



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS

ENGINEERING GRAPHICS AND DESIGN P2

MAY/JUNE 2024

MARKING GUIDELINES

MARKS: 100

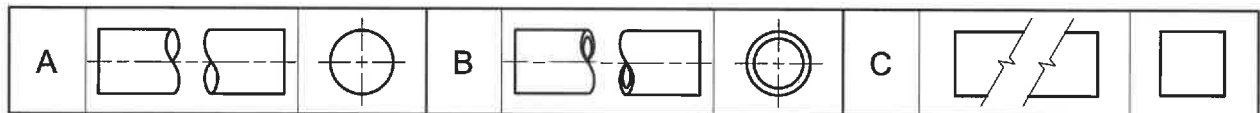
DEPARTMENT OF BASIC EDUCATION
PRIVATE BAG X695, PRETORIA 0001
2024 -05 -18
APPROVED MARKING GUIDELINE
PUBLIC EXAMINATION

These marking guidelines consist of 7 pages.

ANSWERS		
1	SIPHO	1
2	www.mecdraw.co.za	1
3	JJVWBJ-6	1
4	1500	1
5	CAD	1
6	2	1
7	18	1
8	1 / ONE	1
9	4	1
10	ROUNDING	1
11	C: 39 D: 28 E: 106 F: Ø38 G: 90	5
12	35°, 36°, 37°	1
13	M14 x 1,5	2
14	MAX. = 162,02 MIN. = 161,83	2
15	9	1
16	Q: T	2
	R: V	
17	AUXILIARY VIEW	1
18	DIRECTION OF LAY/ CIRCULAR MACHINING	1
19	MATERIAL REMOVAL NOT PERMITTED	1
20	See below	4
TOTAL		30

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ANSWER 20



FREEHAND ①

CIRCLE ①

OUTER CIRCLE ①

SQUARE / RECTANGLE ✓1

2 x CL ①

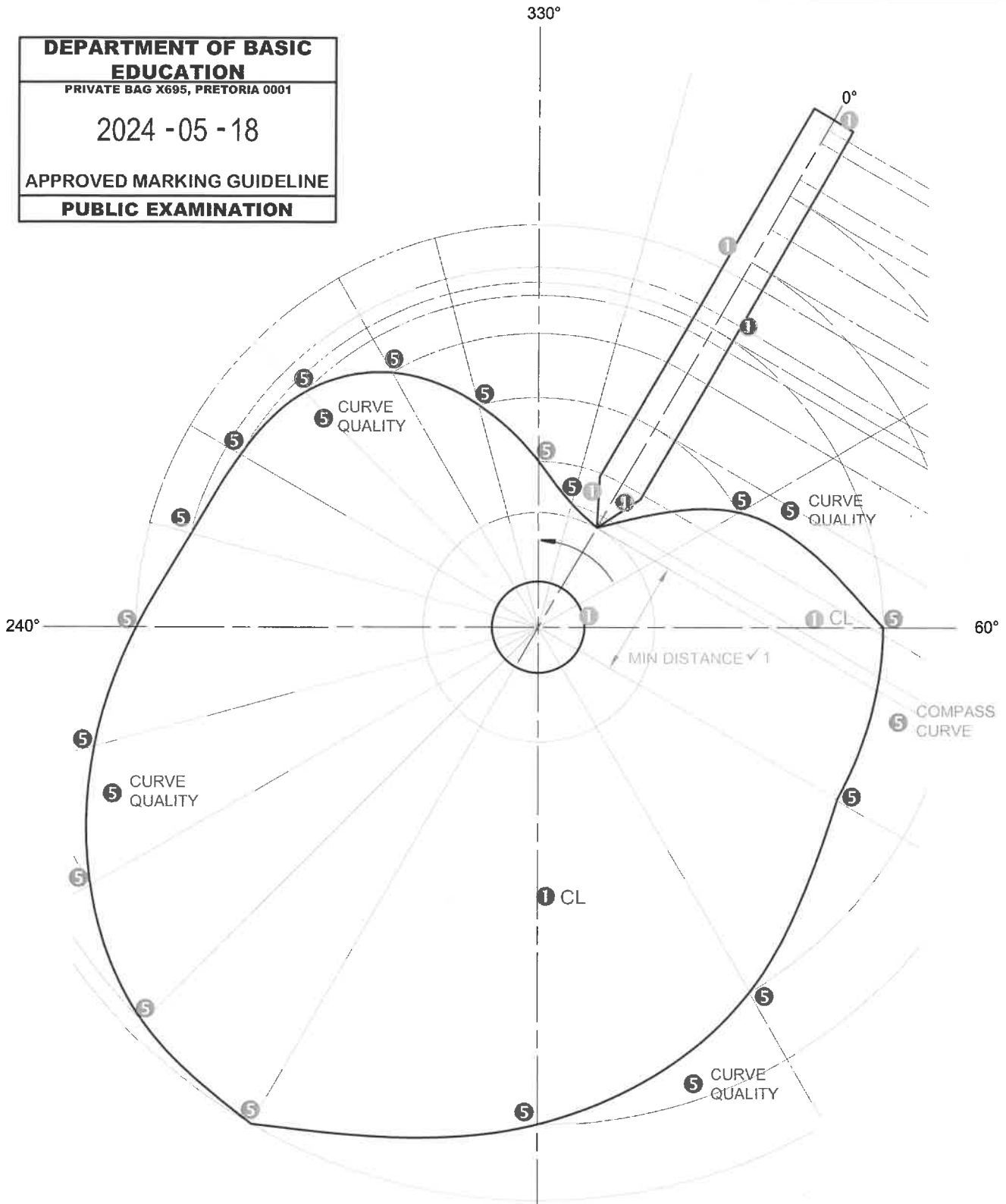
INNER CIRCLE ①

2 x CL ①



PAPER 2 QUESTION 1
GRADE 12
DBE MAY/JUNE 2024
MARKING GUIDELINES

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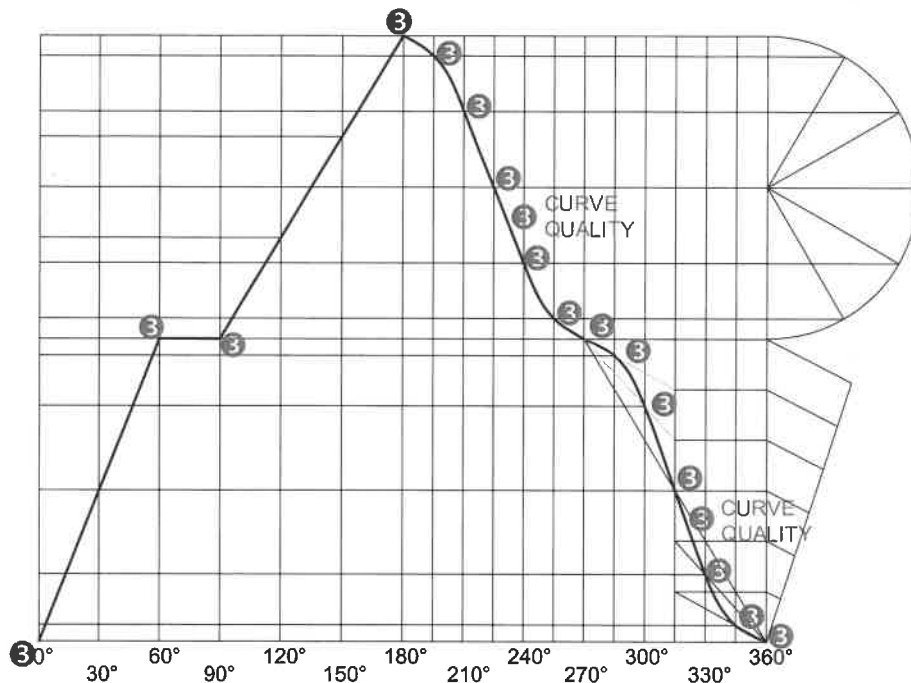


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4. CAM CONSTRUCTION
- GIVEN POSITION EQUALS 0° 1
 - CIRCLE DIVISION 1
 - PROJECTION/TRANSFER FROM GRAPH 1
 - ARC PROJECTION/TRANSFER 1
 - ARROW INDICATING ANTI-CLOCKWISE 1
- TOTAL 5

ASSESSMENT CRITERIA		
1	GIVEN + MINIMUM DISTANCE + CL	5
4	CAM CONSTRUCTION	5
5	PLOTTING + CAM PROFILE	11
TOTAL		21

PAPER 2 QUESTION 2
 GRADE 12
 DBE MAY/JUNE 2024
 MARKING GUIDELINES



SCALE 8 mm = 30°

2. GRAPH CONSTRUCTION

- BASE LENGTH 96 mm 1
- 12 EQUAL DIVISIONS 1
- TOTAL HEIGHT 80 mm 0.5

SIMPLE HARMONIC MOTION

- SEMI CIRCLE 0.5
- CIRCLE DIVISIONS 0.5
- 15° SUBDIVISIONS 0.5
- PROJECTION 0.5

UNIFORM ACCELERATION + RETARDATION

- LINE DIVISION 0.5
- 15° SUBDIVISIONS 0.5
- FIRST 1/2 CONSTRUCTION 0.5
- SECOND 1/2 CONSTRUCTION 0.5

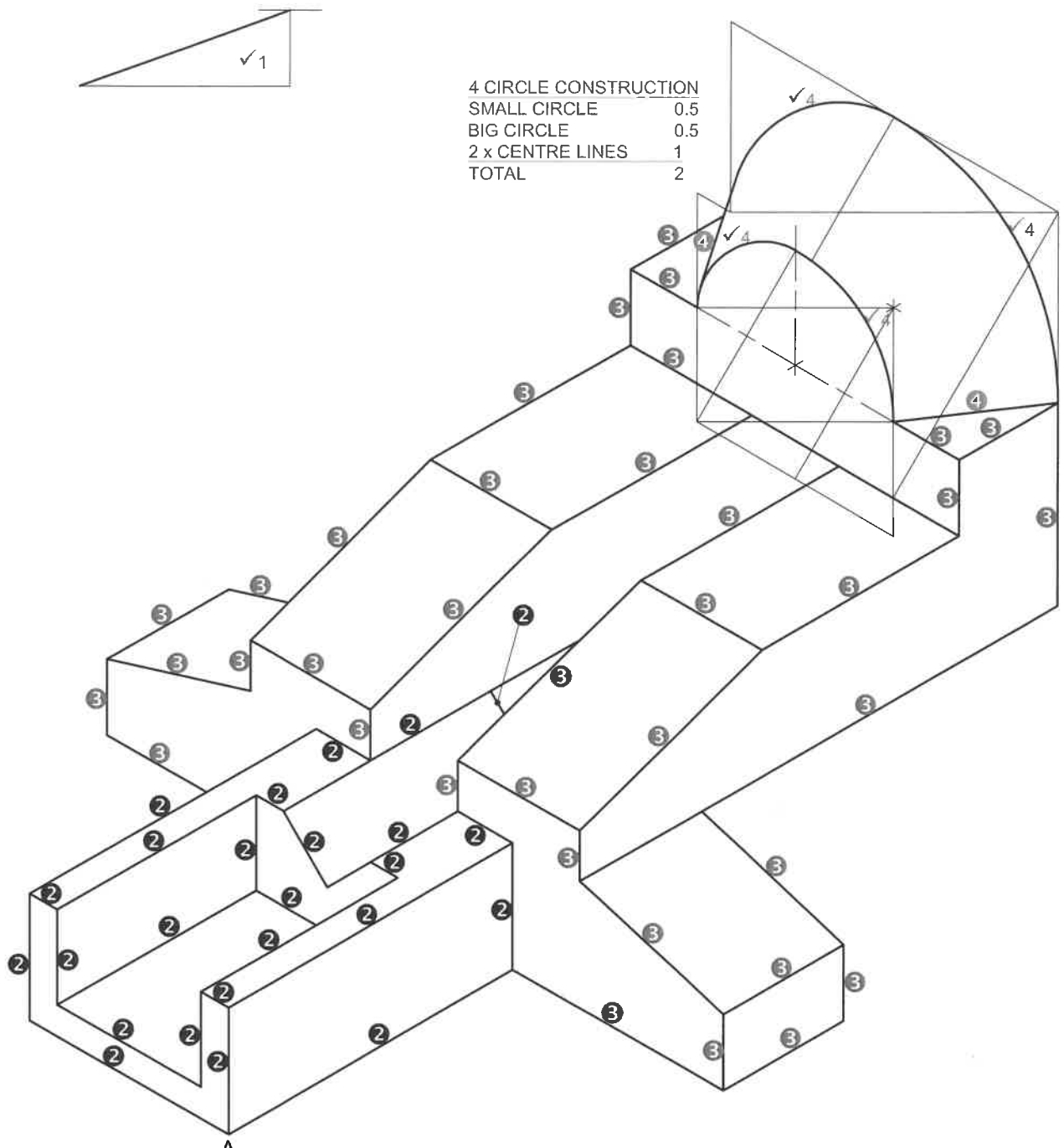
LABEL 0.5
TOTAL 7

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ASSESSMENT CRITERIA		
2	GRAPH CONSTRUCTION	7
3	PLOTTING GRAPH + GRAPH CURVES	9
TOTAL		16

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PAPER 2 QUESTION 2
GRADE 12
DBE MAY/JUNE 2024
MARKING GUIDELINES



4 CIRCLE CONSTRUCTION

SMALL CIRCLE	0.5
BIG CIRCLE	0.5
2 x CENTRE LINES	1
TOTAL	2

✓1 ORIENTATION / PLACEMENT

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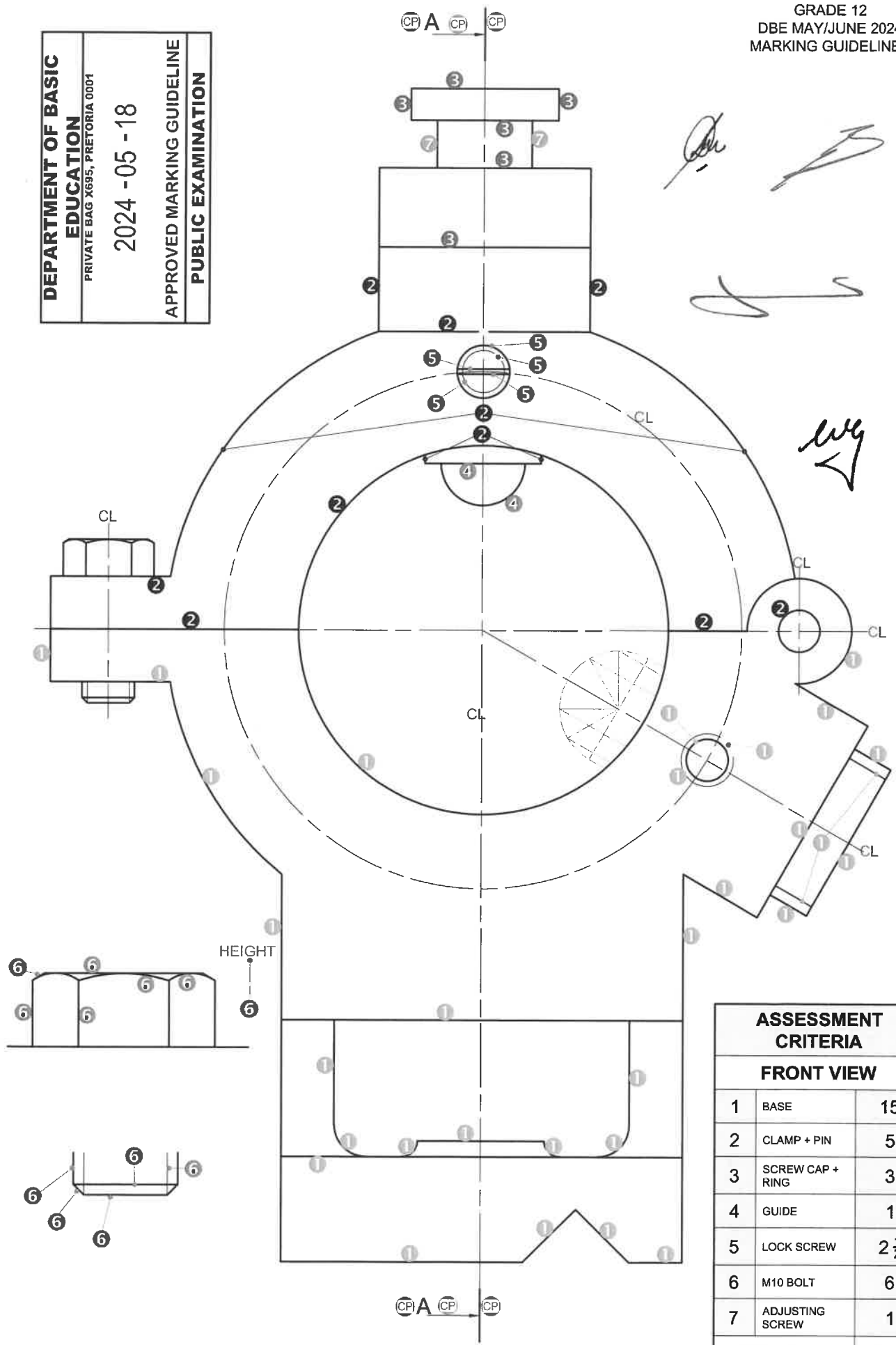
ASSESSMENT CRITERIA		
1	PLACING + AUX. VIEW	2
2	FRONT PORTION	12 1/2
3	UPPER PORTION	18 1/2
4	ARCS + CONSTR. + CL	7
TOTAL		40

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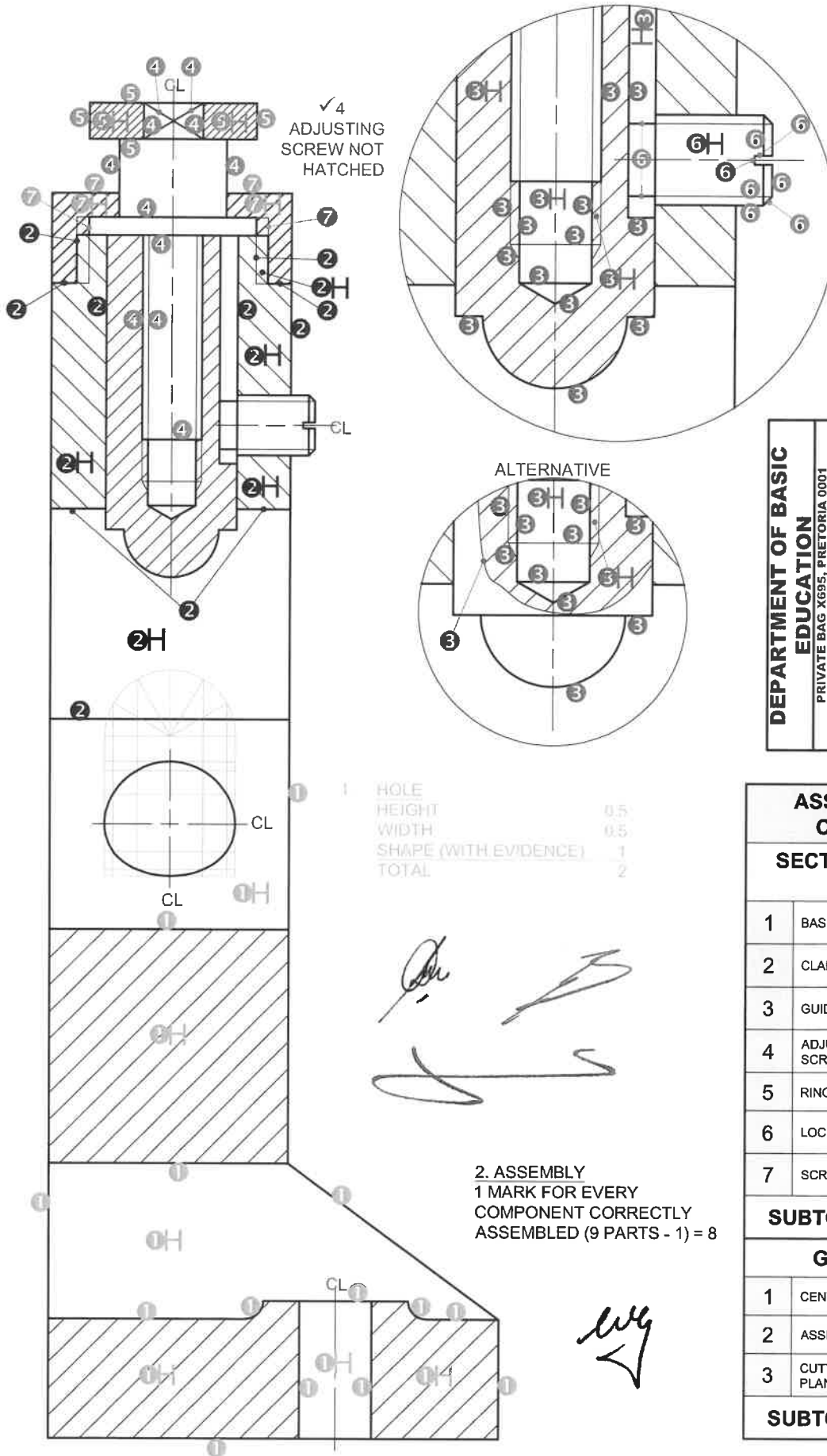
PAPER 2 QUESTION 3
GRADE 12
DBE MAY/JUNE 2024
MARKING GUIDELINES

PAPER 2 QUESTION 4
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ASSESSMENT CRITERIA		
FRONT VIEW		
1	BASE	15
2	CLAMP + PIN	5
3	SCREW CAP + RING	3
4	GUIDE	1
5	LOCK SCREW	2 1/2
6	M10 BOLT	6
7	ADJUSTING SCREW	1
SUBTOTAL		33 1/2



✓ 4
ADJUSTING
SCREW NOT
HATCHED

ALTERNATIVE

1	HOLE	
	HEIGHT	0.5
	WIDTH	0.5
	SHAPE (WITH EVIDENCE)	1
	TOTAL	2

2. ASSEMBLY
1 MARK FOR EVERY
COMPONENT CORRECTLY
ASSEMBLED (9 PARTS - 1) = 8

1. CENTRE LINE MARK ALLOCATION
SANS COMPLIANT TYPE
CENTRE LINES (1 - 3 = 0.5; 4 - 7 = 1; 8 & 9 = 2; 10 & 11 = 3) 3
4

DEPARTMENT OF BASIC EDUCATION PRIVATE BAG X695, PRETORIA 0001	2024 - 05 - 18
	APPROVED MARKING GUIDELINE PUBLIC EXAMINATION

ASSESSMENT CRITERIA		
SECTIONAL LEFT VIEW		
1	BASE	12
2	CLAMP	7
3	GUIDE	8 1/2
4	ADJUSTING SCREW	6 1/2
5	RING	3
6	LOCK SCREW	4 1/2
7	SCREW CAP	3
SUBTOTAL		44 1/2
GENERAL		
1	CENTRE LINES	4
2	ASSEMBLY	8
3	CUTTING PLANE A-A	3
SUBTOTAL		15

PAPER 2 QUESTION 4
GRADE 12
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