



## **education**

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**Department:  
Education  
KwaZulu - Natal**

**GRADE 12**

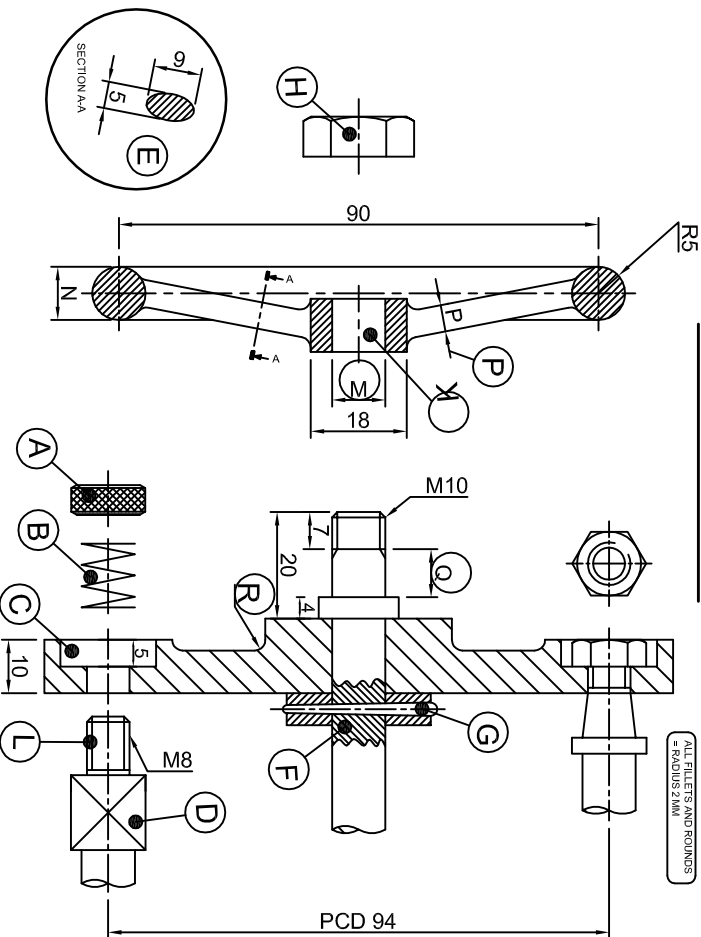
# **MARKING MEMO**

**ENGINEERING GRAPHICS AND DESIGN P2  
MID-YEAR EXAMINATION 2011**

**DEANS MANUFACTURING Co**

Established 1989 Durban South Africa  
 "We create the future"  
 Order Number - 2812HP Sector Number - DUKS 0111073  
 Material - Mild Steel Number Required - 1023  
 Assembly Number - PETER21 Drawing Number - SAM-R14  
 Drawn By - A. Dukhi Checked By - V. Gounden

**VALVE MECHANISM**



**QUESTION: 1 A**  
**STUDY THE DRAWING AND ANSWER THE QUESTIONS:**

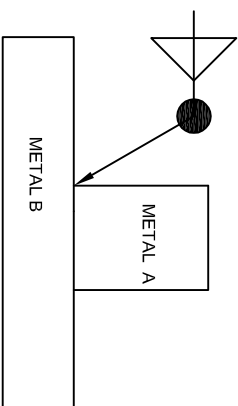
- Name the standard part shown at G? PIN [1]
- What special type of sectioning is shown at F? PART SECTION [1]
- Part H is M10, identify part H? HEXAGONAL NUT [1]
- What is the height of part H? 8mm [1]
- At what angle is part H chamfered? 30° [1]
- Name the hole at position K? THROUGH HOLE [1]
- How many parts make up this assembly? 10 [1]
- Determine dimension M? 10 [1]
- Determine dimension N? 0 10 or 10 [1]
- What is the dimension at P? 5 [1]
- What is the dimension at Q? 9 [1]
- Determine the dimension at R? R2 or 2 [1]
- What is the drawing number? SAM-R14 [1]
- What feature is represented by A? KNURLING [1]
- State the number required? 1023 [1]
- Name the component represented at B? SPRING [1]
- What type of hole is represented by C? COUNTERBORED [1]
- What is the feature D on the shaft called? SQUARE ON THE SHAFT [1]
- What type of sectioning is shown at E? REMOVED SECTION [1]
- Draw the centre line on the middle shaft. drawn/can/drawn/wing [1]

**QUESTION: 1 B**

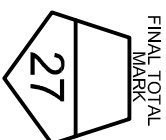
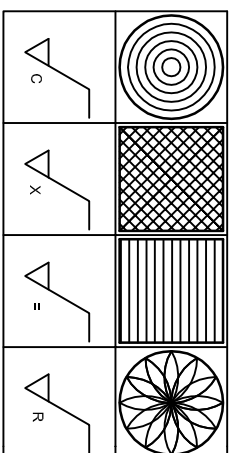
**1. TYPES OF WELD.**  
 Match the type of weld with the correct symbol from the list provided. [1 ½ = 2]

WELD	SYMBOL	LIST OF SYMBOLS
SQUARE		
BEAD		
FILLET		
SLOT OR PLUG		

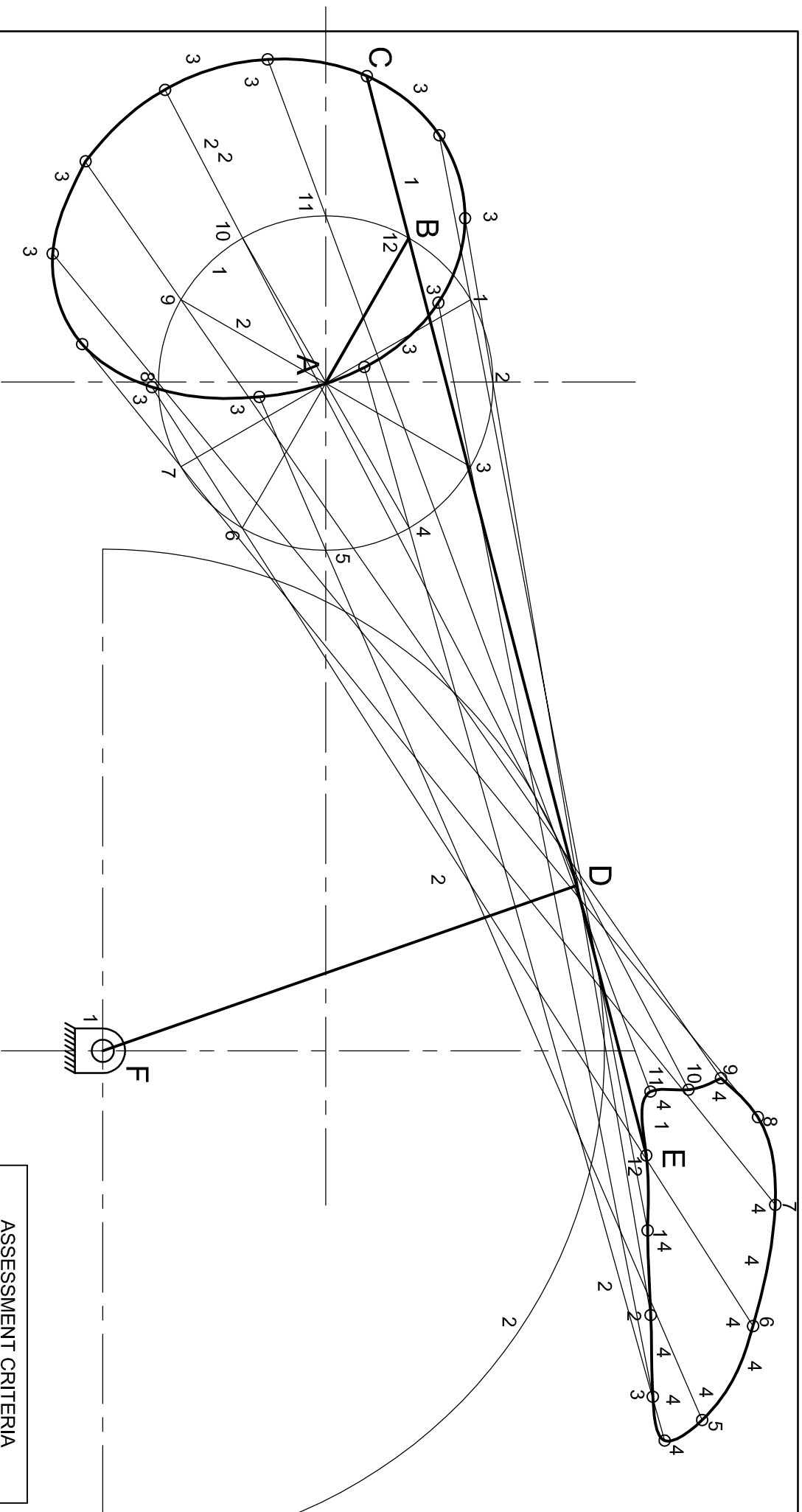
**2. Using the basic welding symbol**  
 show that fillet welding has to be done on BOTH sides and on site/field. [3]



**3. MACHINING: DIRECTION OF LAY**  
 Label the lay symbol under the given pattern at the correct position. [1 ½ = 2]

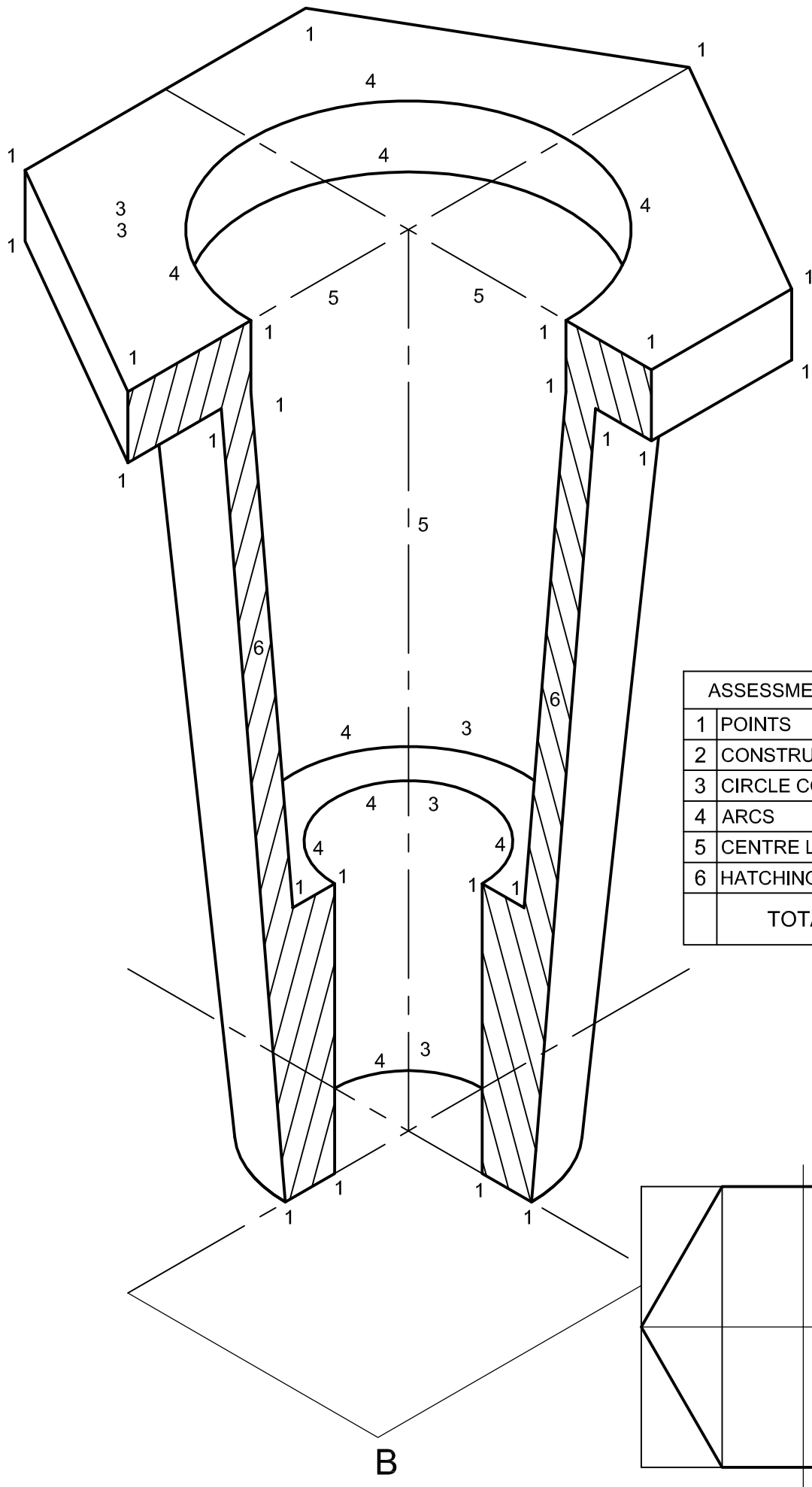


NAME \_\_\_\_\_  
 NAME \_\_\_\_\_

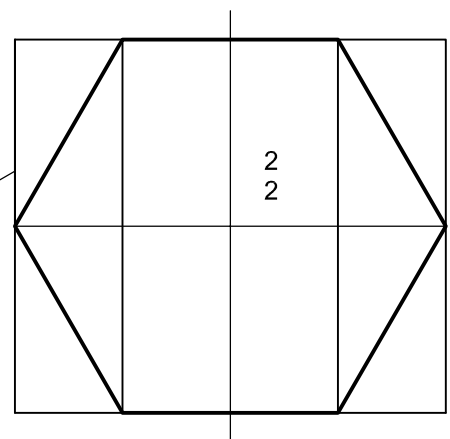


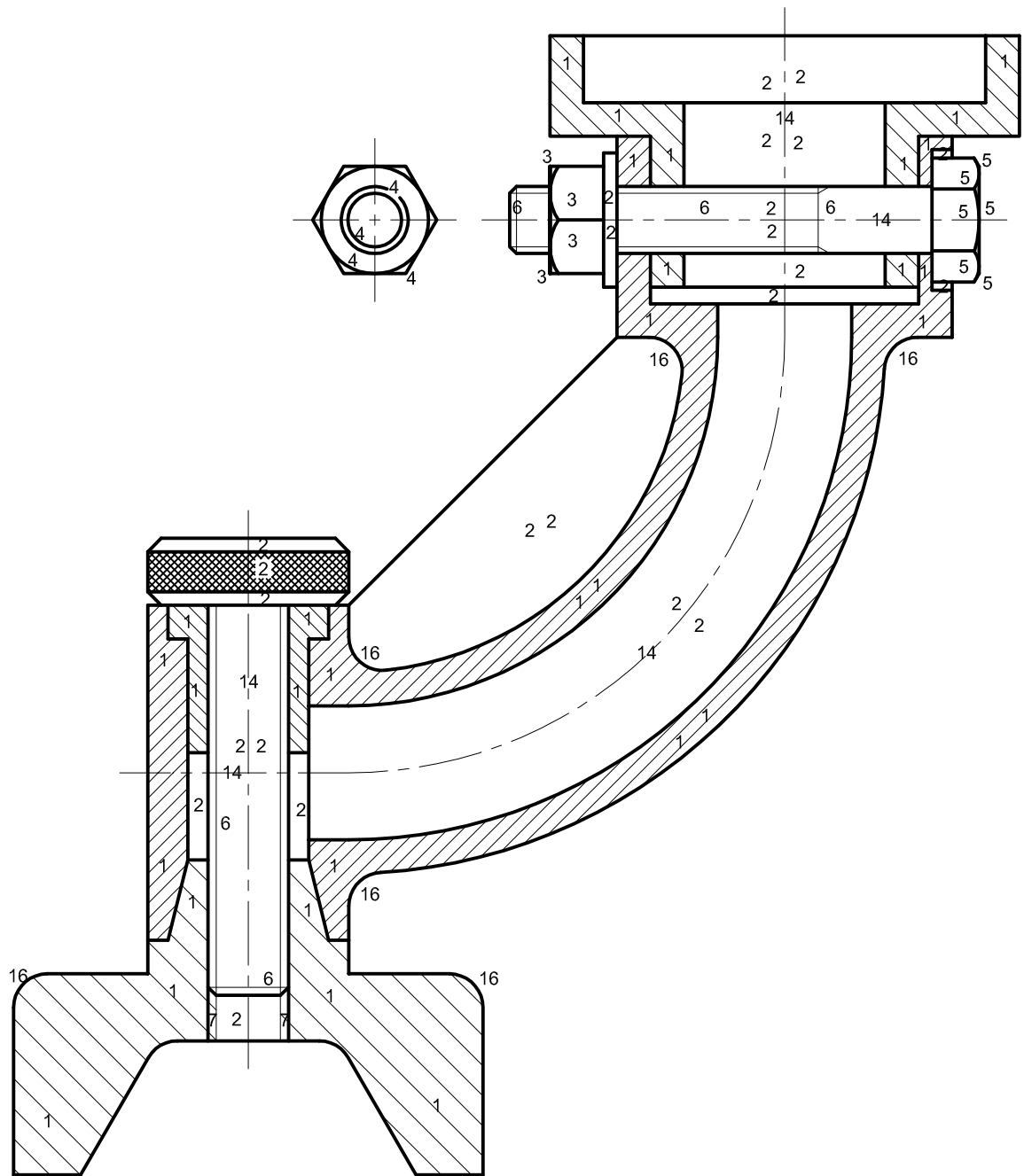
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ASSESSMENT CRITERIA		
1	GIVEN + LABELS	4
2	CONSTRUCTION	6
3	LOCUS C + CURVE	10
4	LOCUS E + CURVE	10
TOTAL		30



ASSESSMENT CRITERIA		
1	POINTS	24
2	CONSTRUCTION	2
3	CIRCLE CONST.	5
4	ARCS	9
5	CENTRE LINES	3
6	HATCHING	2
TOTAL		45



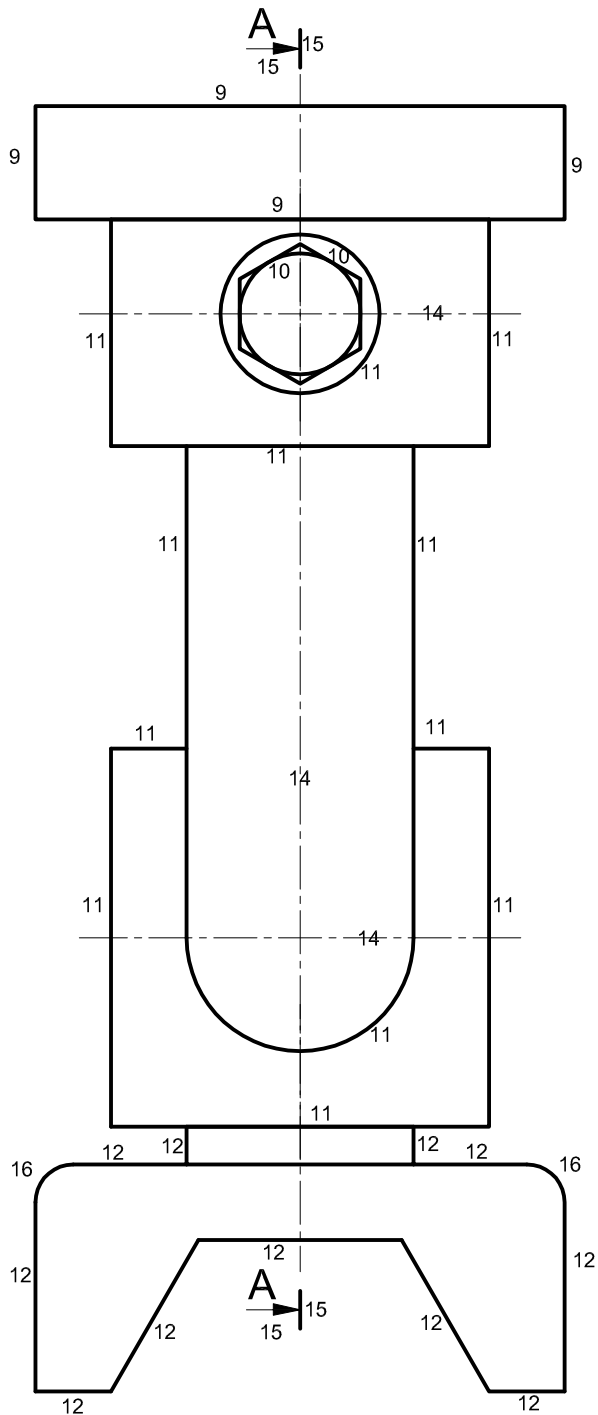


SECTION A-A

13

BRACKET AND SCREW ASSEMBLY 13

SCALE 1:1 13



RIGHT VIEW

13

ASSESSMENT CRITERIA

SECTIONAL ELEVATION			
SECTIONING	1		15
NO SECTIONING	2		12
M10 HEXAGONAL NUT	3		4
M10 NUT CONSTRUCTION	4		2
M10 BOLT	5		6
THREAD	6		7
INTERNAL THREAD	7		2
TOTAL			48
RIGHT VIEW			
CAP	9		4
BOLT HEAD	10		2
BRACKET	11		12
BASE	12		11
TOTAL			29
GENERAL			
TITLE, SCALE, HEADING	13		4
CENTRE LINES	14		4
CUTTING PLANE	15		4
FILLETS	16		4
ASSEMBLY			7
TOTAL			23

TOTAL

	98
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