



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS

ENGINEERING GRAPHICS AND DESIGN P2

2018

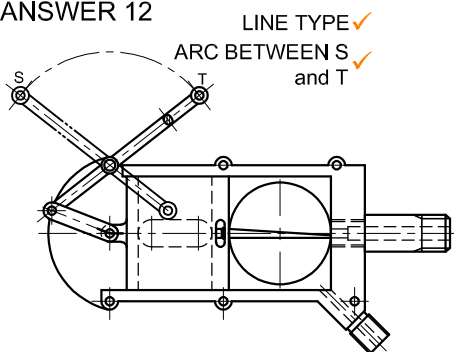
MARKING GUIDELINES

MARKS: 200

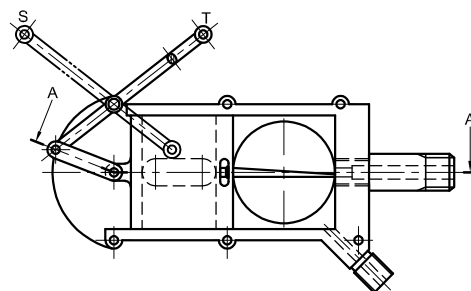
These marking guidelines consist of 7 pages.

ANSWERS			
1	1 VISCOUNT STREET	1	
2	BR2018	1	
3	ROLI	1	
4	CAD	1	
5	R 2	1	
6	BRASS	1	
7	24	1	
8	ROUND / CIRCLE	1	
9	REVOLVED SECTION	1	
10	SECTIONAL TOP VIEW	1	
11	8	1	
12	<i>See below</i>	2	
13	C: 26 D: Ø36 E: 23	3	
14	LONGITUDINAL SECTION / SHAFT / PIN	1	
15	SLIDE, E-CLIP, THROTTLE NEEDLE	3	
16	DIRECTION OF LAY	d	1
	MACHINING ALLOWANCE	e	1
	PRODUCTION METHOD	b	1
	ROUGHNESS VALUE	a	1
17	<i>See below</i>	3	
18		3	
TOTAL		30	

ANSWER 12



ANSWER 17: SECTION A-A

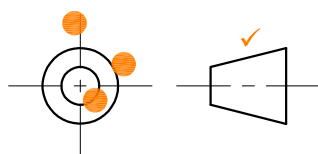


SECTION A-A MARK ALLOCATION

- LEFT ARROW PLACEMENT 1
- RIGHT ARROW PLACEMENT 1
- PERPENDICULAR TO CL 1
- TOTAL** 3

ANSWER 18: PROJECTION SYMBOL

FREEHAND ●



PAPER 2 QUESTION 1
GRADE 12
SCE 2018
MARKING GUIDELINES

1 CONSTRUCTION OF UNIFORM ACCELERATION + RETARDATION

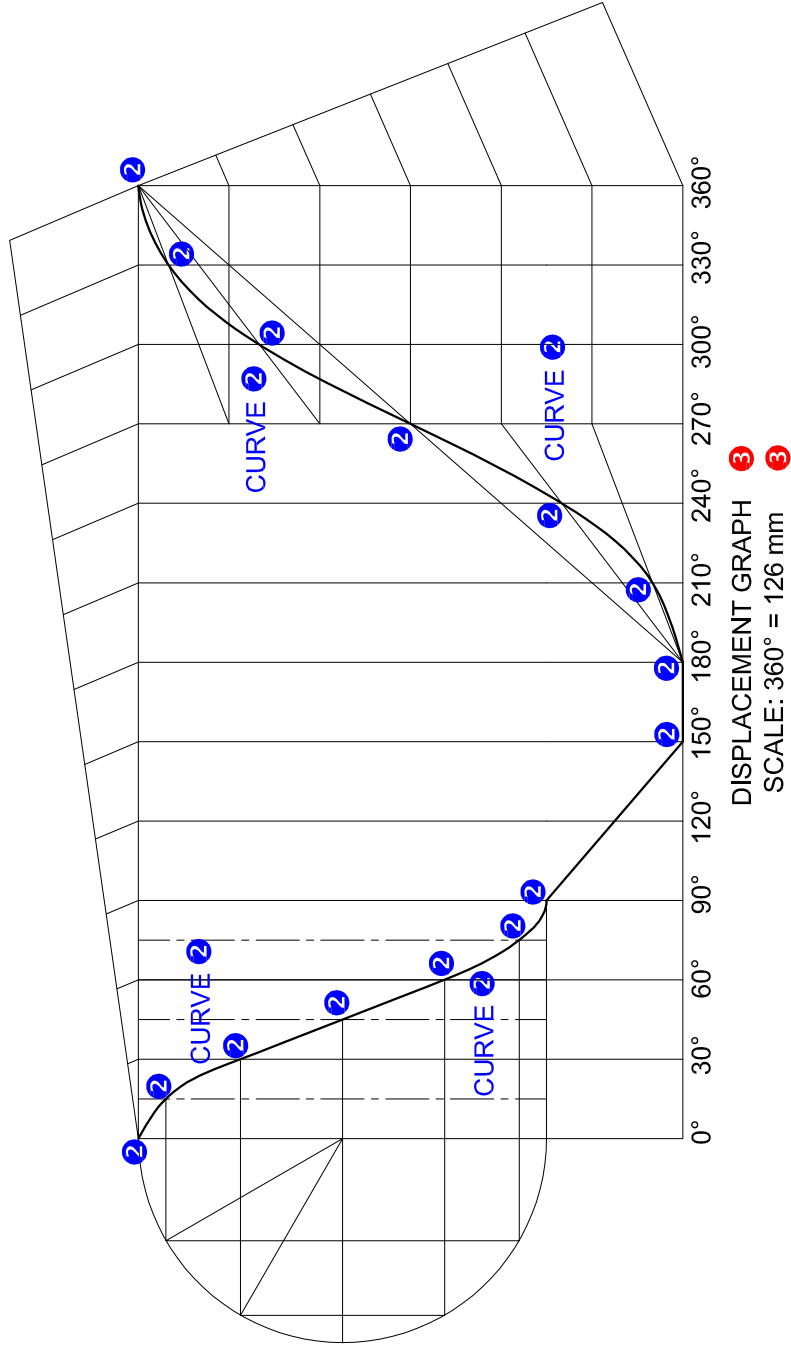
- HORIZONTAL DIVISION 1
- 180° - 270° CONSTRUCTION 1
- 270° - 360° CONSTRUCTION 1 3

1 CONSTRUCTION OF GRAPH

- LENGTH (126) ✓ 1
- LINE DIVISION 1 2

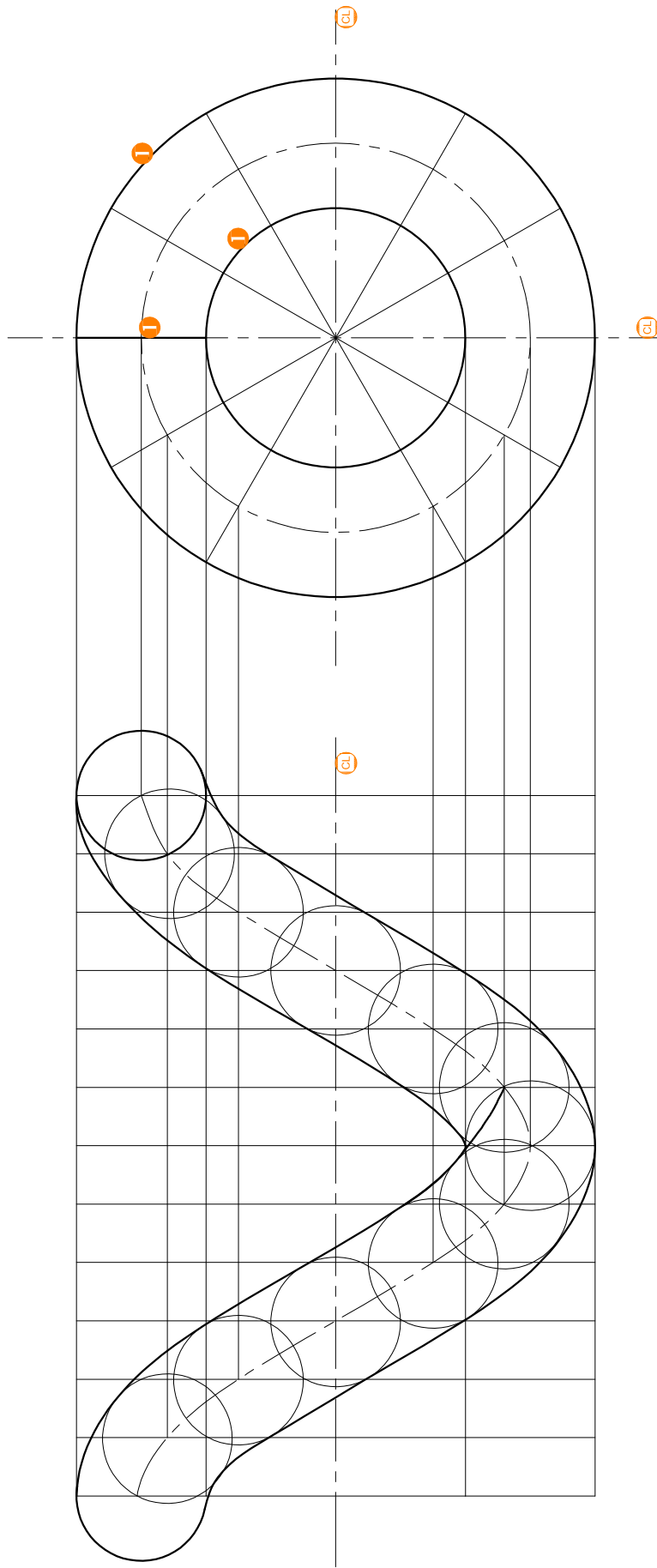
1 CONSTRUCTION OF SIMPLE HARMONIC MOTION

- SEMI CIRCLE 1
- CIRCLE DIVISION 1
- VERTICAL PROJECTION 1
- ADDITIONAL 15° DIVISIONS 1 2
- HORIZONTAL PROJECTION 2 2



ASSESSMENT CRITERIA	
1	CONSTRUCTION 7 1/2
2	POINTS + CURVE 9 1/2
3	LABELS 1
SUBTOTAL 2.1 18	

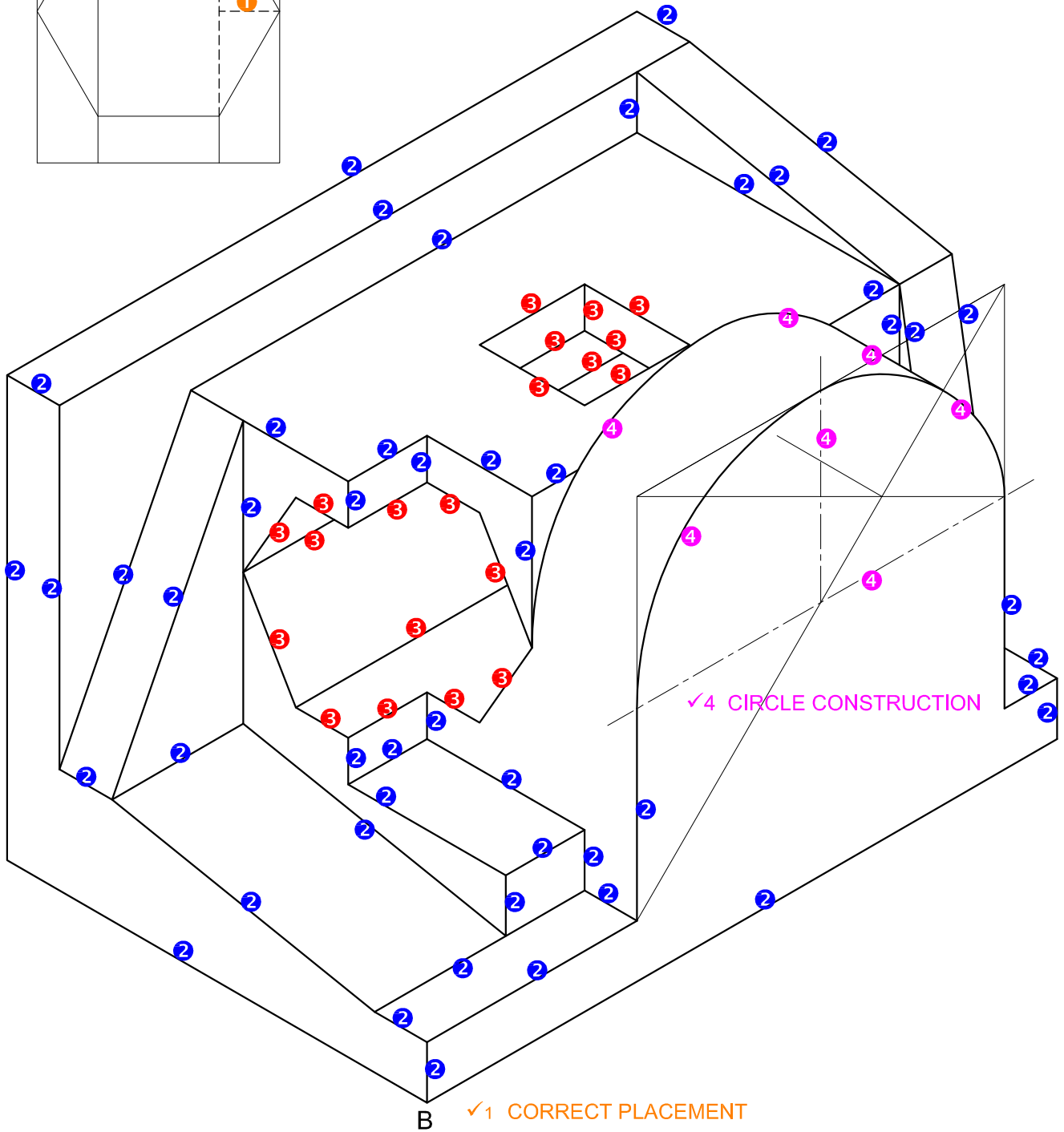
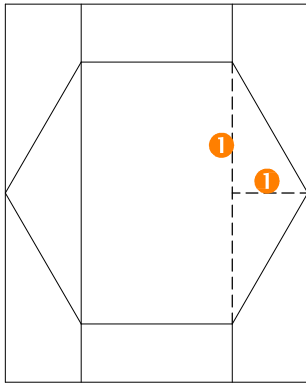
PAPER 2 QUESTION 2.1
 GRADE 12
 SCE 2018
 MARKING GUIDELINES



- 2 CONSTRUCTION**
- PROFILE CENTRE 1
 - CIRCLE DIVISIONS 1
 - PITCH 1
 - LINE DIVISION 1
 - VERTICAL PROJECTION 1
 - HORIZONTAL PROJECTION 1
- 6**
- 3 FRONT VIEW**
- CORRECTLY PLACED CIRCLES (13 x 1/2) 6 1/2
 - INDICATION DIRECTION 2
 - CURVES (4 x 1/2) 2
 - START + FINISH 1 1/2
- 12**

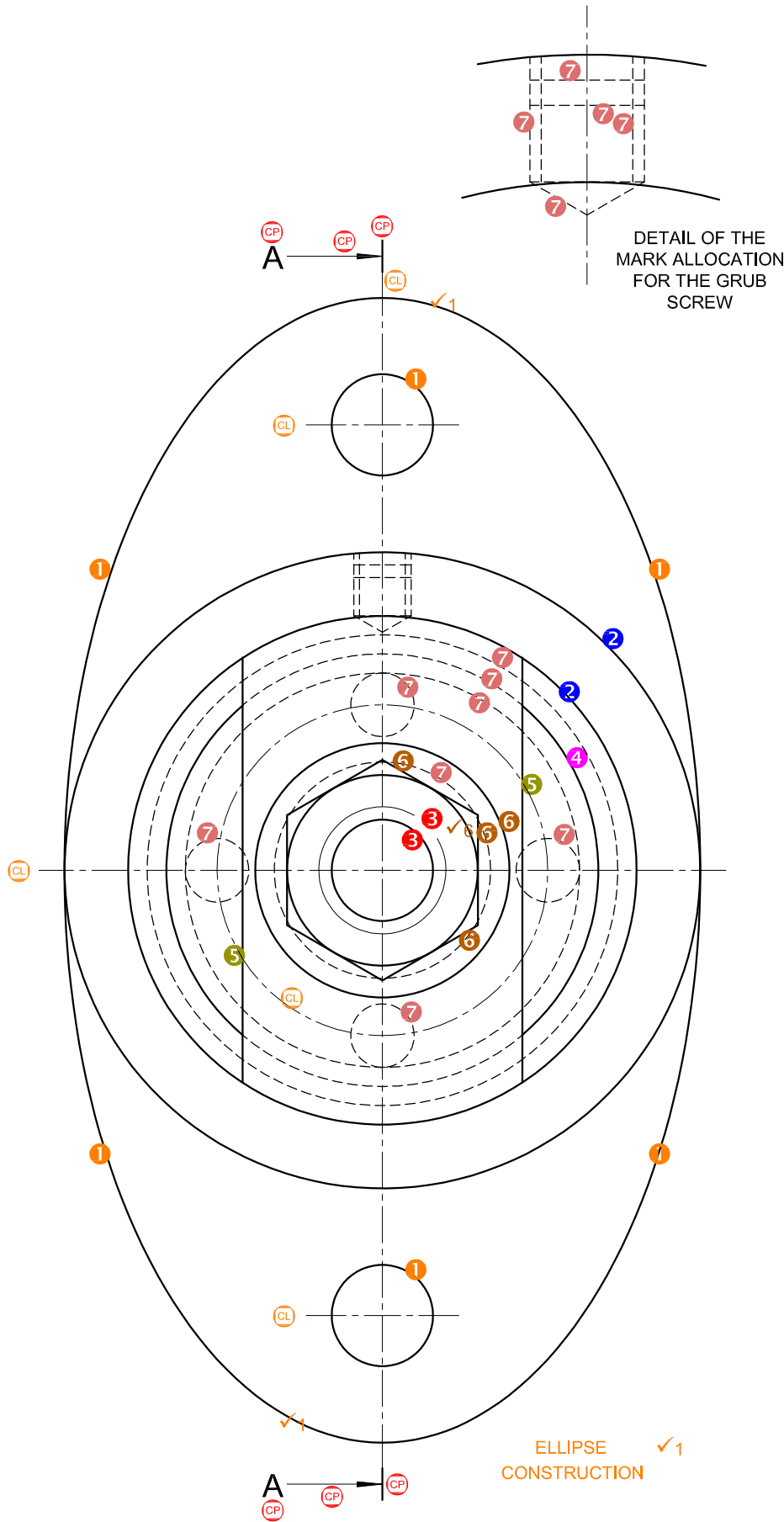
PAPER 2 QUESTION 2.2
 GRADE 12
 SCE 2018
 MARKING GUIDELINES

ASSESSMENT CRITERIA		
1	GIVEN + CENTRE LINES	3
2	CONSTRUCTION	6
3	FRONT VIEW	12
2.2 SUBTOTAL		21



PAPER 2 QUESTION 3
 GRADE 12
 SCE 2018
 MARKING GUIDELINE

ASSESSMENT CRITERIA		
1	PLACEMENT + AUX. VIEW	2
2	ISOMETRIC + NON ISOMETRIC LINES	24 $\frac{1}{2}$
3	HEXAGON + SQUARE	10
4	CIRCLE + CIRCLE CONSTRUCTION + CL	4 $\frac{1}{2}$
TOTAL		41



PAPER 2 QUESTION 4 RV
 GRADE 12
 SCE 2018
 MARKING GUIDELINE

ASSESSMENT CRITERIA		
RIGHT VIEW		
1	BASE	6
2	SLEEVE	1
3	PLUNGER	1
4	SEAL	1/2
5	GUIDE	1
6	NUT + WASHER	3
7	HIDDEN DETAIL	6 1/2
SUBTOTAL		19

DETAIL OF THE MARK ALLOCATION FOR THE GRUB SCREW

DETAIL OF THE MARK ALLOCATION FOR THE M20 NUT

DETAIL OF THE MARK ALLOCATION FOR THE BUFFER
 $2\frac{1}{2} \times 2 = 5$

1. CENTRE LINE MARK ALLOCATION
 SANS COMPLIANT (LINE TYPE) 2
 11 CENTRE LINES 2
TOTAL 4

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

ASSESSMENT CRITERIA

SECTIONAL FRONT VIEW		
1	BASE	7
2	SLEEVE + GRUB SCREW	11 $\frac{1}{2}$
3	BUFFER	5
4	PLUNGER	14
5	SEAL	3
6	BUSH	2
7	GUIDE	3
8	NUT + WASHER	6
SUBTOTAL		51 $\frac{1}{2}$

PAPER 2 QUESTION 4 SFV
 GRADE 12
 SCE 2018
 MARKING GUIDELINE