



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**SENIOR CERTIFICATE EXAMINATIONS/
NATIONAL SENIOR CERTIFICATE EXAMINATIONS**

ENGINEERING GRAPHICS AND DESIGN P2

MAY/JUNE 2025

MARKING GUIDELINES

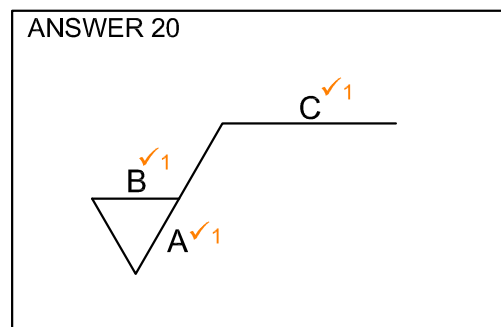
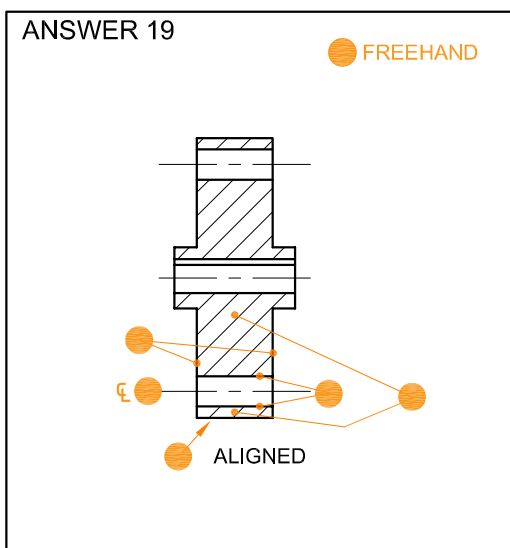
MARKS: 100

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PRIVATE BAG X695, PRETORIA 0001
2025 - 06 - 04
APPROVED MARKING GUIDELINE
PUBLIC EXAMINATION

These marking guidelines consist of 6 pages.

ANSWERS		
1	SAMANTHA	1
2	CLAMPIT TOOLS CC	1
3	AutoCAD 2024	1
4	THIRD-ANGLE ORTHOGRAPHIC / TAOP	1
5	MILD STEEL	1
6	2	1
7	860°	1
8	TOP VIEW	1
9	DETAIL T	1
10	A: R2 B: 9 C: R7 D: Ø122 E:70	5
11	ROUNDING	1
12	BOLT	1
13	R63	1
14	REVOLVED SECTION	1
15	PART SECTION	1
16	SITE WELD / FIELD WELD	1
17	25 = LENGTH 75 = PITCH	2
18	MAXIMUM: 40,23 MINIMUM: 39,9	2
19	See below	3
20		3
TOTAL		30

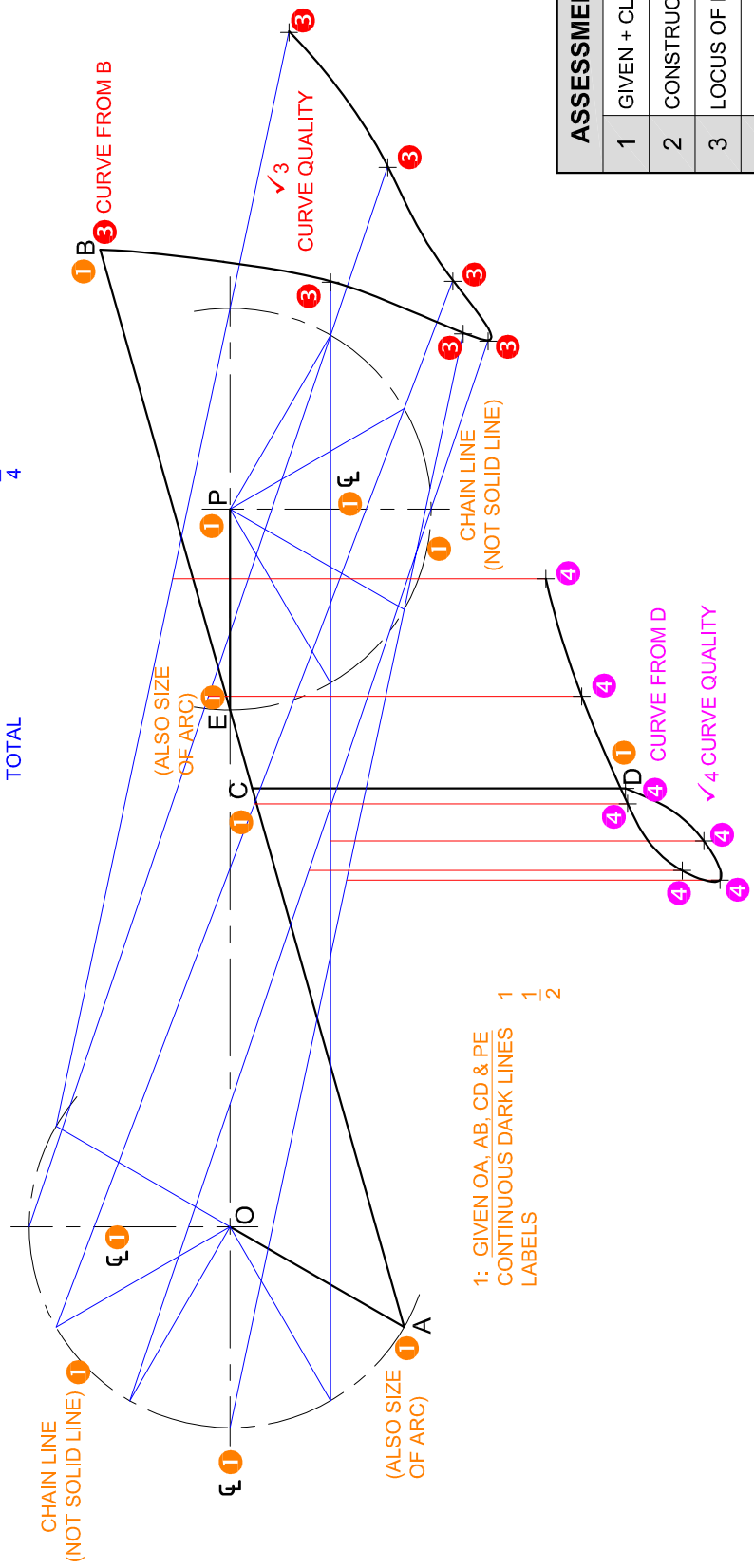
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PAPER 2 QUESTION 1
 GRADE 12
 DBE MAY/JUNE 2025
 MARKING GUIDELINES

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2. CONSTRUCTION	
ARC A DIVISIONS	0.5
ARC E DIVISIONS	0.5
CONSTRUCTION OF AB	2
CONSTRUCTION OF CD	1
TOTAL	4

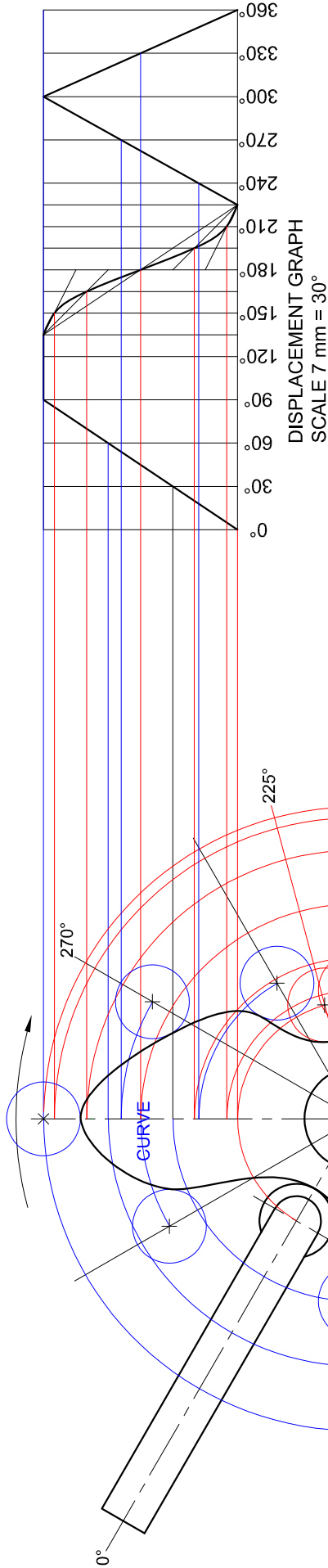


1: GIVEN OA, AB, CD & PE
CONTINUOUS DARK LINES
LABELS

ASSESSMENT CRITERIA 2.1	
1	GIVEN + CL 7 1/2
2	CONSTRUCTION 4
3	LOCUS OF B 4 1/2
4	LOCUS OF D 4 1/2
SUBTOTAL	
	20 1/2

PAPER 2 QUESTION 2.1
GRADE 12
DBE MAY/JUNE 2025
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ANSWER

MOTION FROM 135° TO 225°: UNIFORM ACCELERATION AND RETARDATION ✓3

- 1. CONSTRUCTION**
- CIRCLE DIVISION 1
 - STARTING ON ROLLER-FOLLOWER AS 0° 1
 - TRANSFERRING FROM GRAPH 1
 - PLOT DIRECTION (ANTI-CLOCKWISE) 1
 - ARROW (CLOCKWISE) 1
 - TOTAL 5

- 2. CAM PROFILE**
- 12 ROLLERS 12
 - PLOTTED CENTRE POINTS (14 x 0.5) 7
 - (1 - 5 = 0.5, 6 - 9 = 1, 10 - 12 = 1.5, 13 + 14 = 2) 2
 - POINTS OF TANGENCY (1 - 5 = 0.5, 6 - 9 = 1, 10 - 12 = 1.5, 13 + 14 = 2) 2
 - POINTS OF TANGENCY TO GIVEN ROLLER 0.5
 - CURVES AND ARC QUALITY 2
 - TOTAL 13.5

ASSESSMENT CRITERIA 2.2	
1	CONSTRUCTION 5
2	CAM PROFILE 13 1/2
3	TYPE OF MOTION 1
SUBTOTAL 19 1/2	

PAPER 2 QUESTION 2.2
 GRADE 12
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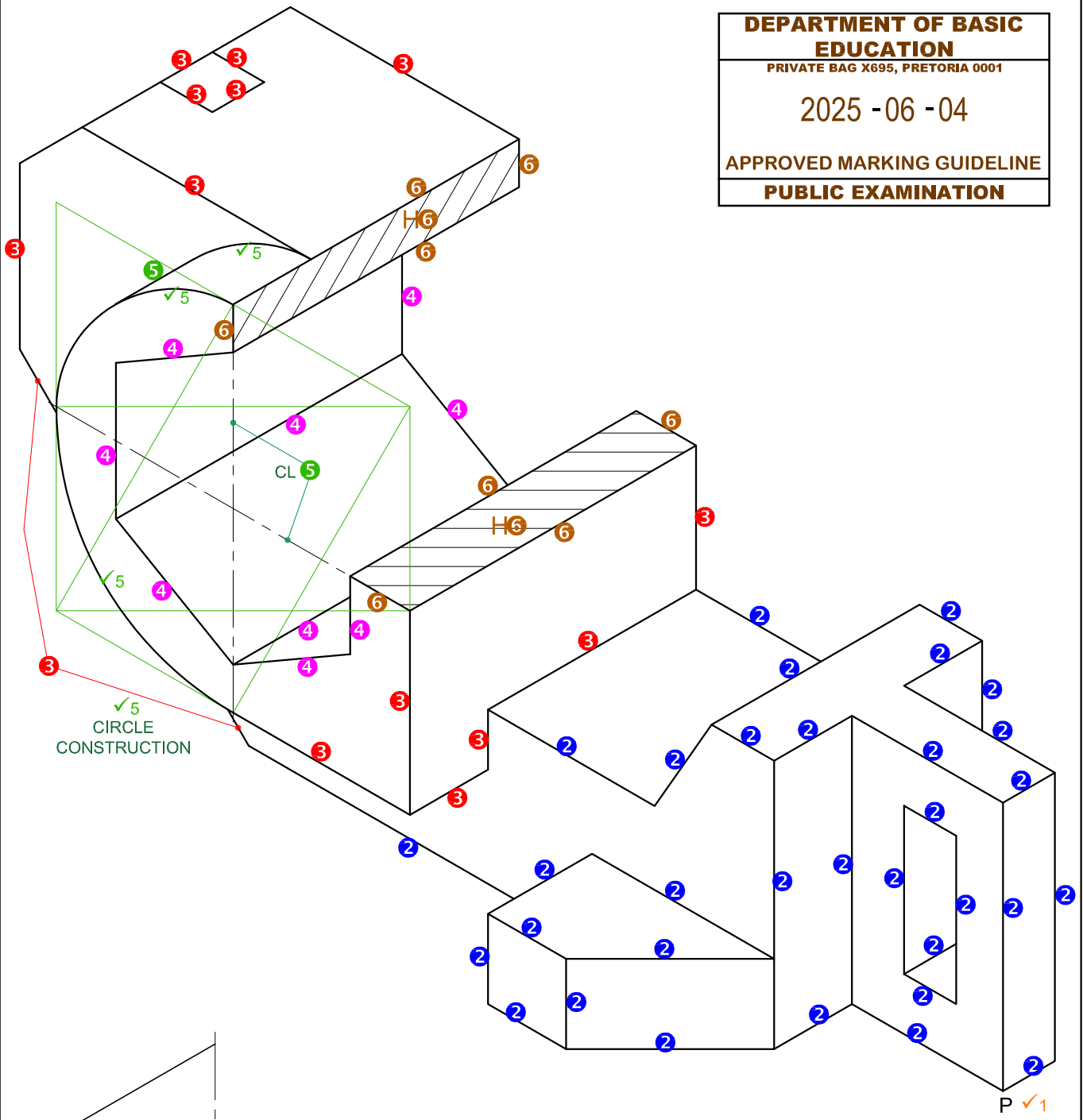
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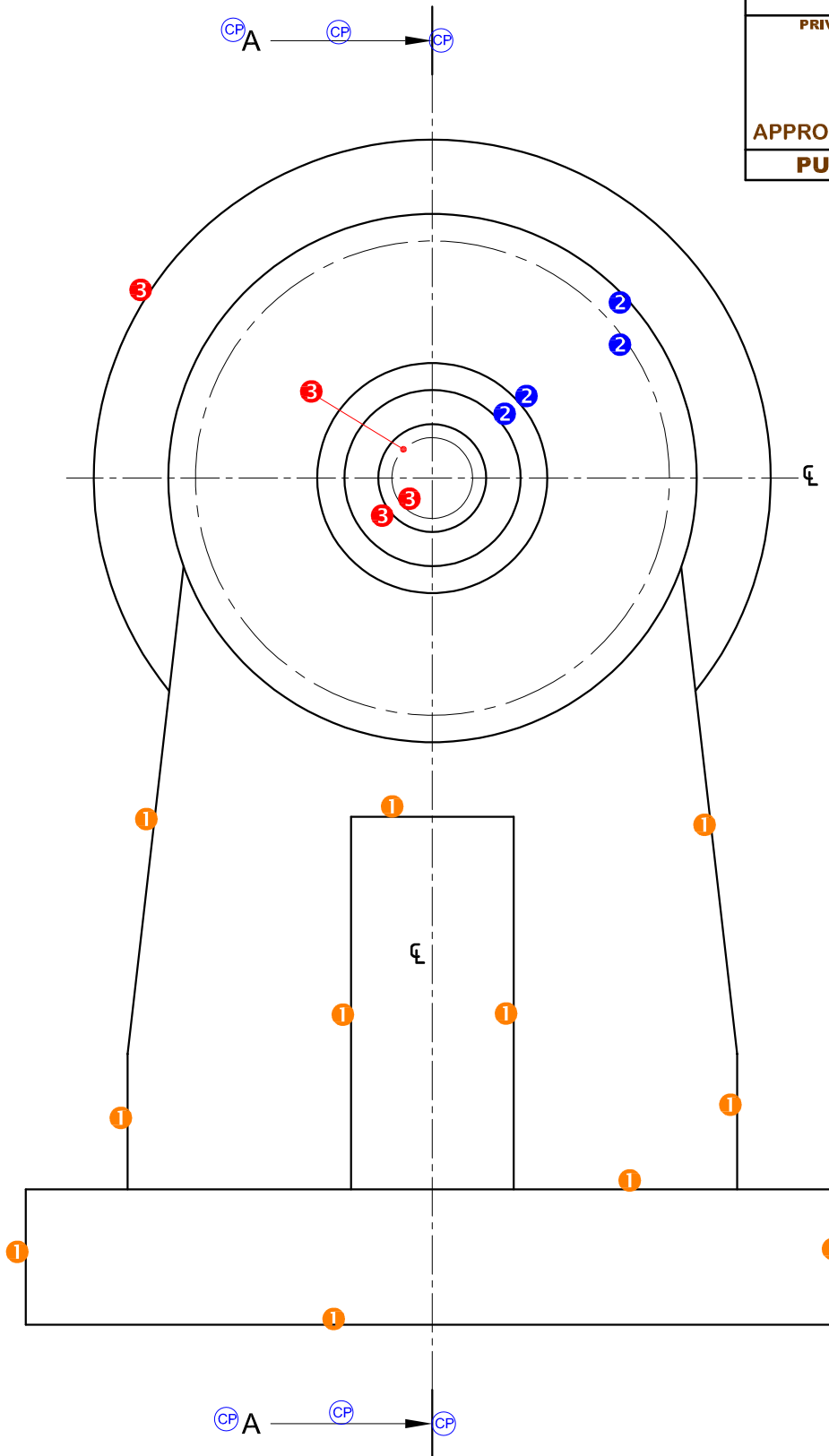
ASSESSMENT CRITERIA		
1	PLACING/ORIENTATION + AUX. VIEWS	2
2	FRONT PORTION	16 1/2
3	MIDDLE + REAR PORTION	7
4	HEXAGON	4 1/2
5	CIRCLE + CL	5
6	SECTIONED SURFACE + HATCHING	5
TOTAL		40

PAPER 2 QUESTION 3
 GRADE 12
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1. CENTRE LINES (CL)
SANS COMPLIANT 1
CENTRE LINES (1 - 2 = 0.5; 3 - 4 = 1) 1/2

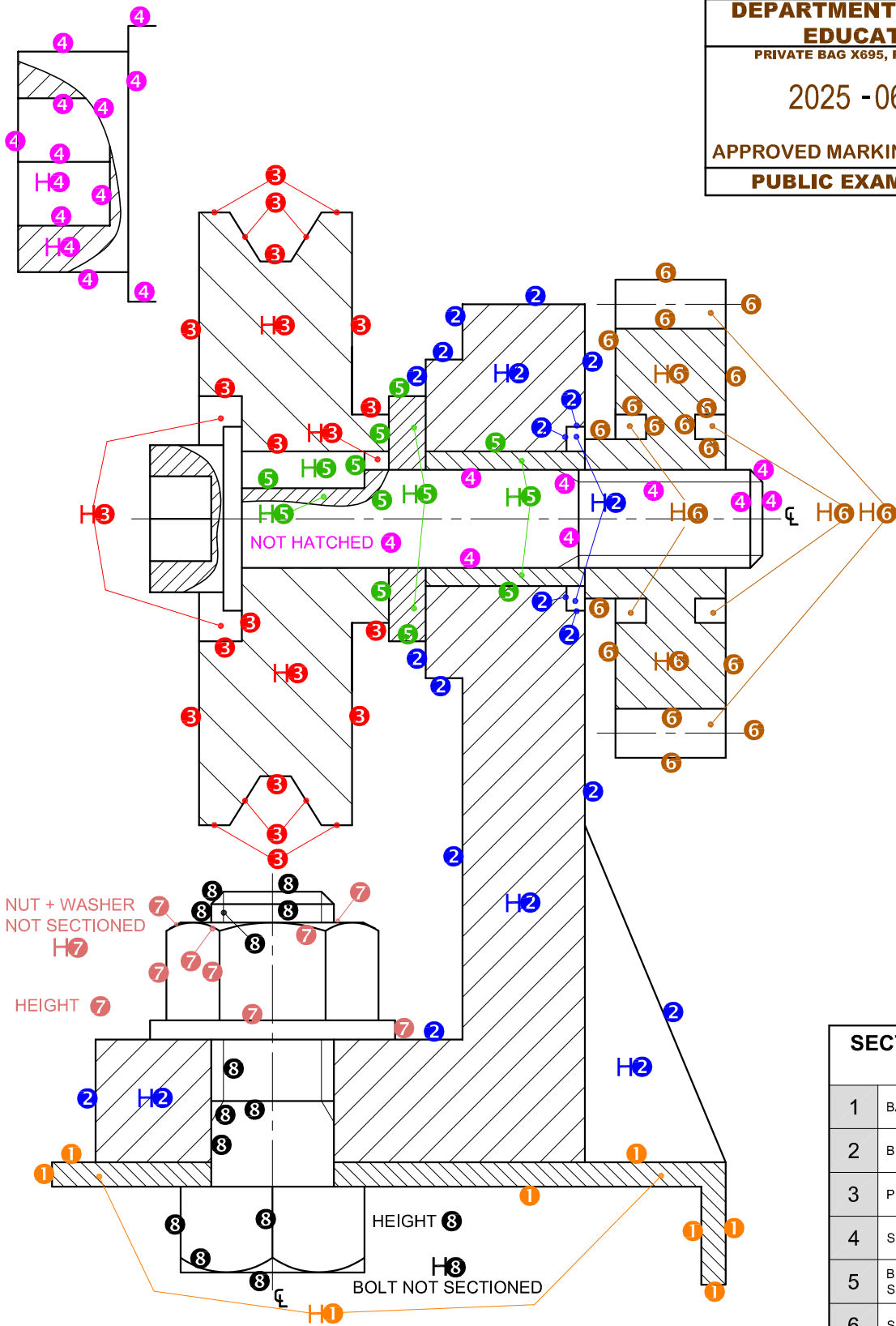
RIGHT VIEW		
1	BRACKET + BASE PLATE	5 1/2
2	GEAR + CL	2
3	PULLEY + SHAFT	2
SUBTOTAL		9 1/2

PAPER 2 QUESTION 4
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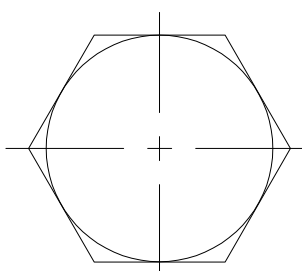
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PUBLIC EXAMINATION



SECTIONAL FRONT VIEW		
1	BASE	4
2	BRACKET + RIB	10 $\frac{1}{2}$
3	PULLEY	10
4	SHAFT	11
5	BUSH + KEY + SPACER	6 $\frac{1}{2}$
6	SPUR GEAR	11
7	M20 NUT + WASHER	5
8	M20 BOLT	7 $\frac{1}{2}$
SUBTOTAL		65 $\frac{1}{2}$

3. ASSEMBLY
1 MARK FOR EVERY COMPONENT CORRECTLY ASSEMBLED (11 PARTS - 1) = 10



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PAPER 2 QUESTION 4
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