higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

CARPENTRY AND ROOF WORK
NQF LEVEL 2

XX February 2020

This marking guideline consists of 4 pages.

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QUESTION 1: BASIC TOOLS AND TERMINOLOGY

1.1
- Electric hammer drill
- Circular saw (2)

1.2
1.2.1 Sloping member of a truss
1.2.2 Truss with only one slope
1.2.3 Angle or slope of a truss/roof
1.2.4 Specified distance between two trusses
1.2.5 Fixed load that never moves
(5 × 1) (5)

1.3
1.3.1 B
1.3.2 D
1.3.3 E
1.3.4 A
1.3.5 C
(5 × 1) (5)

1.4
1.4.1 Measuring tape
1.4.2 Crowbar
1.4.3 Shifting/Ring/Socket spanner
1.4.4 Crosscut saw
1.4.5 Roofing square
(5 × 1) (5)

1.5
- Hurricane clips
- Hanger rackets
- Hoop iron
- Tie-down wire
- Clout nails (Any 3 × 1) (3)

[20]

QUESTION 2: ROOF CONSTRUCTION

2.1
2.1.1 True
2.1.2 True
2.1.3 True
2.1.4 False
2.1.5 True
(5 × 1) (5)

2.2 The outer skin of the wall would be in the way of the bottom ends of the rafters✓ therefore the wall plate must be placed on the outer skin to lift the rafters.✓ (2)

2.3
- Hoop iron
- 2,4 mm wire (2)

2.4
- It requires additional fittings such as brackets and bolts.
- The roof must be constructed by a competent person.
- It is also requires a proper plan and must be inspected. (3)

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2.5 To ensure that the roof anchors are positioned accurately✓ no more than 200 mm away from the truss✓ to make it effective✓ (3)

2.6
- The roof may become distorted and can cause the roof to collapse.
- The roof can blow off when the wind is strong. (2)

2.7
2.7.1 38 mm × 76 mm
2.7.2 38 mm × 114 mm
2.7.3 38 mm × 152 mm
(3 × 1) (3)

2.8 Skew nailing occurs when a nail is driven into wood at an angle. It is used to keep the wood temporarily in place. (2)

2.9 Properly erected trusses will remain vertical.✓ The top chords and bottom chords will remain straight.✓ The chords are effectively supported laterally (side-to-side).✓ (3)

2.10
- The top-chord bracing is fixed using 3 mm × 100 mm wire nails.
- The bracing is nailed to the underside of the top chords of the trusses.
- Start nailing at the wall plate and end at the apex.
- It is fixed diagonally at 45° to the top plane of the trusses. (4)

2.11
2.11.1 Split-ring connector
2.11.2 Hurricane clip
2.11.3 Bolts and nuts
2.11.4 Nail-plate connector
(4 × 1) (4)

2.12 It supports the roofing sheets✓ and prevents the lateral buckling of the top chord.✓ (2)

2.13
2.13.1 5 degrees
2.13.2 17 degrees
2.13.3 10 degrees
2.13.4 45 degrees
2.13.5 20 degrees
(5 × 1) (5)
[40]

QUESTIONS 3: HOWE ROOF TRUSS

3.1
3.1.1 Bearing
3.1.2 Clinch
3.1.3 Caulk
3.1.4 Template
3.1.5 Strike/Shoot
3.1.6 Principle
3.1.7 Washer
3.1.8 Extension
3.1.9 Butt
3.1.10 Plumb
(10 × 1) (10)

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3.2
H
I
F
A
D
E
G
J
C
B

(10 × 1) (10)
[20]

QUESTION 4: GABLE-ROOF CONSTRUCTION

4.1
4.1.1 electric
4.1.2 OHSA
4.1.3 six
4.1.4 stays
4.1.5 truss spacing
4.1.6 spacing
4.1.7 roof covering
4.1.8 align
4.1.9 fungal
4.1.10 two

(10 × 1) (10)

4.2
- Type of timber to be used
- Grade of timber
- Size of the timber
- Type of treatment required to protect the timber (4)

4.3 50 mm (1)

4.4 Two workers check at the eaves✓ and one checks at the apex.✓ (2)

4.5
- It must be of the same width as the wall plate.
- It must be inserted from both sides. (2)

4.6 6,6 metres (1)
[20]

TOTAL: 100

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