

**QUESTION 2: CAM**

**Given:**

- The detail of a roller follower.
- The starting point A on the displacement graph.

**Specifications:**

- The minimum distance from the cam profile to the cam shaft is 13 mm.
- Camshaft is  $\varnothing 20$
- Rotation is counterclockwise.

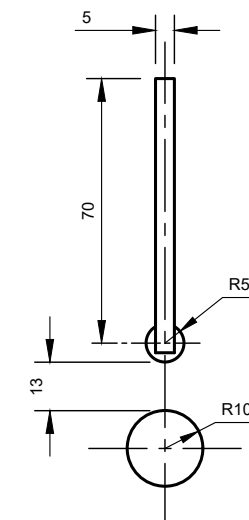
**Movement:**

- The follower rises 30 mm for the first  $90^\circ$ .
- The follower rise for 40 mm over the next  $60^\circ$
- It then dwells for  $60^\circ$ .
- The follower descend 60 mm over  $120^\circ$ .
- For the next  $60^\circ$  the follower return to its original position.

**Instructions:**

- Draw to scale 1:1 the given follower and camshaft.
- Draw, to a horizontal scale of  $5\text{mm} = 30^\circ$  and a vertical displacement scale of 1:1 the complete displacement graph for the uniform motions.
- Label the graph.
- Show the direction of rotation.
- Show all necessary construction lines and projection lines. **[30]**

A



ASSESSMENT CRITERIA				
1	GIVEN + MINIMUM DISTANCE + CENTRE LINES	5		
2	CONSTRUCTION DISPLACEMENT GRAPH	7		
3	GRAPH	5,5		
4	CAM CONSTRUCTION	5		
5	CAM & CURVE QUALITY	7,5		
PENALIZING (-)				
<b>TOTAL</b>		<b>30</b>		



<b>CAM</b>	ESTIMATED TIME FOR COMPLETION	35 MIN	<b>GRADE 11</b>	NAME & SURNAME		<b>TASK 11.5</b>	<b>PAGE 52</b>
	YOUR TIME OF COMPLETION	MIN					