



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P2

NOVEMBER 2023

MARKING GUIDELINES

MARKS: 100

**DEPARTMENT OF BASIC
EDUCATION**

PRIVATE BAG X695, PRETORIA 0001

2023 - 11 - 23

APPROVED MARKING GUIDELINE

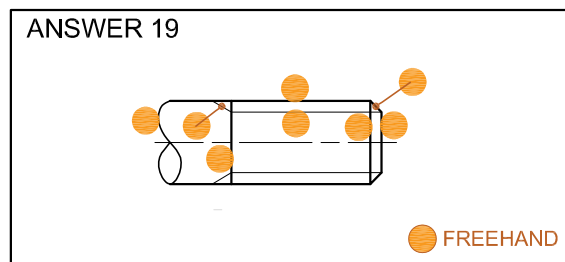
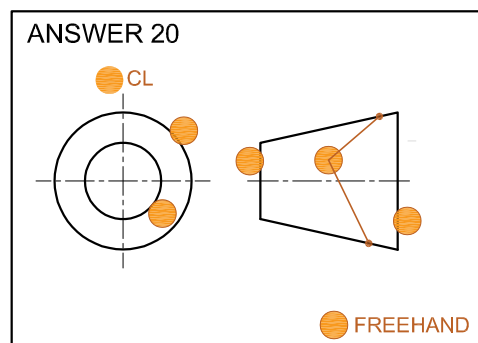
PUBLIC EXAMINATION

These marking guidelines consist of 7 pages.

ANSWERS		
1	SHARK STREET	1
2	APPROVED	1
3	SCGG213	1
4	<u>INTERRUPTED VIEW</u>	1
5	<u>INDUCTION</u>	1
6	REMOVED	1
7	PART / PARTIAL	1
8	B: R10 C: R4 D: 135 E: 2	4
9	36°, 37°, 38°	1
10	2	1
11	ALTERNATIEWE- / EXTREME POSITION	1
12	4	1
13	NOT TO SCALE	1
14	<u>RIGHT VIEW</u>	1
15	5	1
16	MIN = 7,9 & MAX = 8,23	2
17	MULTI-DIRECTIONAL	1
18	<u>ROUGHNESS VALUE</u>	1
19	See below	4½
20		3½
TOTAL		30

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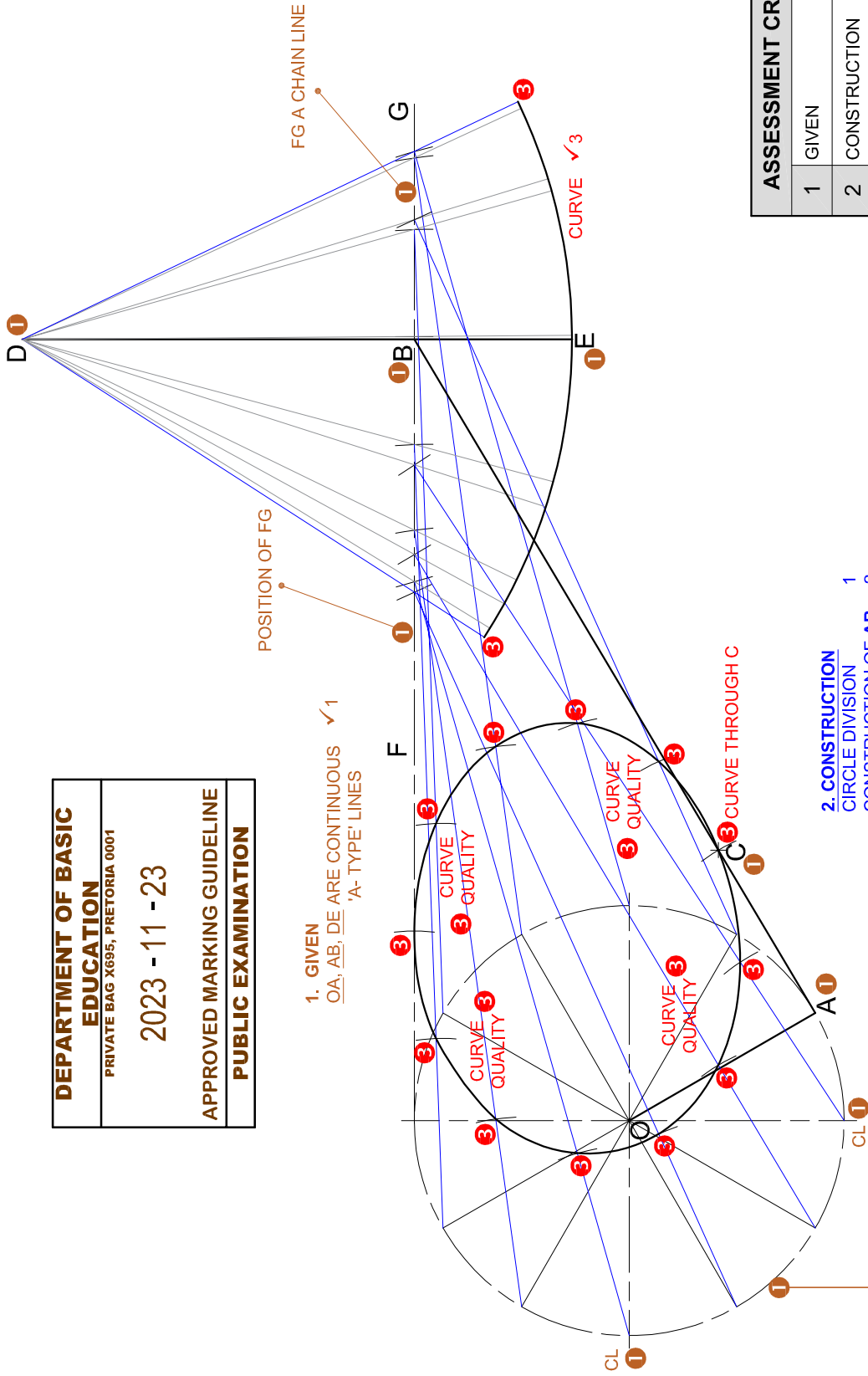
AB

PAPER 2 QUESTION 1
GRADE 12
NOVEMBER 2023
MARKING GUIDELINES

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1. GIVEN
 OA, AB, DE ARE CONTINUOUS ✓1
 'A-TYPE' LINES

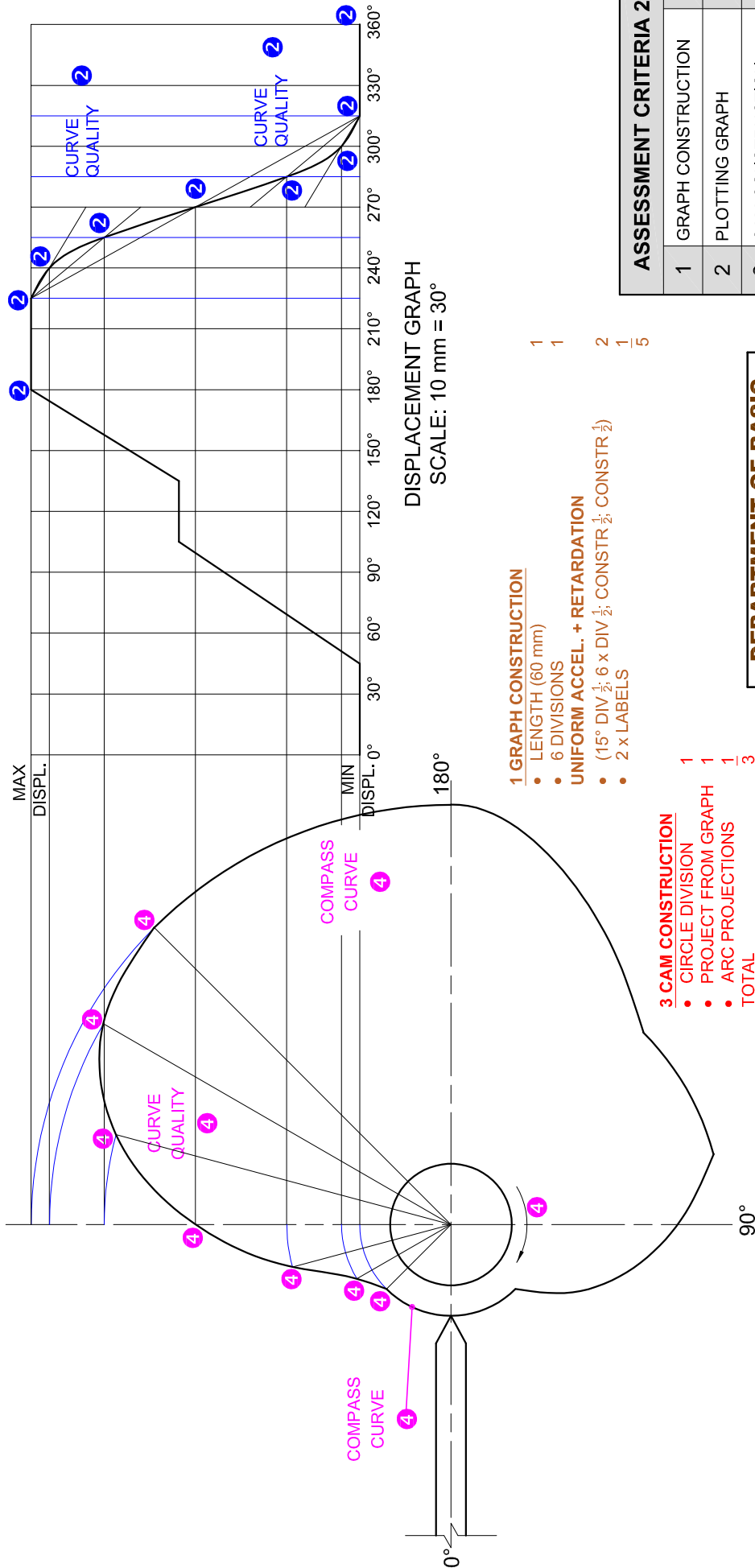


CIRCLE MUST BE A CHAIN LINE FOR MARK TO BE ALLOCATED

2. CONSTRUCTION
 CIRCLE DIVISION 1
 CONSTRUCTION OF AB 2
 TOTAL 3

ASSESSMENT CRITERIA 2.1	
1	GIVEN 6
2	CONSTRUCTION 3
3	POINTS + CURVE 10
SUBTOTAL 2.1 19	

Handwritten marks and signatures:
 A signature at the top right.
 A signature in the middle right.
 A signature at the bottom right.
 The letters 'AB' written in the middle right.



DISPLACEMENT GRAPH
SCALE: 10 mm = 30°

- 1 GRAPH CONSTRUCTION**
- LENGTH (60 mm) 1
 - 6 DIVISIONS 1
- UNIFORM ACCEL. + RETARDATION**
- (15° DIV $\frac{1}{2}$; 6 x DIV $\frac{1}{2}$; CONSTR $\frac{1}{2}$) 2
 - 2 x LABELS $\frac{1}{5}$

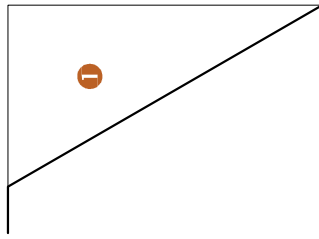
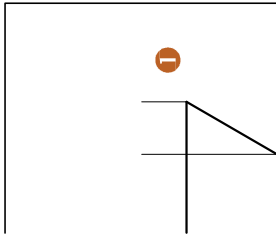
- 3 CAM CONSTRUCTION**
- CIRCLE DIVISION 1
 - PROJECT FROM GRAPH 1
 - ARC PROJECTIONS 1
 - TOTAL 3

ASSESSMENT CRITERIA 2.2	
1	GRAPH CONSTRUCTION 5
2	PLOTTING GRAPH 5 $\frac{1}{2}$
3	CAM CONSTRUCTION 3
4	CAM + CURVE QUALITY 5 $\frac{1}{2}$
SUBTOTAL 2.2 19	

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Handwritten signatures and initials: *AB*, *my*, *my*

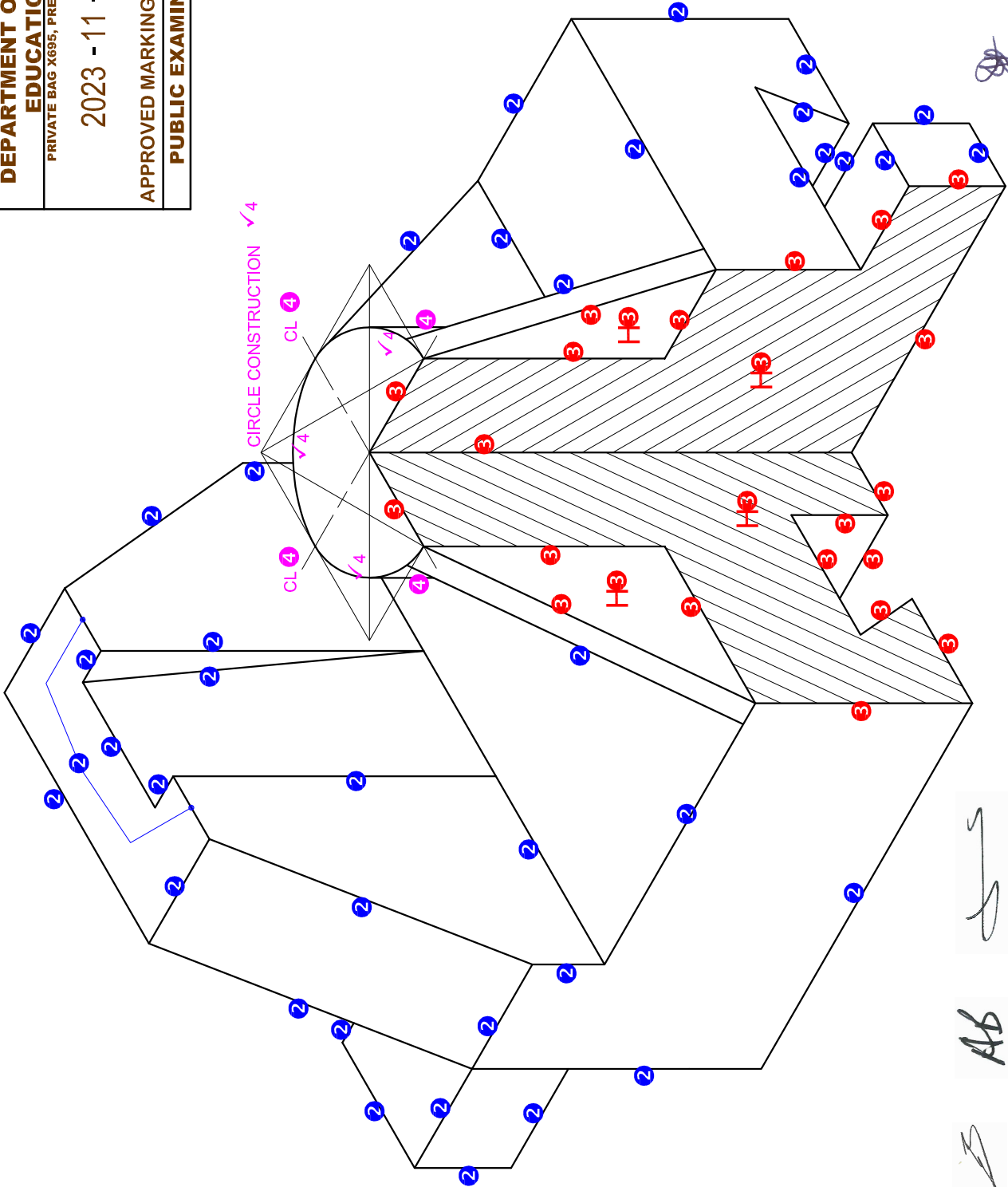
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ASSESSMENT CRITERIA	
1	PLACING + AUX. VIEWS 2
2	FRONT + MIDDLE SURFACES 20
3	SECTIONED SURFACE + HATCHING 12
4	CIRCLE + CL 6
TOTAL 40	

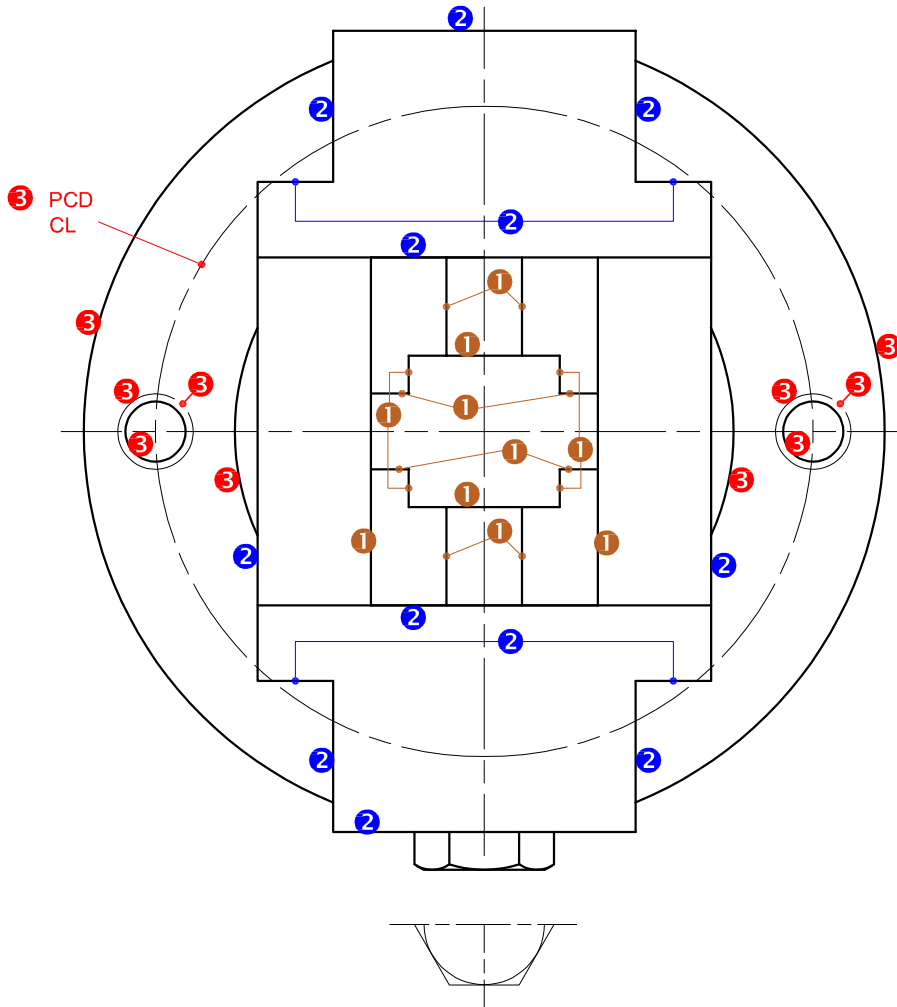
PAPER 2 QUESTION 3
 GRADE 12
 NOVEMBER 2023
 MARKING GUIDELINE

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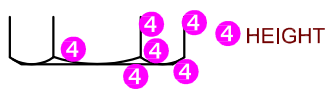


✓1 PLACEMENT/ORIENTATION

Handwritten signatures and initials



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ASSESSMENT CRITERIA		
LEFT VIEW		
1	BRACKET	5
2	COUPLING	6
3	FLANGE	5 ¹ / ₂
4	M10 HEX. BOLT	3 ¹ / ₂
SUBTOTAL		20

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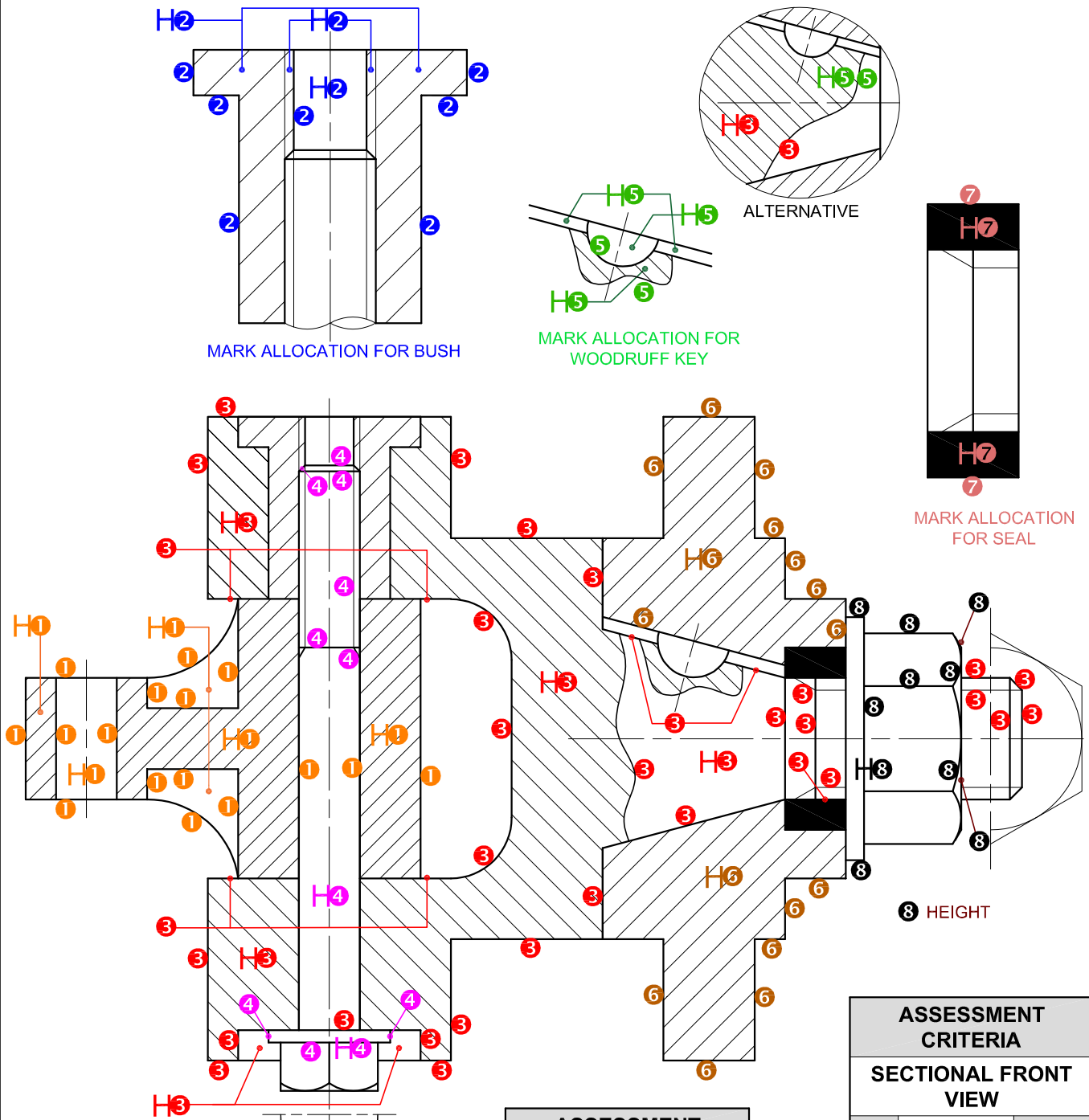
AB

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PAPER 2 QUESTION 4
 GRADE 12
 NOVEMBER 2023
 MARKING GUIDELINE



MARK ALLOCATION FOR BUSH

MARK ALLOCATION FOR WOODRUFF KEY

ALTERNATIVE

MARK ALLOCATION FOR SEAL

8 HEIGHT

ASSESSMENT CRITERIA		
GENERAL		
1	CENTRE LINES	3
2	ASSEMBLY	9
SUBTOTAL		12

ASSESSMENT CRITERIA		
SECTIONAL FRONT VIEW		
1	BRACKET	10 ¹ / ₂
2	BUSH	5
3	COUPLING	18 ¹ / ₂
4	M10 HEX. BOLT	8
5	WOODRUFF KEY	2 ¹ / ₂
6	FLANGE	8
7	SEAL	2
8	WASHER + M20 NUT	5 ¹ / ₂
SUBTOTAL		60

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1. CENTRE LINES
 SANS COMPLIANT
 1 - 4 = 1; 5 - 6 = 2
 (EXCLUDING PCD CL)

1
 2
 3

2. ASSEMBLY
 1 MARK FOR EVERY COMPONENT
 CORRECTLY ASSEMBLED (10 PARTS - 1) = 9

Handwritten signature

PAPER 2 QUESTION 4
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