higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

ENGINEERING FABRICATION: SHEETMETAL WORK
NQF LEVEL 3

16 November 2022

This marking guideline consists of 5 pages.

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SECTION A

QUESTION 1

1.1	1.1.1	C		
	1.1.2	C		
	1.1.3	B		
	1.1.4	D		
	1.1.5	D		
	1.1.6	D		
			(6 × 1)	(6)
1.2	1.2.1	Vertical correctness		
	1.2.2	Odd-leg or jenny callipers		
	1.2.3	Blowpipe		
	1.2.4	Flashback		
	1.2.5	Bending allowance		
	1.2.6	Wire cables or chain slings		
			(6 × 1)	(6)
1.3	1.3.1	E		
	1.3.2	B		
	1.3.3	I		
	1.3.4	K		
	1.3.5	C		
	1.3.6	G		
			(6 × 1)	(6)
1.4	1.4.1	True		
	1.4.2	True		
	1.4.3	True		
	1.4.4	True		
	1.4.5	True		
	1.4.6	True		
			(6 × 1)	(6)
1.5	1.5.1	Phillips screw driver		
	1.5.2	Prick punch		
	1.5.3	No lubricant		
	1.5.4	GTAW		
	1.5.5	Crane driver		
	1.5.6	WLL		
			(6 × 1)	(6)
				[30]

TOTAL SECTION A: 30

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SECTION B

QUESTION 2

2.1
- Ball pein hammer
- Straight-pein hammer
- Cross-pein hammer
- Soft-face hammer
- Sledge hammer (Any 3 × 1) (3)

2.2
- Shank length
- Tip/Blade width (2)

2.3
- Do not use a screwdriver as a bending tool.
- Do not use a screwdriver as a chisel.
- A screwdriver's blade size must fit in the screw width.
- Do not overpower a screwdriver.
- Do not use a screwdriver as an electrical-circuit tester.
- Do not hold a workpiece in your hand whilst using a screwdriver.
- Do not use a damaged screwdriver.
- Do not use a screwdriver for a job that is not intended for (Any 4 × 2) (8)

2.4
2.4.1 Vice-grip pliers are mainly used for holding round objects.
2.4.2 Side cutters are used to cut thin round objects.
2.4.3 Water pump pliers are used to hold a variety of objects of different sizes.
2.4.4 Slip-joint pliers are used for general plier work or for holding round objects.
(4 × 2) (8)

2.5 Cutting stroke or forward stroke (1)

2.6 32 Teeth per inch or 32 teeth per 25 mm or the pitch. (2)

2.7 14 TPI (1)

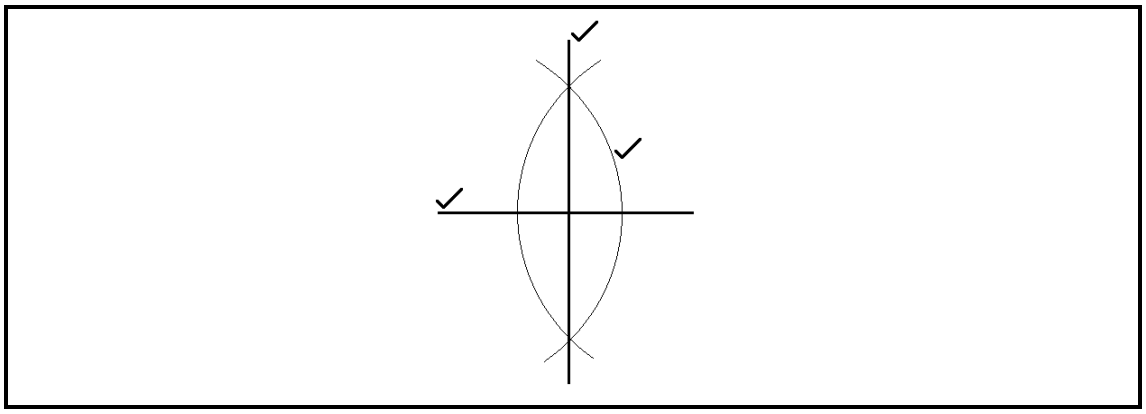
2.8
2.8.1 Trigger/Switch
2.8.2 Speed control
2.8.3 Chuck
2.8.4 Hammer action on/off switch
2.8.5 Trigger/Switch lock
(5 × 1) (5)

2.9
2.9.1 Straight edge (1)
2.9.2 It is used to check the flatness of the workpiece. (2)

2.10
2.10.1 Odd-leg callipers or jenny callipers (1)
2.10.2 The purpose of the markings is to determine the centre of the round object. (2)

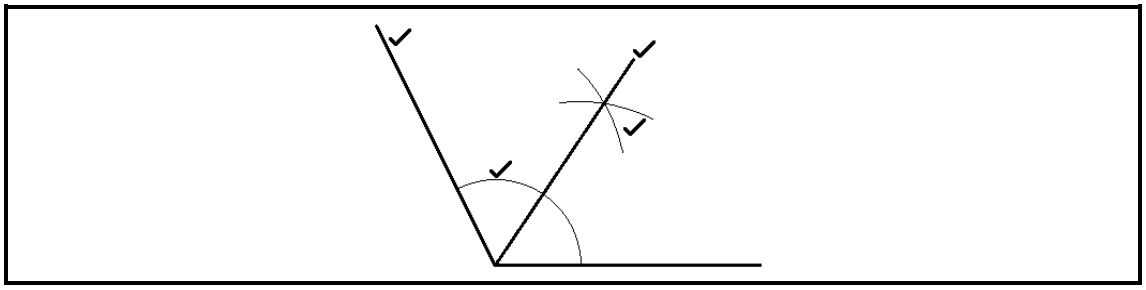
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2.11



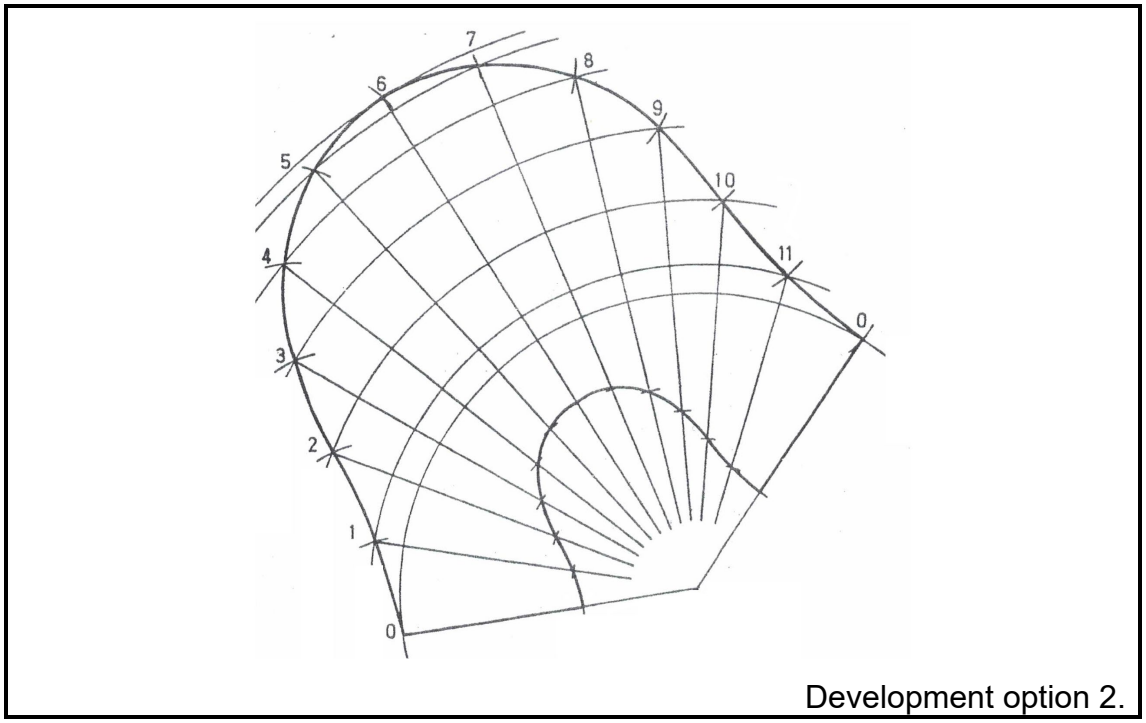
(3)

2.12



(4)

2.13



Development option 2. (2)

2.14
- Working drawings must be verified as the latest version.
- Check all specifications regarding shaping and assembly.
- Follow and interpret specifications correctly.
- Check all items for correspondence to fabricated components.
- Check item numbers and quantities of parts.
- Apply all shaping and assembly procedures as stated in the working drawings. (Any 5 × 1) (5)

[50]

QUESTION 3

3.1	3.1.1	Outlet		
	3.1.2	Working pressure gauge. (Name must be specific.)		
	3.1.3	Safety valve		
	3.1.4	Cylinder content gauge. (Name must be specific.)		
	3.1.5	Regulating screw		
			(5 × 1)	(5)
3.2	3.2.1	Depth of bevel		
	3.2.2	Groove weld size		
	3.2.3	Length of weld		
	3.2.4	Pitch (Centre-to-centre spacing of welds)		
	3.2.5	Weld on arrow side		
			(5 × 1)	(5)
				[10]

QUESTION 4

4.1	4.1.1	Air eliminator		
	4.1.2	Anchor		
	4.1.3	Expansion joint		
	4.1.4	Hanger		
			(4 × 1)	(4)

4.2
- Overalls
- Foot protection – Safety boots
- Hand protection – Leather gloves
- Head protection – Hard hat or helmet
- Eye protection – Goggles
- Safety glasses
- Face shield
- Hearing protection, ear muffs, ear plugs

(Any 6 × 1) (6)
[10]

TOTAL SECTION B: 70
GRAND TOTAL: 100

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