



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

ENGINEERING FABRICATION

(First paper)

NQF LEVEL 2

11 March 2020

This marking guideline consists of 5 pages.

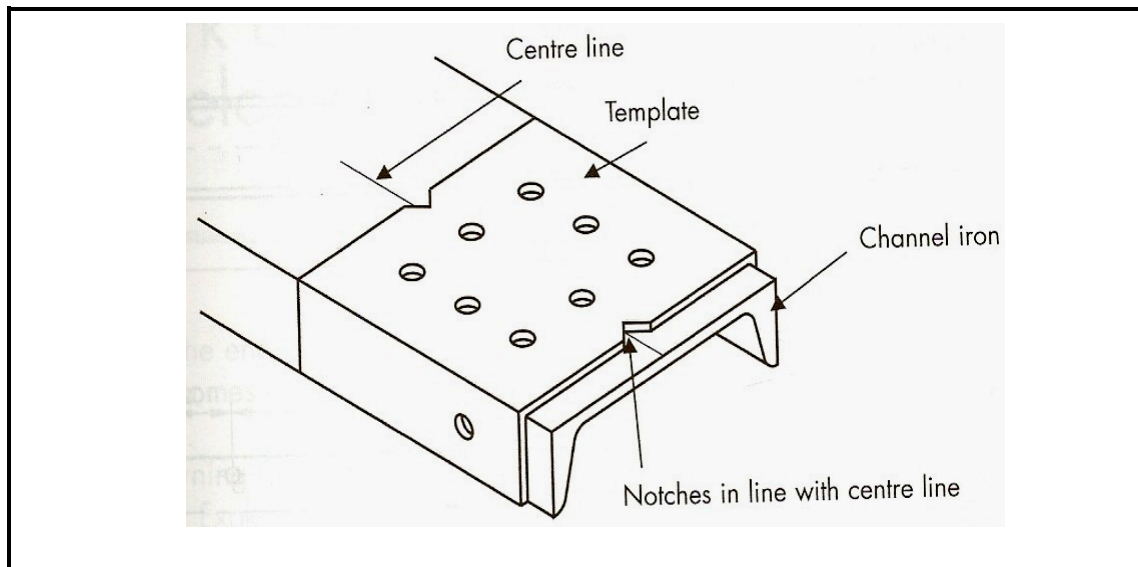
QUESTION 1

- 1.1 True
- 1.2 False
- 1.3 True
- 1.4 True
- 1.5 False
- 1.6 False

(6 × 1)

[6]**QUESTION 2**

- 2.1
- A template is a device used for the repetitive copying of items required to be fabricated.✓
 - A pattern is a piece of material exactly cut to a required size and shape to form a required product.✓✓
- (3)
- 2.2
- Parallel-line method
 - Triangulation method
 - Radial-line method
- (3)
- 2.3 Tolerance is a minimum or maximum deviation✓ to a given measurement.✓
- (2)
- 2.4



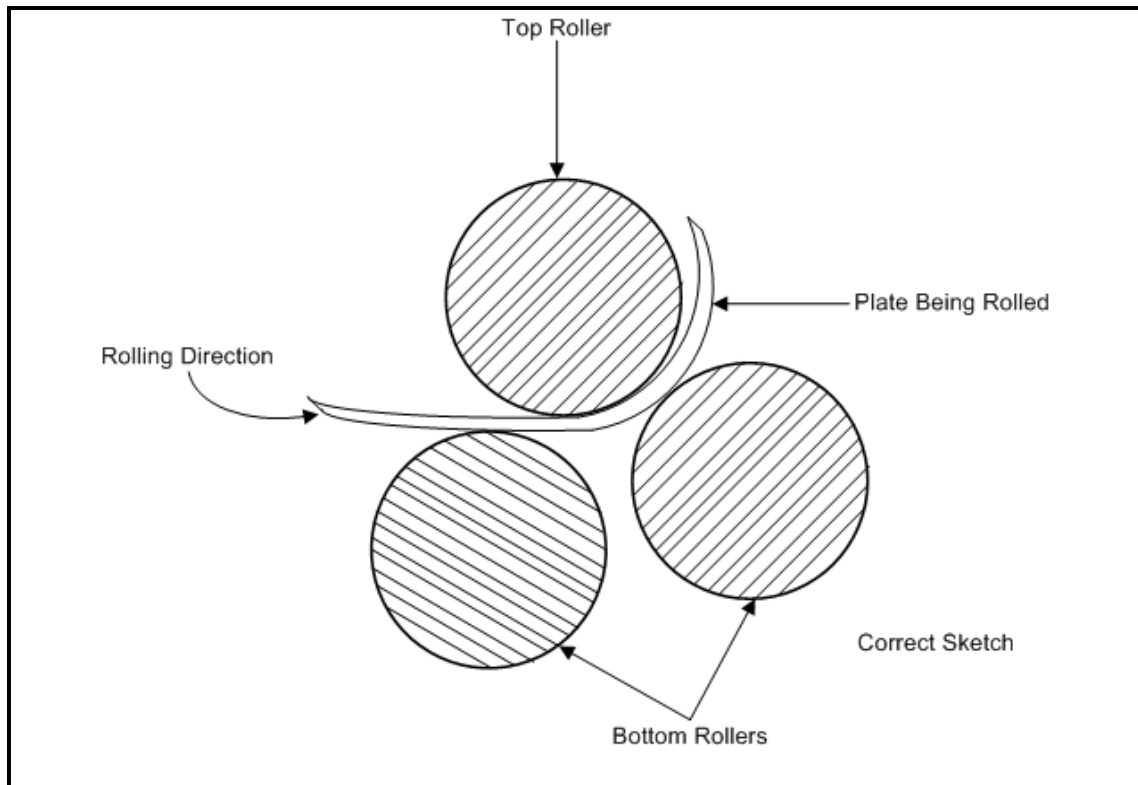
- Notch line (2)
Template and holes (2)
Channel line (2)

[14]

3.1	3.1.1	$\text{Mean diameter} = \text{ID} + t\checkmark$ $= 1\,206 + 16\checkmark$ $= 1\,222\text{ mm}\checkmark$	(3)
	3.1.2	$\text{Circumference} = 3,142 \times \text{MD}\checkmark$ $= 3,142 \times 1\,222\checkmark$ $= \underline{3\,839,524\text{ mm or }3,839\text{ m}}\checkmark$	(3)
	3.1.3	$\text{Area plate} = C \times h$ $= 3,839 \times 4\checkmark$ $= \underline{15,358\text{ m}^2}\checkmark$	(2)
3.2	3.2.1	• Malleability • Ductility	(2)
	3.2.2	Inside template	(1)
	3.2.3	• Malleability is a metal property that allows a metal to be rolled or bent. • Ductility is a metal property which allows a metal to be hammered or stretched without any fracture.	(4)
		(2 × 2)	[15]

4.1	4.1.1	• Bar folder • Cornice brake		
	4.1.2	• Press forming • Rolling machine	(2 × 2)	(4)

4.2



(Labelling) (4)
(Correct sketch) (3)

4.3 Hardness is a metal property that allows a harder metal to scratch or cut a softer metal. (1)
[12]

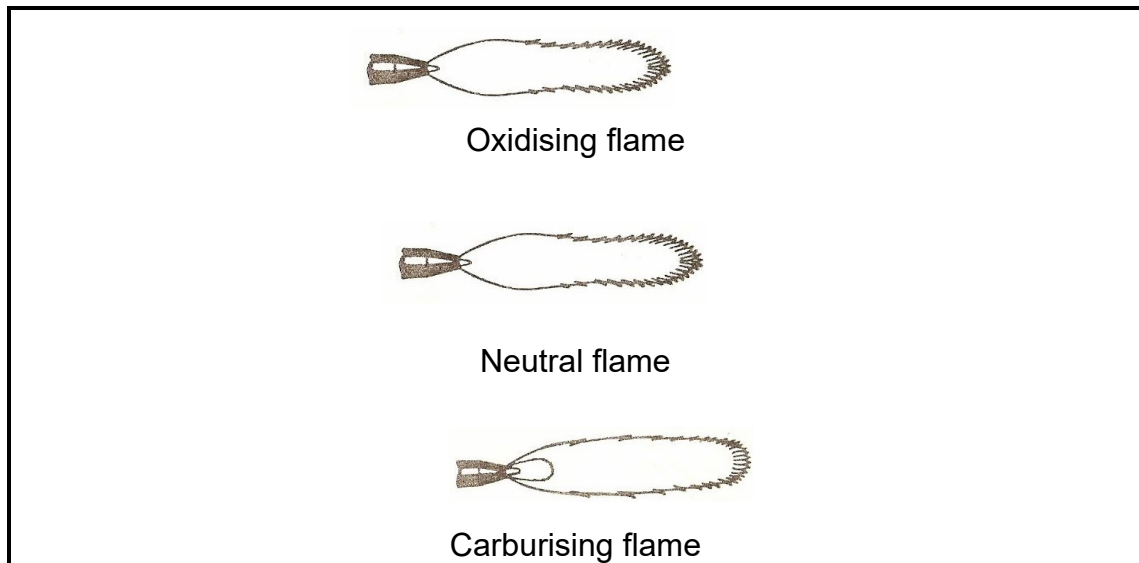
QUESTION 5

5.1 • A regulator reads the amount of content inside a cylinder.
• It regulates the amount of flow from the cylinder. (2)

5.2 5.2.1 Red/Maroon
5.2.2 Black/Green
5.2.3 Left-handed
5.2.4 Right-handed
(4 × 1) (4)

5.3 A flashback arrestor prevents backfiring. (2)

5.4



(3 × 2)

(6)

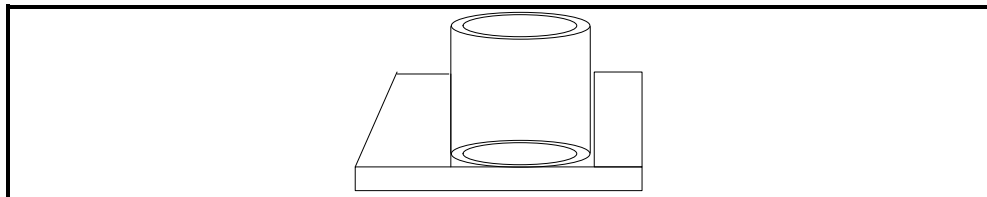
[14]**QUESTION 6**

- 6.1 6.1.1 • Portable grinder
 • Hand file
 • Deburring tool
 • Pedestal grinder (only for small items) (Any 3 × 1) (3)

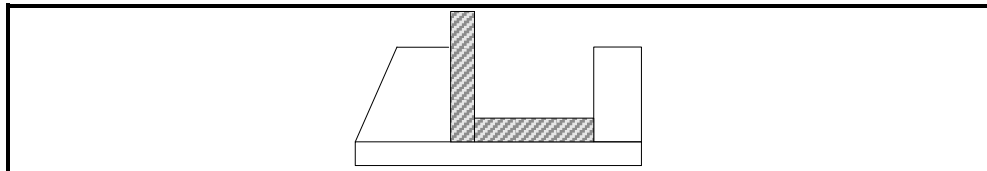
- 6.1.2 Coolant is used for wet cutting, ✓ but not for dry cutting. ✓ (2)

6.2

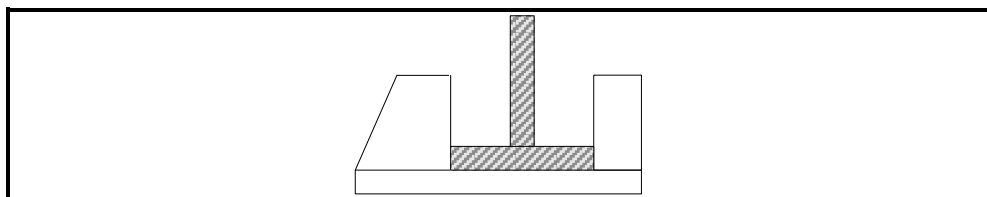
6.2.1



6.2.2



6.2.3



(3 × 3)

(9)

[14]**TOTAL:****75**