



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS

ENGINEERING GRAPHICS AND DESIGN P2

2018

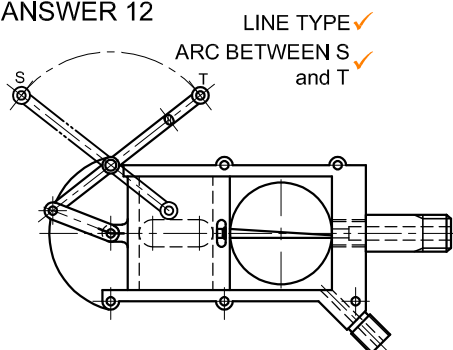
MARKING GUIDELINES

MARKS: 200

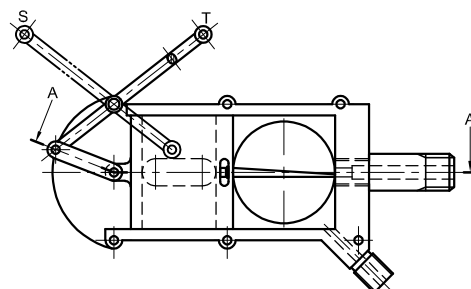
These marking guidelines consist of 7 pages.

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	See below		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	See below		3
18			3
TOTAL			30

ANSWER 12



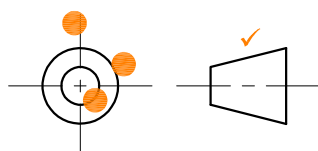
ANSWER 17: SECTION A-A

**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 SIMPLE HARMONIC MOTION

- SEMI CIRCLE

- CIRCLE DIVISION

- VERTICAL PROJECTION

- ADDITIONAL 15° DIVISIONS

- HORIZONTAL PROJECTION

1

1

1

1

1

1

2

1 CONSTRUCTION OF GRAPH

- LENGTH (126) ✓

- LINE DIVISION

1

1

2

1 CONSTRUCTION OF UNIFORM ACCELERATION + RETARDATION

- HORIZONTAL DIVISION

- 180° - 270° CONSTRUCTION

- 270° - 360° CONSTRUCTION

1

1

1

3

DISPLACEMENT GRAPH

SCALE: 360° = 126 mm

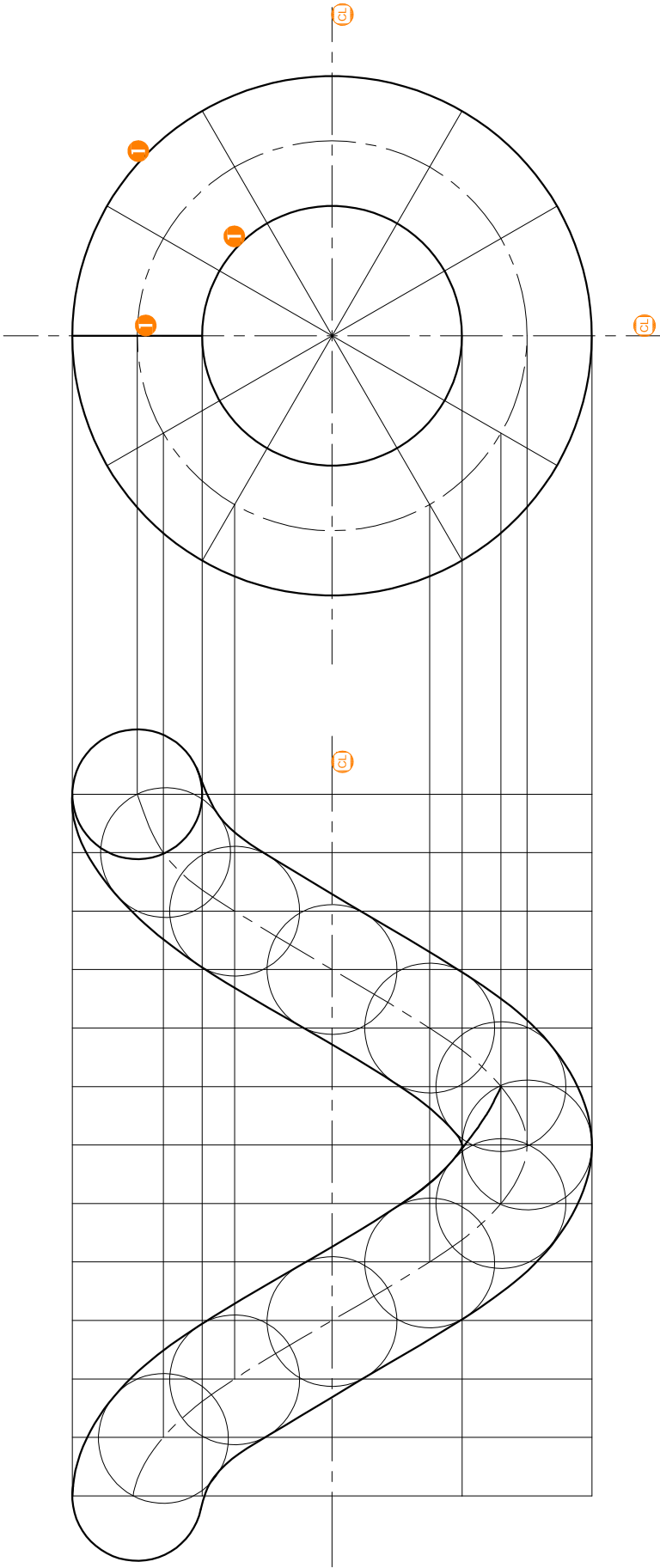
PAPER 2 QUESTION 2.1

GRADE 12

SCE 2018

MARKING GUIDELINES

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



- 2 CONSTRUCTION

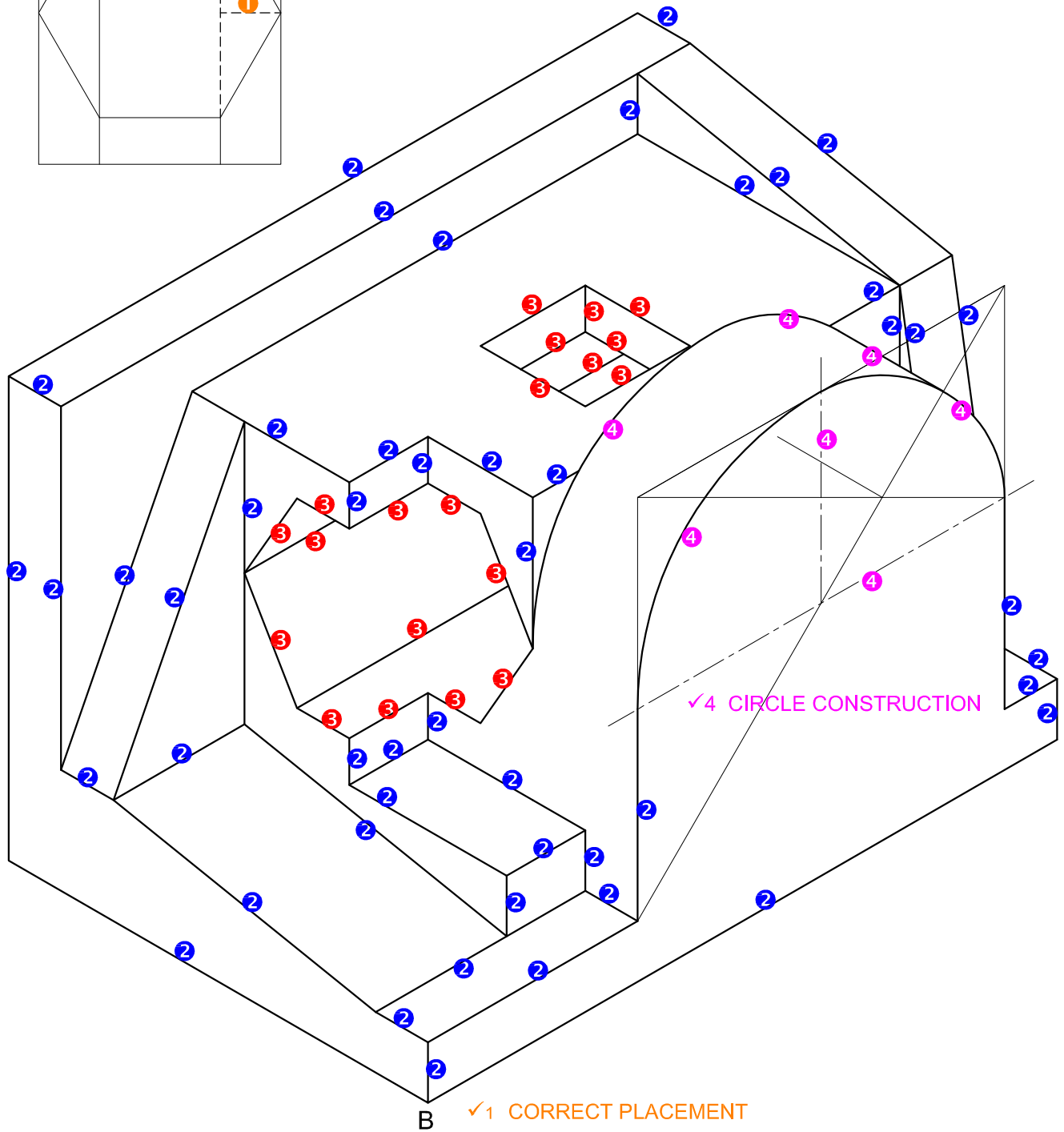
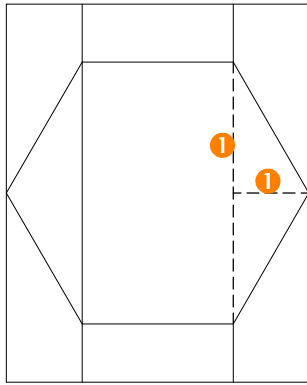
 - PROFILE CENTRE
 - CIRCLE DIVISIONS
 - PITCH
 - LINE DIVISION
 - VERTICAL PROJECTION
 - HORIZONTAL PROJECTION
- 3 FRONT VIEW

 - CORRECTLY PLACED CIRCLES (13 x $\frac{1}{2}$)
 - INDICATION DIRECTION
 - CURVES (4 x $\frac{1}{2}$)
 - START + FINISH
- 1 1 1 1 1 1 $\frac{1}{6}$

6 $\frac{1}{2}$ 2 2 $1\frac{1}{2}$ $\frac{12}{12}$

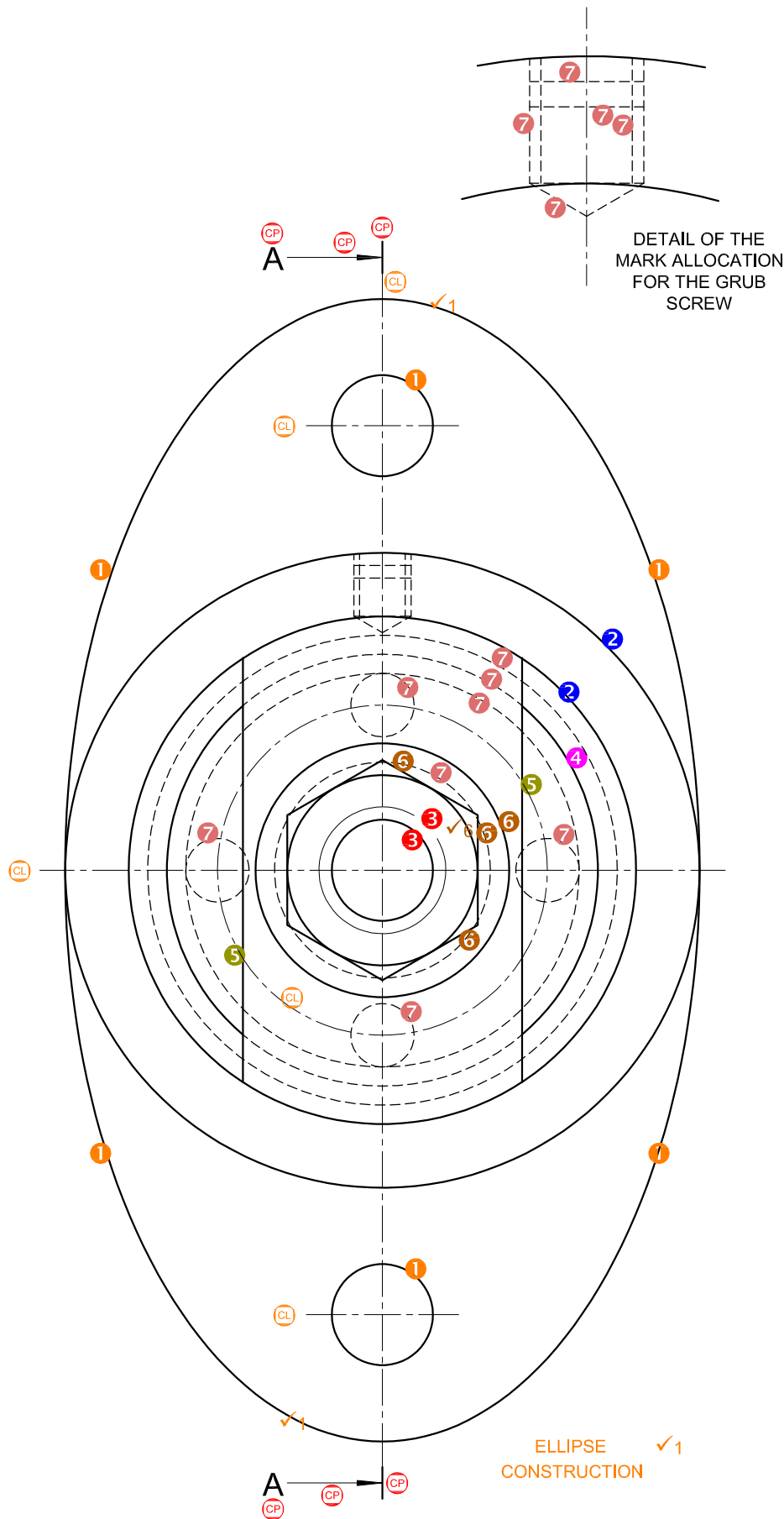
ASSESSMENT CRITERIA			
1	GIVEN + CENTRE LINES	3	
2	CONSTRUCTION	6	
3	FRONT VIEW	12	
2.2 SUBTOTAL		21	

PAPER 2 QUESTION 2.2
GRADE 12
SCE 2018
MARKING GUIDELINES



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	$\frac{1}{2}$
5	GUIDE	1
6	NUT + WASHER	3
7	HIDDEN DETAIL	$6\frac{1}{2}$
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