



**QUESTION 1: ANALYTICAL (MECHANICAL)**

**Given:**

The front view and top view of a micrometer, sections, a parts list, a title block and a table of questions. The drawing has not been prepared to the indicated scale.

**Instructions:**

Complete the table below by neatly answering the questions which refer to the accompanying drawing, title block and mechanical content. [30]

QUESTIONS		ANSWERS	
1	Who prepared the drawing?	1	
2	On what date was the drawing checked?	1	
3	What was Siyabongi's responsibility?	1	
4	What is the drawing number?	1	
5	What material is used to manufacture the anvil?	1	
6	How many parts make up this micrometer?	1	
7	At what temperature will the micrometer be accurate?	1	
8	What is the maximum size that this micrometer can measure?	1	
9	Why is the shaft at A drawn as a phantom line (double chain line)?	1	
10	What does the S-break at B indicate?	1	
11	Give TWO uses of chain lines on mechanical drawings.	2	
12	How many surfaces on this micrometer are knurled?	1	
13	What is VIEW 1 called?	1	
14	Determine the complete dimensions at: C: D: E:	5	
15	Measure the angle at F.	1	
16	Name the type of section at G.	1	
17	Name the type of section at H.	1	
18	Name the type of section at J.	2	
19	With reference to the tolerance at K, determine the minimum dimension.	2	
20	In the space below (ANSWER 20), draw, in neat freehand, the symbol for the projection system used.	4	
<b>TOTAL</b>		<b>30</b>	

PARTS LIST			DRAWING PROGRAM: AUTOCAD 2018	SCALE 1 : 1
PART	QUANTITY	MATERIAL	DIMENSIONS ARE ACCURATE AT 20 °C	DRAWING NUMBER MC 25-V2018
1 ANVIL	1	TUNGSTEN	ACCURACY: 1 TURN OF THE OUTER SLEEVE = 0,5 mm	
2 FRAME	1	CAST IRON	MEASUREMENT RANGE: MINIMUM = 0,01 & MAXIMUM = 25,00	
3 SPINDLE LOCKNUT	1	TOOL STEEL	APPROVED: SIYABONGI	DATE: 2018-02-28
4 INNER SLEEVE	1	TOOL STEEL	CHECKED: JACQUES	DATE: 2018-02-10
5 OUTER SLEEVE	1	TOOL STEEL	DRAWN: WENDY	DATE: 2018-01-08
6 SPINDLE	1	SILVER STEEL	<b>TITLE</b> <b>MICROMETER</b>	
7 SCREW	1	TOOL STEEL		
8 RATCHET	1	TOOL STEEL		

ANSWER 20: Projection symbol



EXAMINATION NUMBER	
EXAMINATION NUMBER	2

