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basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATION/ NATIONAL SENIOR CERTIFICATE EXAMINATION

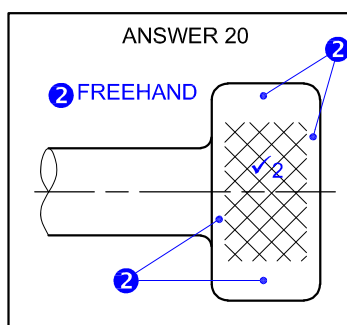
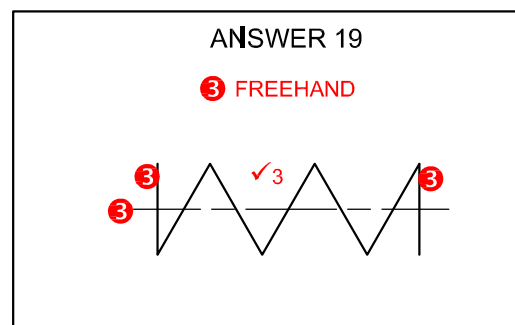
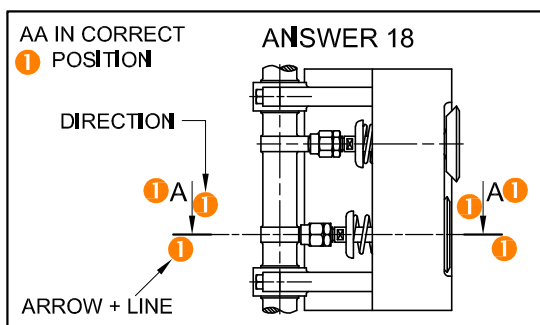
ENGINEERING GRAPHICS AND DESIGN P2

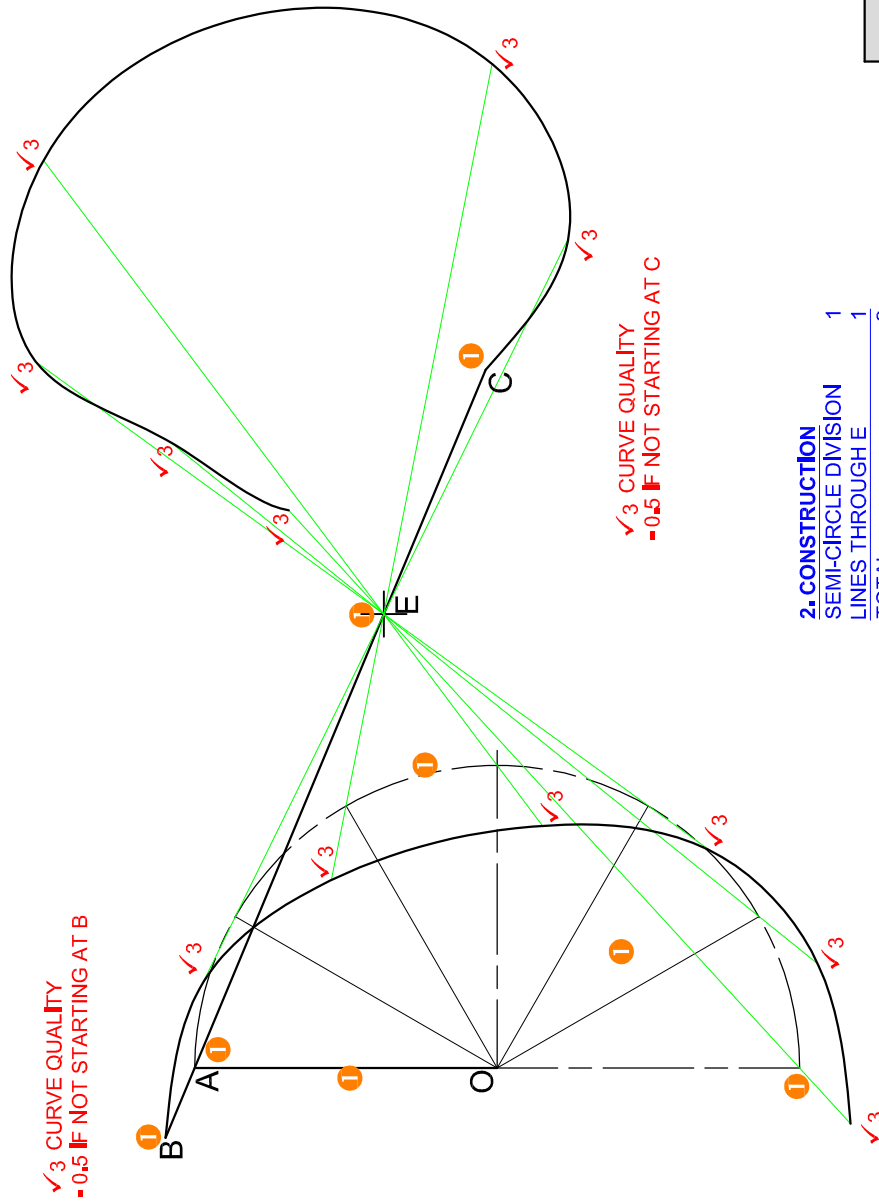
2022

MARKS: 100

These marking guidelines consist of 7 pages.

ANSWERS		
1	MC ENGINEERING WORKS	1
2	GERALD	1
3	4	1
4	02/04/2021	1
5	THIRD ANGLE	1
6	AUTOCAD 2021	1
7	M5	1
8	2	1
9	A: 7 B: R2 C: 15 D: R3 E: AF12	5
10	R15	1
11	FLAT FACE ON A SHAFT	1
12	INTERRUPTED VIEW/CONTINUES	1
13	GRINDING	1
14	39.81	1
15	5 mm	1
16	BOTTOM VIEW	1
17	11	1
18		3½
19	See below	3
20		2½
TOTAL		30





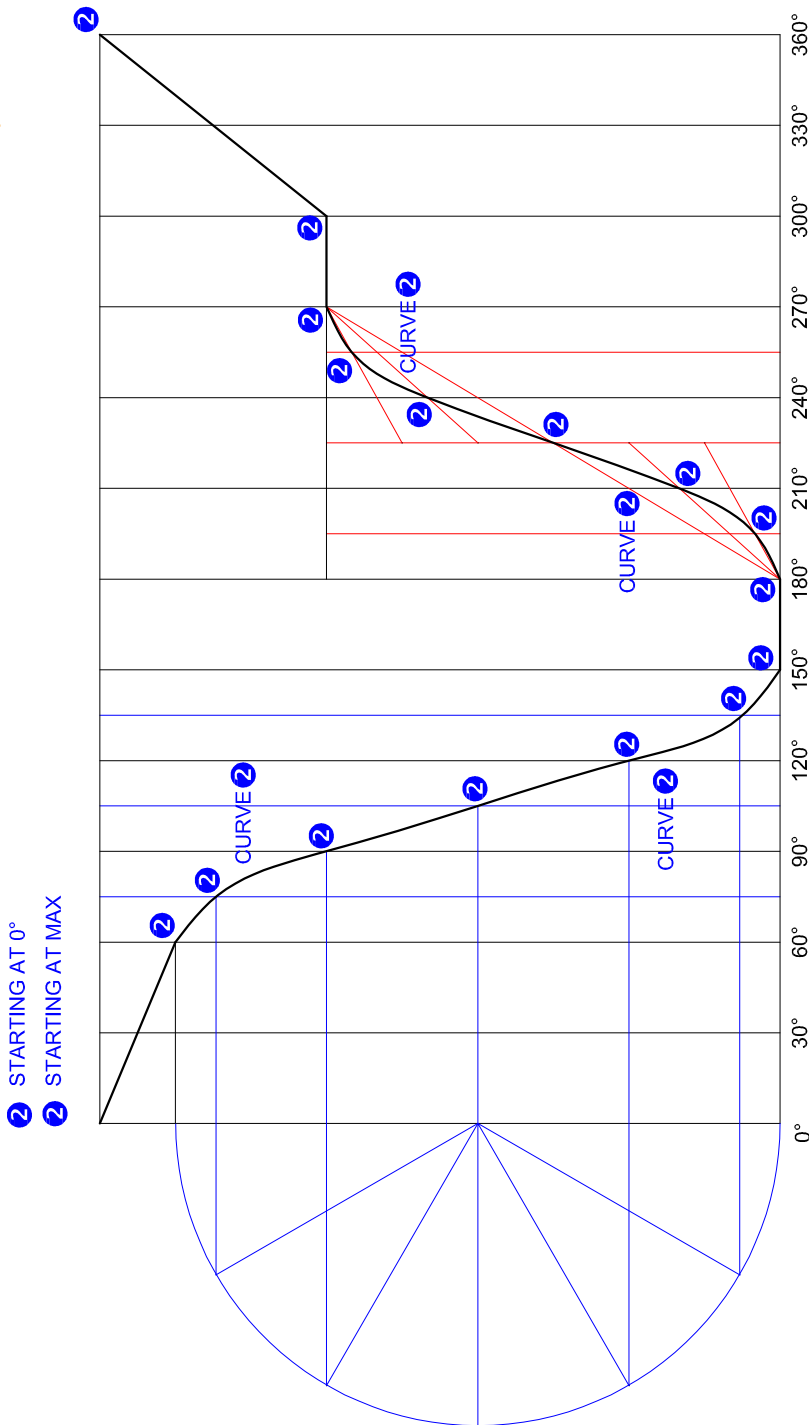
2. CONSTRUCTION
 SEMI-CIRCLE DIVISION 1
 LINES THROUGH E 1
 TOTAL 2

ASSESSMENT CRITERIA 2.1	
1	GIVEN 4
2	CONSTRUCTION 2
3	POINTS + CURVE 14
TOTAL 20	

- 1. CONSTRUCTION OF GRAPH**
- LENGTH (144) 1
 - LINE DIVISION 1
- TOTAL 2

- 1. CONSTRUCTION OF SIMPLE HARMONIC MOTION**
- SEMI CIRCLE 0.5
 - CIRCLE DIVISION 0.5
 - ADDITIONAL 15° DIVISIONS 0.5
 - HORIZONTAL PROJECTION 0.5
- TOTAL 2

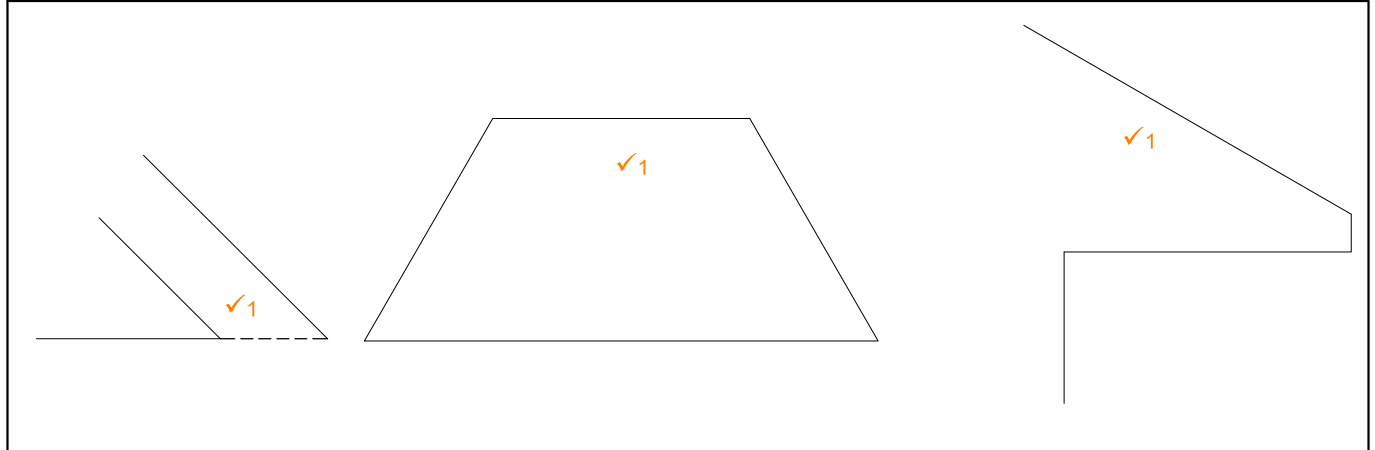
- 1. CONSTRUCTION OF UNIFORM ACCELERATION + RETARDATION**
- ADDITIONAL 15° DIVISIONS 0.5
 - VERTICAL DIVISION 0.5
 - 1st HALF 0.5
 - 2nd HALF 0.5
- TOTAL 2



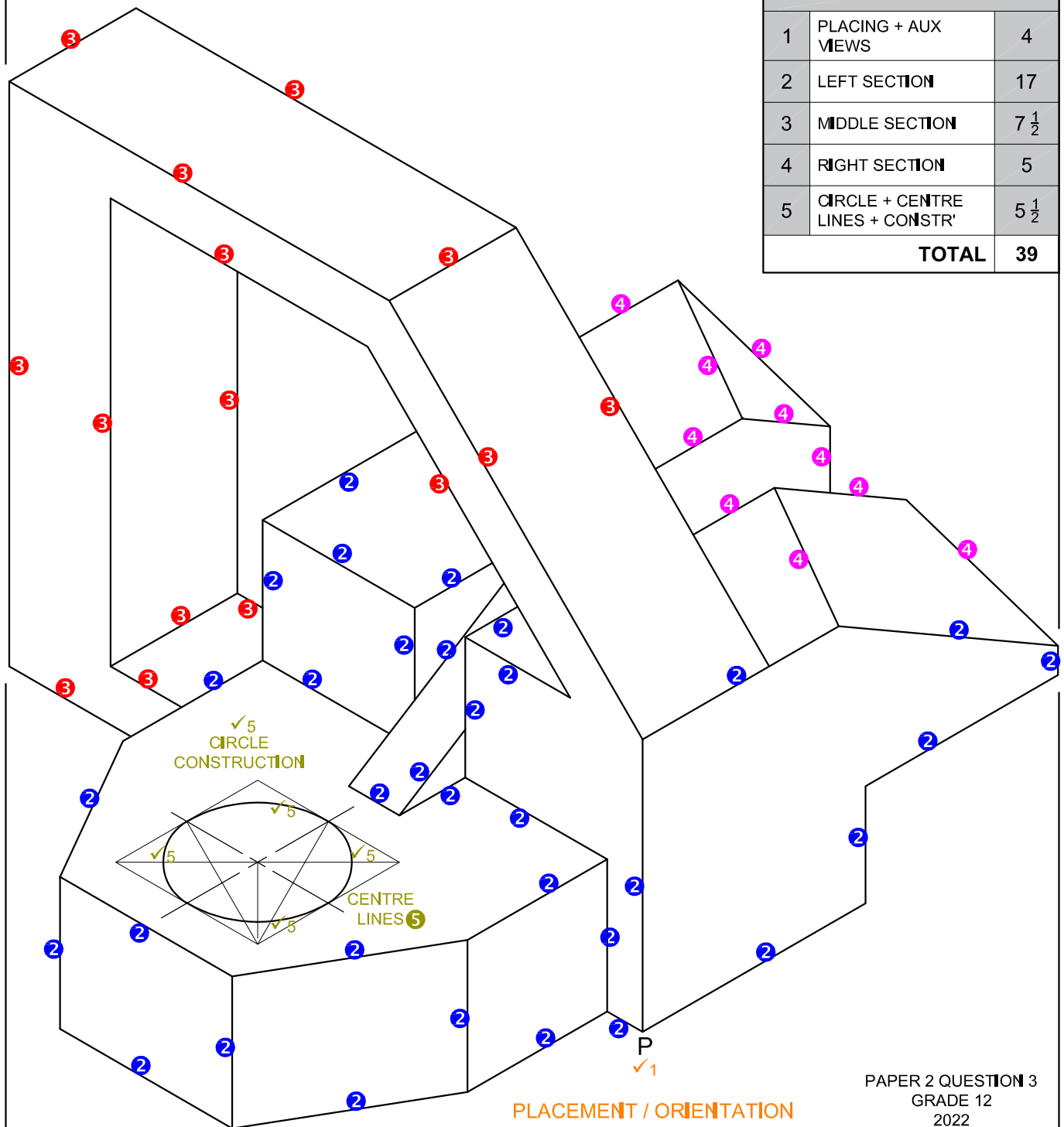
- ② STARTING AT 0°
- ② STARTING AT MAX

DISPLACEMENT GRAPH 3
SCALE: 144 mm = 360° ROTATION 3

ASSESSMENT CRITERIA 2.2	
1	CONSTRUCTION 6
2	POINTS + CURVE 11
3	LABELS 1
TOTAL 18	

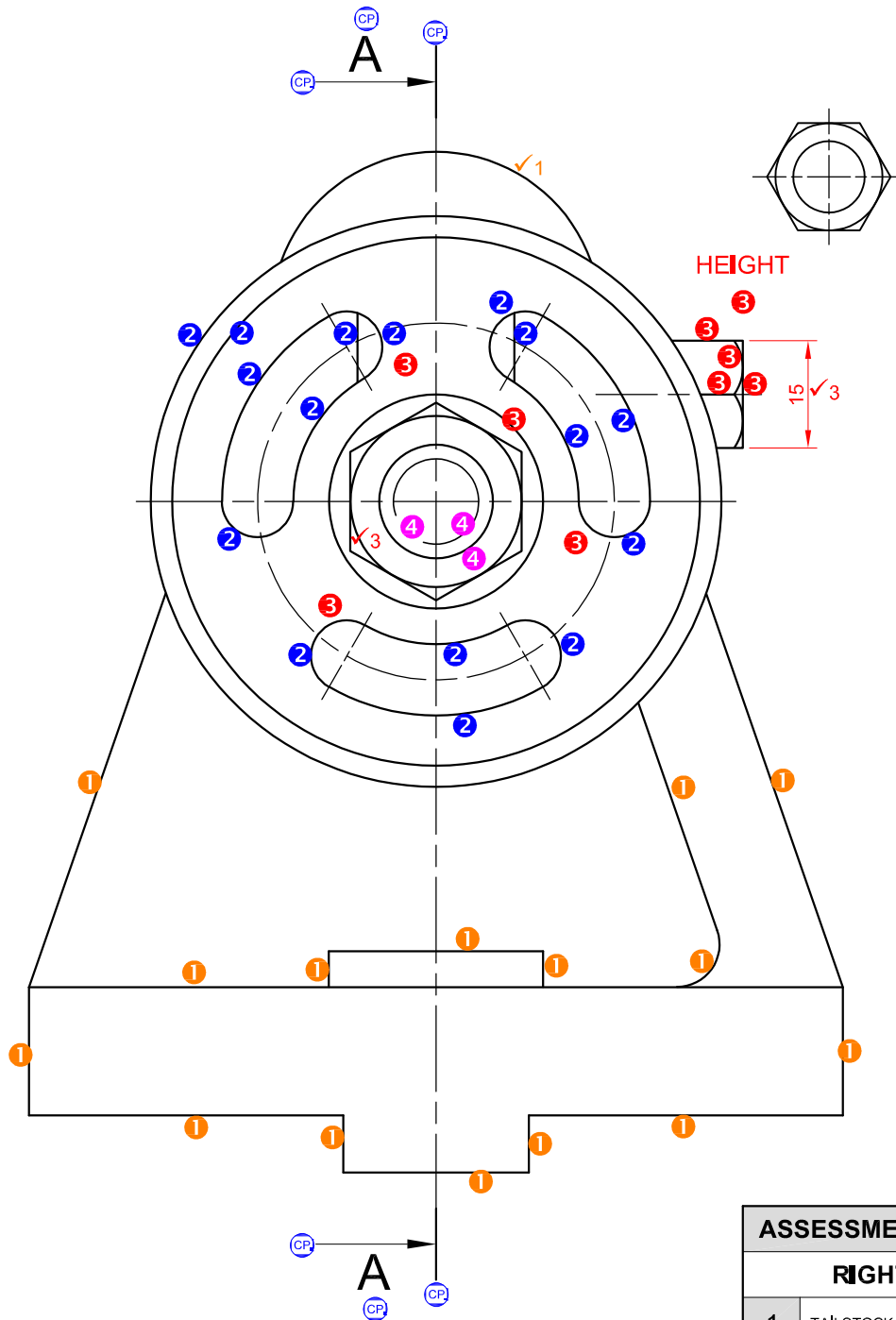


ASSESSMENT CRITERIA		
1	PLACING + AUX VIEWS	4
2	LEFT SECTION	17
3	MIDDLE SECTION	7 1/2
4	RIGHT SECTION	5
5	CIRCLE + CENTRE LINES + CONSTR'	5 1/2
TOTAL		39



PLACEMENT / ORIENTATION

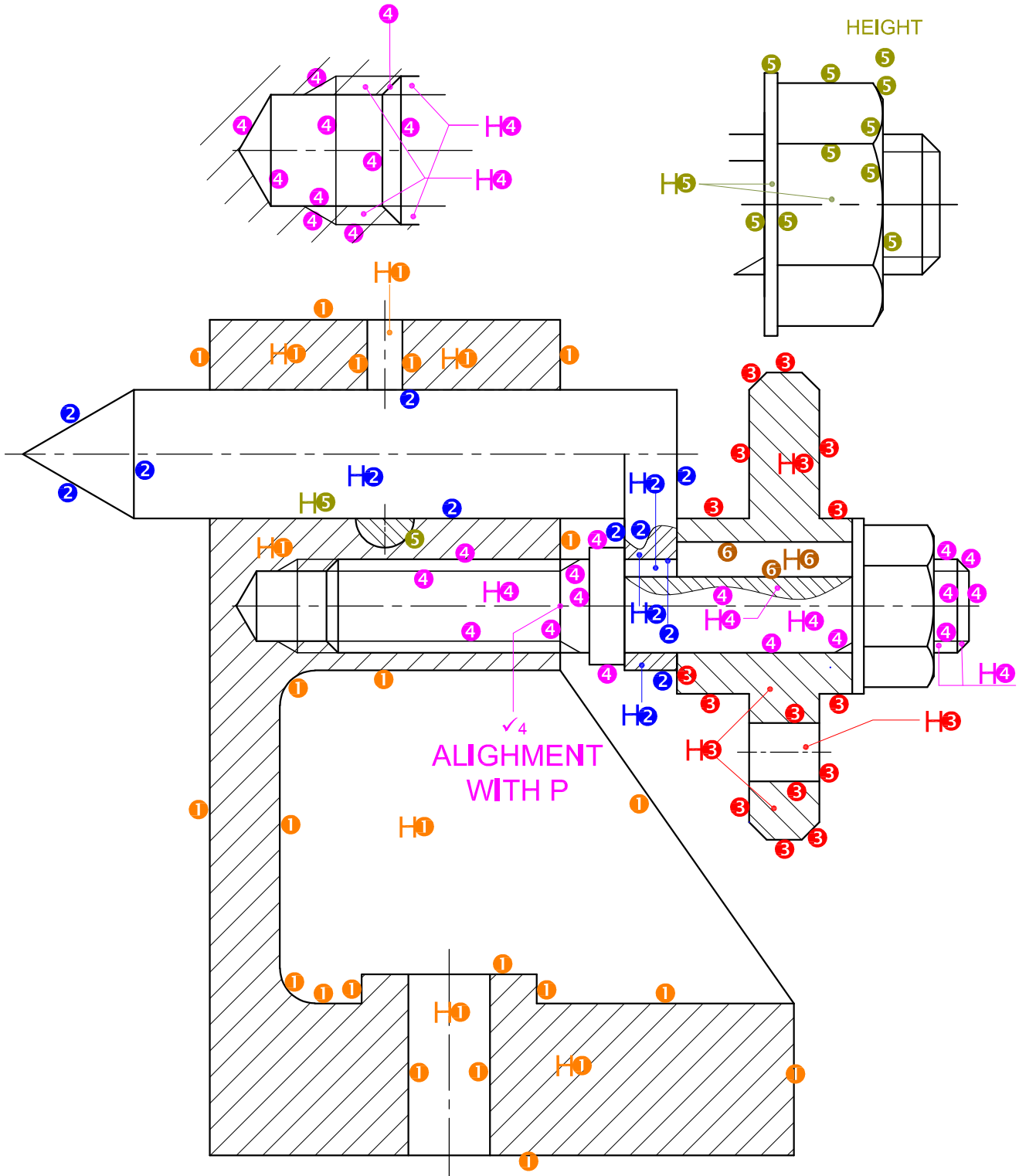
PAPER 2 QUESTION 3
 GRADE 12
 2022
 MARKING GUIDELINES



3. ASSEMBLY (ALTERNATIVE IF ONLY THE RIGHT VIEW WAS DRAWN)
 1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (7 PARTS - 1) = 6

ASSESSMENT CRITERIA		
RIGHT VIEW		
1	TAILSTOCK	8 1/2
2	ADJUSTING WHEEL + DEAD CENTRE	8
3	M16 NUT + WASHER + LOCKING NUT	6 1/2
4	ADJUSTING STUD	1 1/2
SUBTOTAL		24 1/2
GENERAL		
2	CUTTING PLANE	3

PAPER 2 QUESTION 4
 GRADE 12
 2022
 MARKING GUIDELINES



3. ASSEMBLY
 1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (8 PARTS = 1) = 7

1. CENTRE LINE MARK ALLOCATION
 SANS COMPLIANT (LINE TYPE)
 CENTRE LINES
 (1 to 4 = 1 / 5 to 11 = 2 / 12 to 14 = 3)
 TOTAL 4

ASSESSMENT CRITERIA		
GENERAL		
1	CENTRE LINES	4
3	ASSEMBLY	7
SUBTOTAL		14

PAPER 2 QUESTION 4
 GRADE 12
 2022
 MARKING GUIDELINES

ASSESSMENT CRITERIA		
SECTIONAL FRONT VIEW		
1	TAILSTOCK	14
2	DEAD CENTRE	7
3	ADJUSTING WHEEL	9
4	ADJUSTING STUD	16 1/2
5	M16 NUT + WASHER + M10 LOCKING BOLT	6 1/2
6	KEY	1 1/2
SUBTOTAL		54 1/2