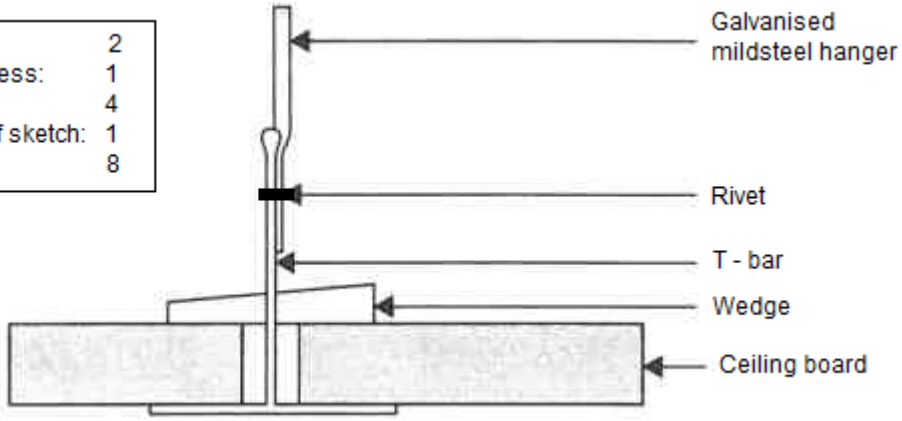
3.2 3.2.1 C
3.2.2 E
3.2.3 B
3.2.4 A
3.2.5 D

(5 × 1) (5)
[15]

QUESTION 4: CEILINGS

4.1

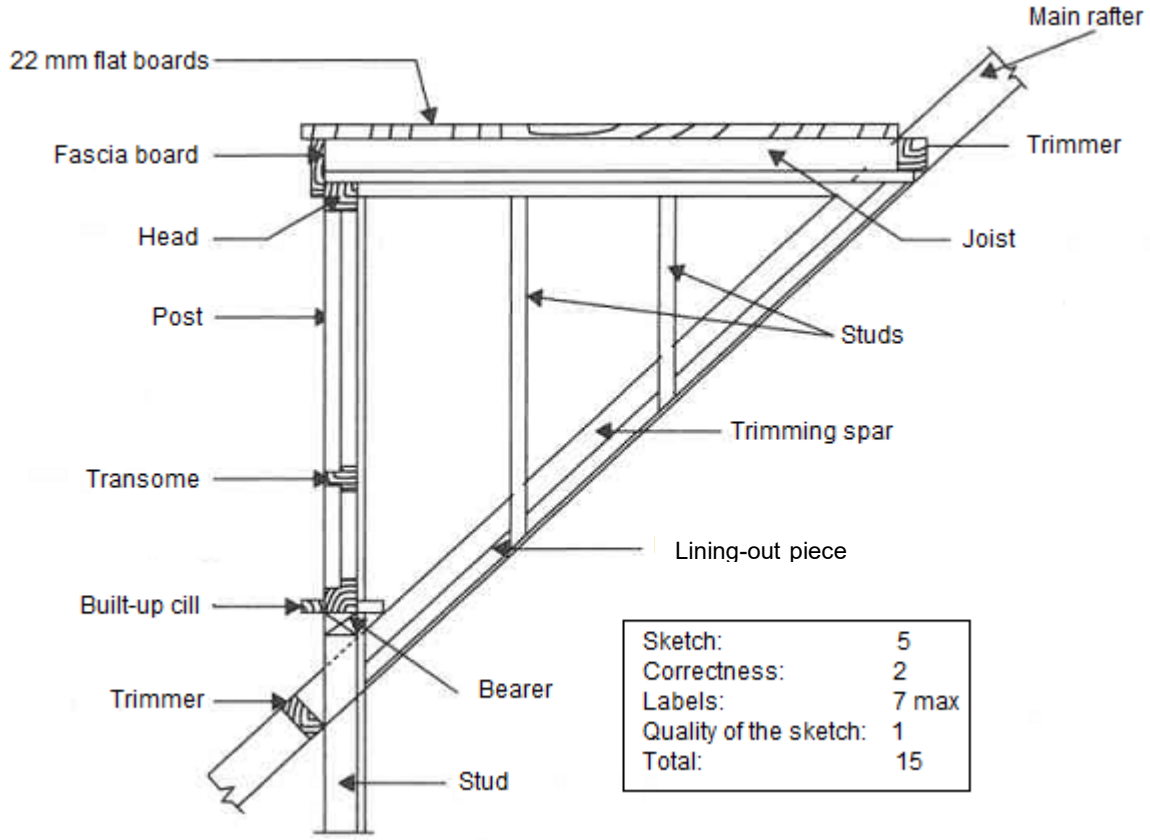
Sketch:	2
Correctness:	1
Labels:	4
Quality of sketch:	1
Total:	8



[8]

QUESTION 5: DORMER ROOF CONSTRUCTION

5.1



Sketch:	5
Correctness:	2
Labels:	7 max
Quality of the sketch:	1
Total:	15

[15]

QUESTION 6: ROOF LIGHT CONSTRUCTION

6.1
6.1.1 Bottom rail
6.1.2 Top rail
6.1.3 Weather groove
6.1.4 Gutter back
6.1.5 Hinge
6.1.6 Rafter/spars
6.1.7 Trimmer
6.1.8 Lining
6.1.9 Cover mould
6.1.10 Lead flashing
6.1.11 Weather bar
6.1.12 Copper clip

(12 × 1) **[12]**

QUESTION 7: CARPENTRY CANDIDATES ONLY

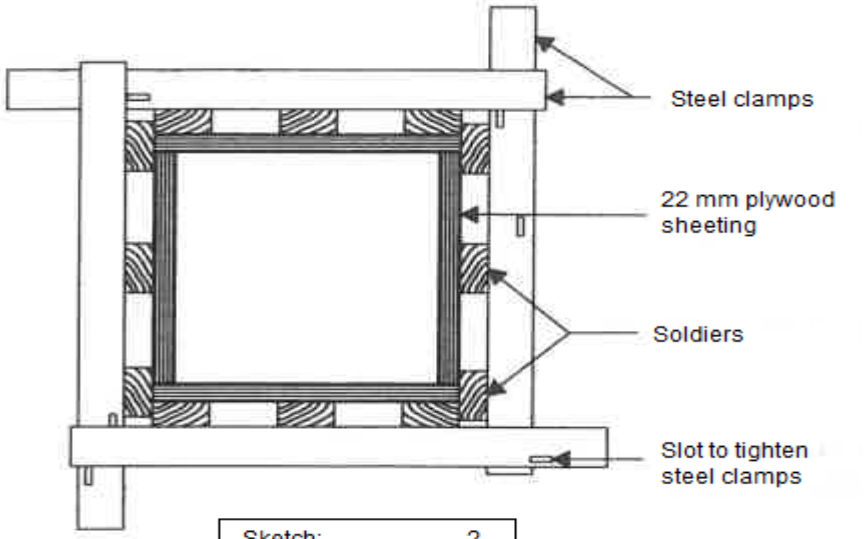
7.1
7.1.1 Plate shelf
7.1.2 Cornice
7.1.3 Top rail
7.1.4 Raised and fielded pane
7.1.5 Dado mould
7.1.6 Bottom rail
7.1.7 Skirting
7.1.8 Soldiers
7.1.9 Rough ground
7.1.10 Middle rail

(10 × 1) (10)

7.2 In-situ partitioning means the complete partition is prepared, erected and finished off on site.✓ (2)

7.3
- To close openings between walls and to maintain continuity of walls when closed
- To provide access and exit to people using the building
- To provide privacy and security to the people using the building (2)

7.4



Sketch:	2
Correctness:	1
Labels: half x 4 =	2
Quality of sketch:	1
Total:	6

(6)
[20]

QUESTION 8: THIS QUESTION IS FOR ROOFING CANDIDATES ONLY

8.1 8.1.1
- Grooved joint
- Rolled
- Riveting
- Brazing and welding but with special equipment (Any TWO)

8.1.2
- Hard soldering
- Brazing and welding
- Riveting
- Grooved seam joined (Any TWO)

8.1.3
- Soft soldering
- Rolled
- Grooved seam joined
- Welding called lead burning (Any TWO)

8.1.4
- Grooved joint
- Riveting
- Hard soldering
- Brazing and welding (Any TWO)

(4 × 2) (8)

8.2 8.2.1 Sealing off a joint so that no water seeps through eg. at a joint between a roof and chimney or a roof and parapet wall

8.2.2 Process in which a structure is protected against the✓ elements of the weather e.g. the rain, the radiation of the sun, etc. and in which varnish for external use is applied to wood.✓

(2 + 2) (4)

8.3
- The surface where the membrane is to be fixed must be clean, dry and fairly even
- All loose particles must be brushed off
- The required length is cut off and the protective layer removed
- The membrane is pressed in position with firm even strokes
- In extreme cases the membrane can be tapped very lightly with a hammer and block. (Any 4 × 1) (4)

8.4 8.4.1 B
8.4.2 A
8.4.3 C
8.4.4 A

(4 × 1) (4)
[20]

TOTAL: 100

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