higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

ENGINEERING FABRICATION – SHEET METAL WORK
NQF LEVEL 3

17 November 2023

This marking guideline consists of 7 pages.

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SECTION A

QUESTION 1

1.1 C
1.2 D
1.3 D
1.4 D
1.5 C
1.6 B
1.7 B
1.8 B

(8 × 1) **[8]**

QUESTION 2

2.1 False
2.2 False
2.3 False
2.4 True
2.5 False
2.6 True

(6 × 1) **[6]**

QUESTION 3

3.1 D
3.2 J
3.3 L
3.4 N
3.5 Q
3.6 S
3.7 P
3.8 F
3.9 T
3.10 O

(10 × 1) **[10]**

QUESTION 4

4.1 Sags.
4.2 Rotating.
4.3 Thickness.
4.4 Fume extractors. ✓
4.5 Workers tripping over objects.
4.6 Travel.

(6 × 1) **[6]**

TOTAL SECTION A: 30

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SECTION B

QUESTION 5

5.1 5.1.1
- Cross cut chisel.
- Used for heavy cuts such as slots and keyways.

5.1.2
- Diamond point chisel.
- Used for finishing off of corners or to cut 'v' grooves.

5.1.3
- Chuck key.
- Used to fasten the chuck of a portable drilling machine.

5.1.4
- Water pump plier.
- Used to grip objects of various sizes.
- Used for pipes (Any TWO)

5.1.5
- Allen key. ✓
- Used to tighten or loosen hexagonal shaped socket slot screws.

(5 × 2) (10)

5.2 5.2.1
- A pop riveter ✓ is used to rivet two plates together.✓

5.2.2
- A ball-pein hammer ✓ is used to shape a rivet head. ✓
- It can also be used to strike nails on to wood✓

(Alternative answer)

5.2.3
- A circlip plier✓ is used to insert a circlip.✓ or to remove circlip
- into housing✓ (Alternative answer)

5.2.4
- An adjustable spanner/shifting✓ is used to fasten a nut✓in hard to reach places✓ (Alternative answer)

5.2.5
- A file✓ is used to shape a curve.✓
- File also used to smooth the material✓ (Alternative answer)
- File used to take out rough edges✓/Burrs on a plate✓

(5 × 2) (10)

5.3 5.3.1 The square head✓ of the combination set is used to scribe a line 45°✓ with the edge of a work piece.

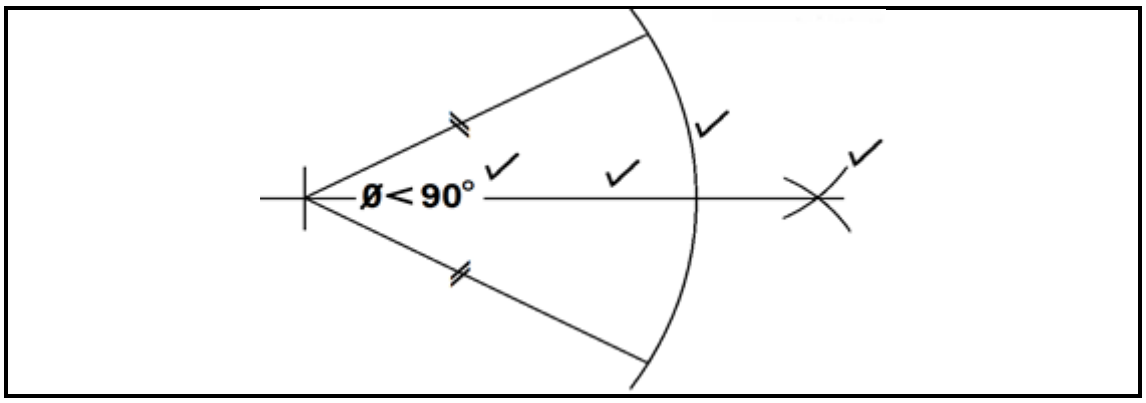
5.3.2 The square head✓ of the combination set is used to scribe a line 90°✓ with the edge of a work piece.

5.3.3 The centre head ✓ of the combination set is used to determine the centre of a round work piece.✓

5.3.4 The odd leg/jenny calliper✓ is used to scribe a line parallel✓ to the edge of a work piece.

5.3.5 A Spring divider✓ is used to mark linear pitches/distances✓on a work piece. (5 × 2) (10)

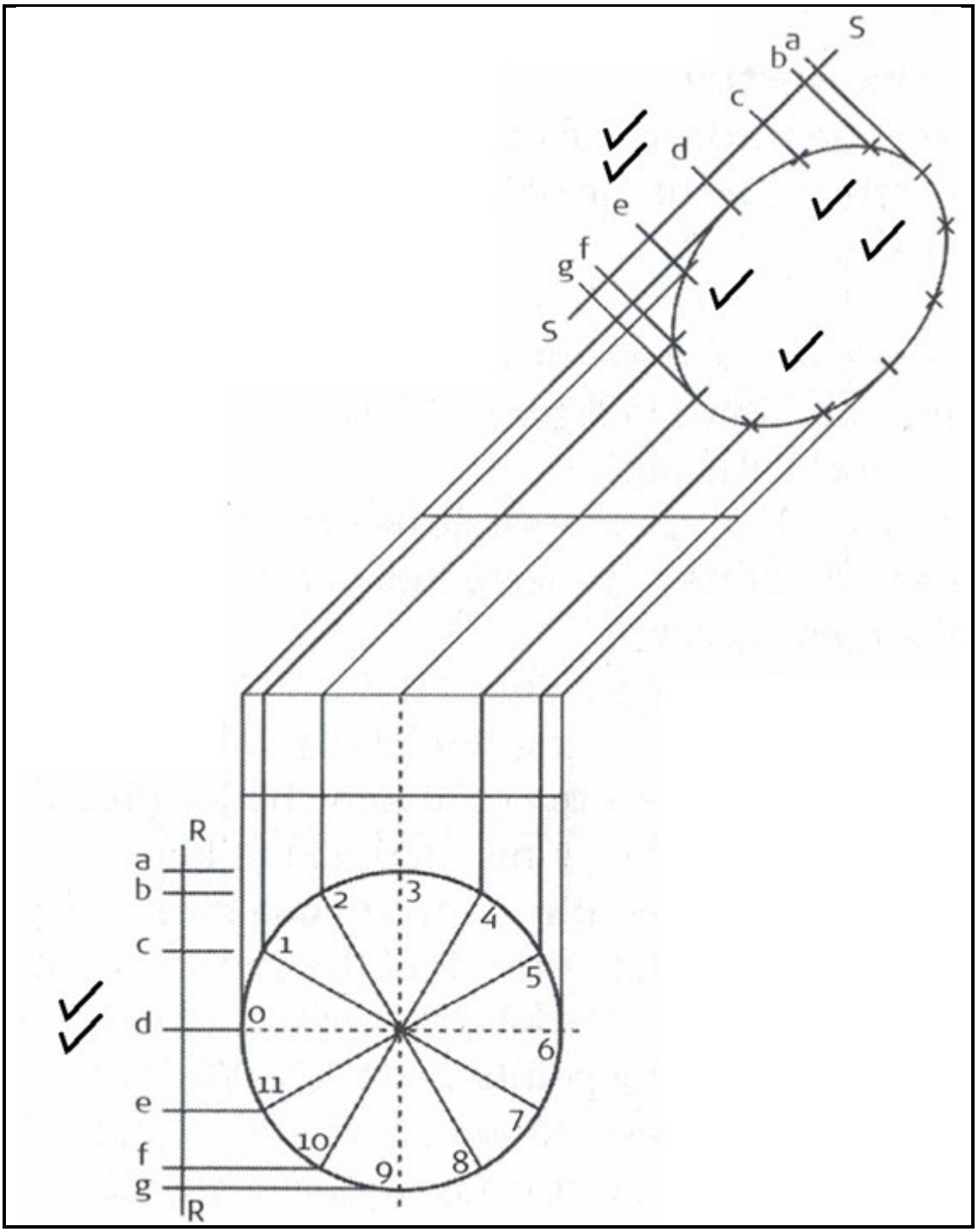
5.4



(4)

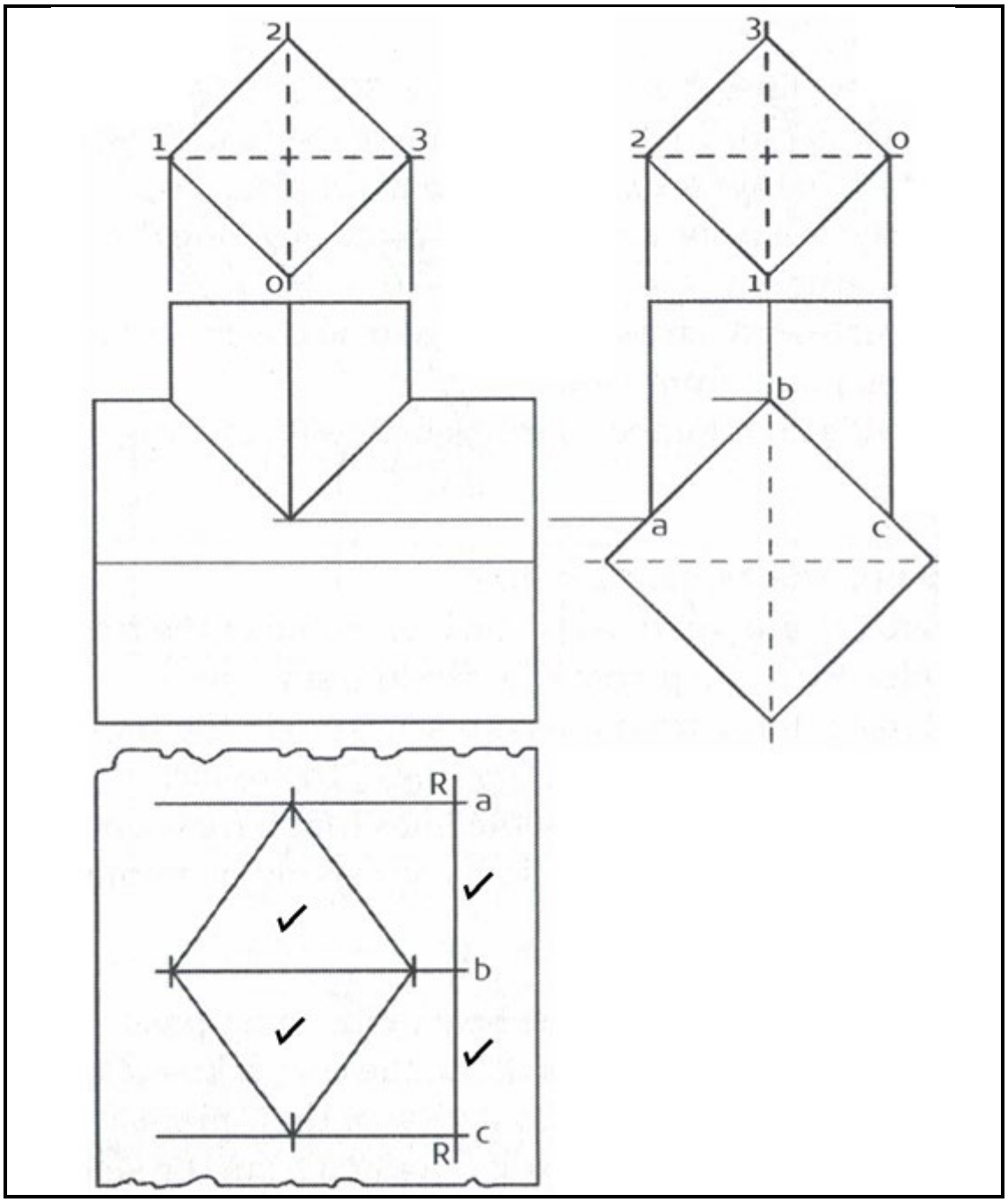
5.2 **MARKING GUIDE**

	Pos. Mark	Stud. Mark
Auxiliary view – Horizontal constructions	2	
True shape – Inclined constructions	2	
True shape	4	
Line work	1	
Accuracy	1	
TOTAL	**10**	



(10)

5.6



MARKING GUIDE

	Pos. Mark	Stud. Mark
Main pipe development – Horizontal constructions	2	
Shape of hole	2	
Line work	1	
Accuracy	1	
TOTAL	**6**	

(6)
[50]

QUESTION 6

6.1	6.1.1	Pressure regulators		
	6.1.2	Welding/Brazing head		
	6.1.3	Cutting head		
	6.1.4	Torch body		
	6.1.5	Check valves/Non-return valves		
			(5 × 1)	(5)
6.2	6.2.1	Pressures set too high or too low		
	6.2.2	The nozzle is too large or too small		
	6.2.3	Nozzle is dirty		
	6.2.4	Nozzle too close to the weld		
	6.2.5	Nozzle has over heated		
			(5 × 1)	(5)
				[10]

QUESTION 7

7.1	7.1.1	Plan drawing		
	7.1.2	Sectional drawing		
	7.1.3	Pictorial drawing		
			(3 × 2)	(6)
7.2	7.2.1	Steel ropes		
	7.1.2	Slings		
	7.1.3	Chains		
	7.1.4	Hooks		
			(4 × 1)	(4)
				[10]

TOTAL SECTION B: 70
GRAND TOTAL: 100

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