



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**ENGINEERING GRAPHICS AND DESIGN P2**

**FEBRUARY/MARCH 2016**

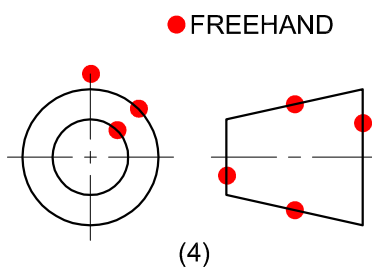
**MEMORANDUM**

**MARKS: 100**

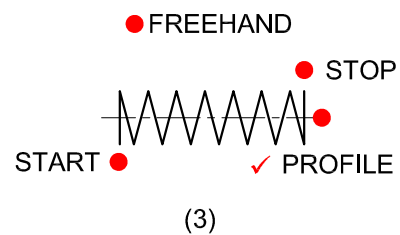
**This memorandum consists of 5 pages.**

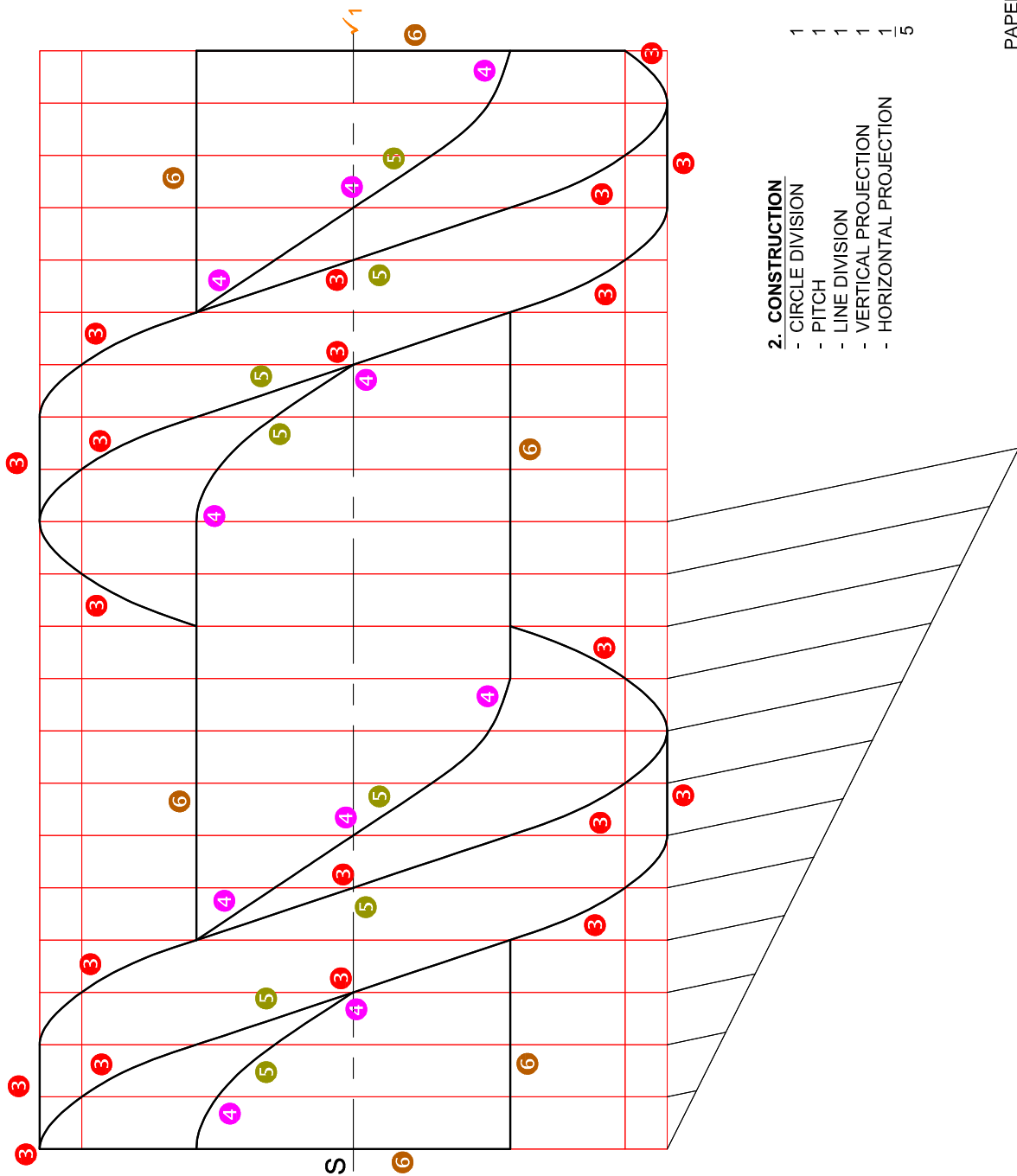
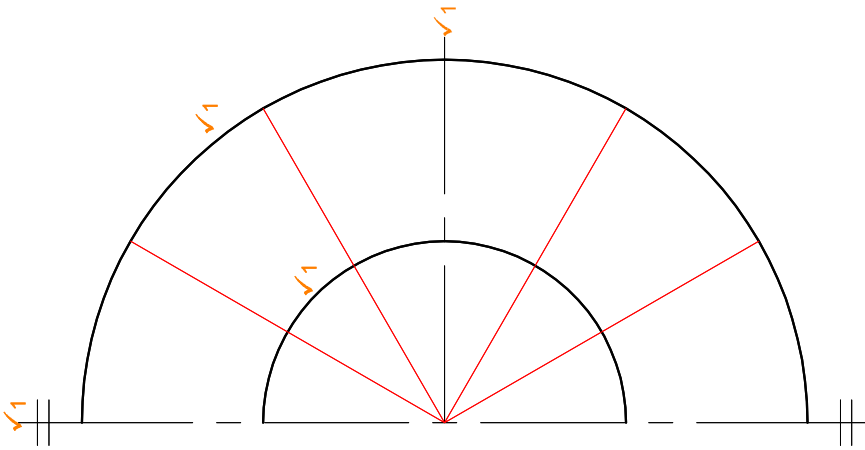
<b>ANSWERS</b>		
1	13/03/15	1
2	VELDDRIFT	1
3	METRIC / MILLIMETRE	1
4	TEMPER	1
5	punch3.dwg	1
6	CAST IRON	1
7	22/04/15	1
8	8	1
9	MULTI PLANE / STEPPED / OFFSET SECTION	1
10	A: 36    B: 70    C: 27    D: AF7,5 / Ø7,5	4
11	GRUB SCREW	1
12	REVOLVED SECTION	1
13	4	1
14	7	1
15	TO STOP THE SPRING FROM SHOOTING OUT OF THE SHAFT / STOP THE SHAFT FROM FALLING OUT	2
16	Ø 3.8	2
17	Ø 4.25	2
18	<i>See below</i>	4
19		3
	<b>TOTAL</b>	<b>30</b>

ANSWER 18



ANSWER 19

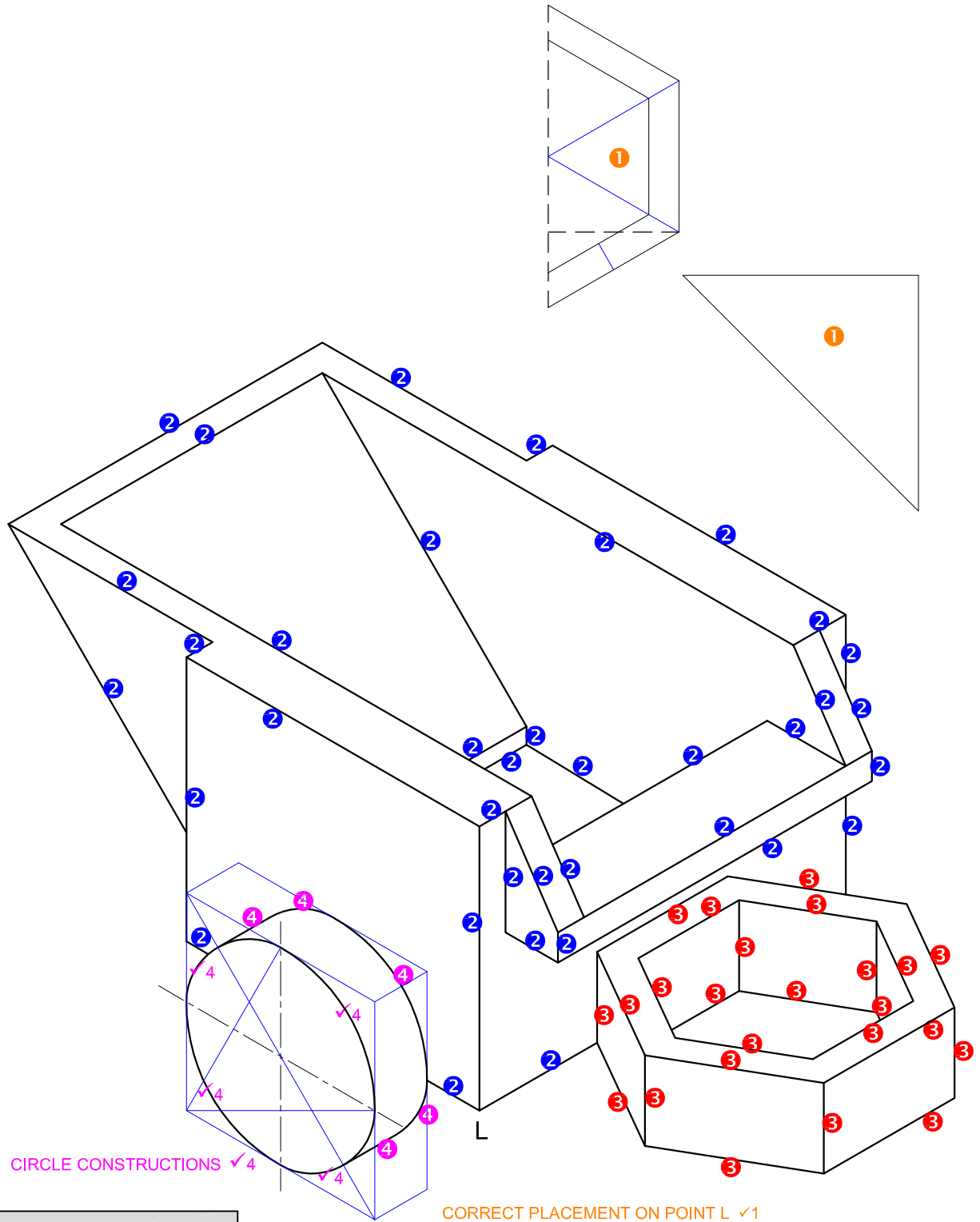




- 2. CONSTRUCTION**
- CIRCLE DIVISION 1
  - PITCH 1
  - LINE DIVISION 1
  - VERTICAL PROJECTION 1
  - HORIZONTAL PROJECTION 1 1/5

ASSESSMENT CRITERIA		
1	RIGHT VIEW + CENTRE LINES	5
2	CONSTRUCTION	5
3	OUTER CURVE POINTS	10
4	INNER CURVE POINTS	5
5	CURVE QUALITY	4
6	CORE	3
<b>TOTAL</b>		<b>32</b>

PAPER 2 QUESTION 2  
 GRADE 12  
 DBE/Feb.-Mar. 2016  
 MEMORANDUM



CIRCLE CONSTRUCTIONS ✓ 4

CORRECT PLACEMENT ON POINT L ✓1

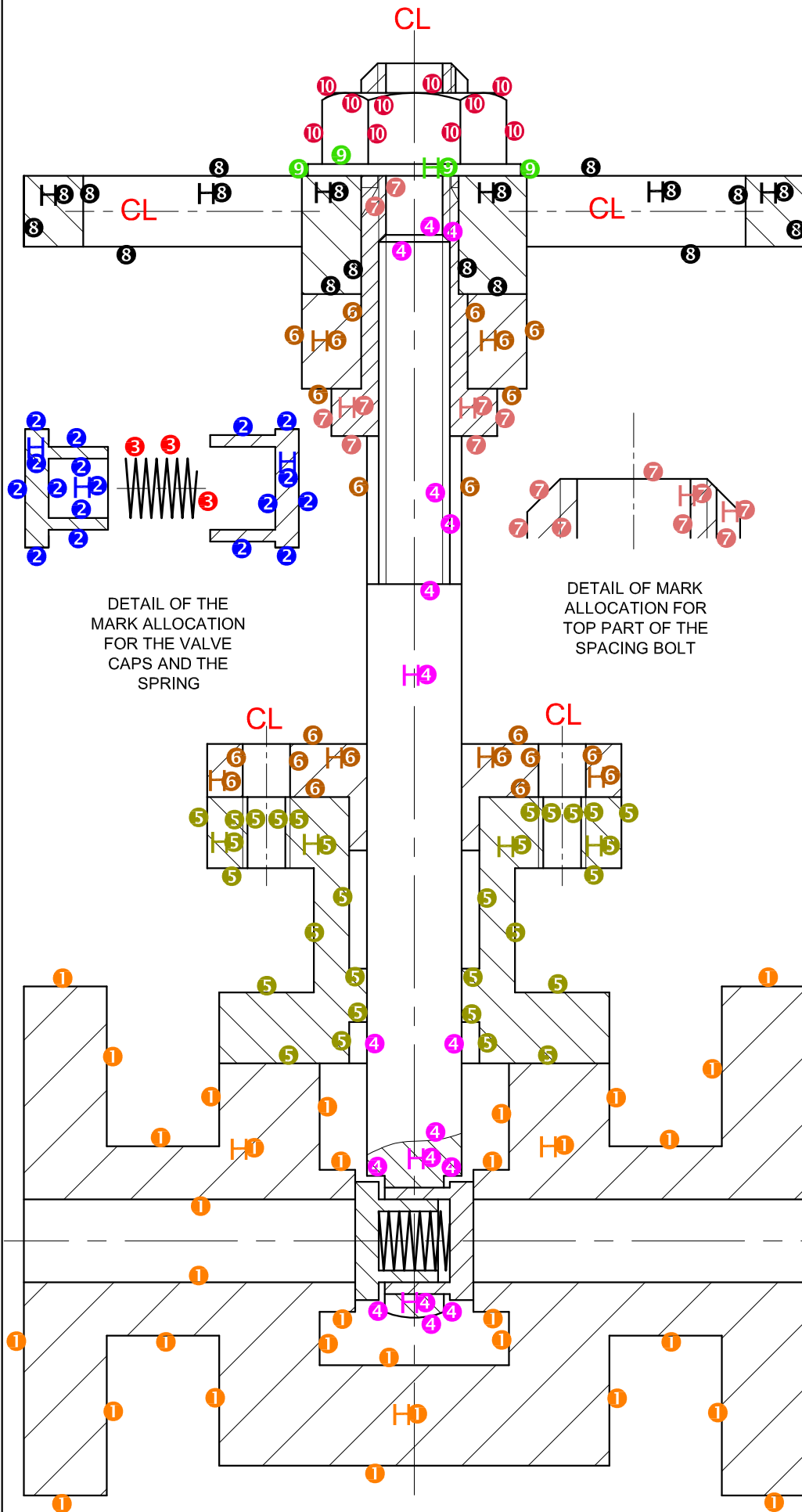
ASSESSMENT CRITERIA		
1	AUXILIARY VIEWS + PLACING	2
2	ISOMETRIC + NON-ISOMETRIC LINES	18 ½
3	HEXAGON	12
4	CIRCLES + CONSTRUCTION + CENTRE LINES	7 ½
PENALTIES (-)		
<b>TOTAL</b>		<b>40</b>

PAPER 2 QUESTION 3  
 GRADE 12  
 DBE/Feb.-Mar. 2016  
 MEMORANDUM

**ASSESSMENT CRITERIA**

**SECTIONAL FRONT VIEW**

		POSSIBLE
1	VALVE BASE	16 ½
2	VALVE CAPS	8 ½
3	SPRING	1 ½
4	CONNECTING ROD	8 ½
5	FILLER PIECE	15
6	SPLIT PIECE	11
7	SPACING BOLT	8
8	HAND WHEEL	9
9	WASHER	2
10	M18 NUT	5
<b>SUBTOTAL</b>		<b>85</b>
<b>GENERAL</b>		
1	CENTRE LINES	3
2	ASSEMBLY	10
<b>SUBTOTAL</b>		<b>13</b>
<b>TOTAL</b>		<b>98</b>



DETAIL OF THE MARK ALLOCATION FOR THE VALVE CAPS AND THE SPRING

DETAIL OF MARK ALLOCATION FOR TOP PART OF THE SPACING BOLT

CL

PAPER 2 QUESTION 4  
GRADE 12  
DBE/Feb.-Mar. 2016  
MEMORANDUM