

STAPEL

QUESTION 2: CAM

Given:

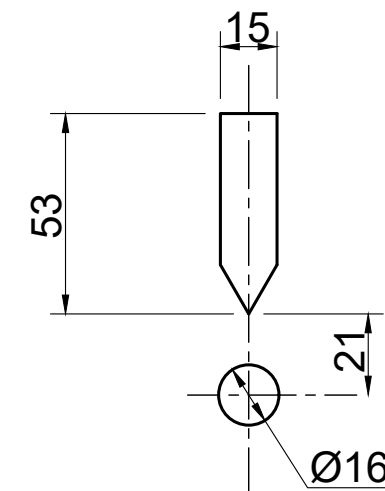
- The shaft and follower detail of an industrial cam with the follower shown at its minimum position.
- The centre lines of the camshaft as a reference on the diagram sheet.

Motion:

- The cam rotates clockwise.
- Over the first 60° there is a dwell period.
- Over the next 30° the follower rises 30 mm using uniform motion.
- Over the next 60° there is a dwell period.
- Over the next 30° the follower rises with uniform motion with 20 mm, and reaches its maximum height of 50mm
- The follower descends with simple harmonic motion to the original position over the rest of the rotation.

Instructions:

- Draw the displacement graph with a horizontal scale of 6mm = 30° and a displacement scale of 1:1 for the given motion.
- Project and draw the cam profile that would generate the given motion.
- Draw the arrow indicating the direction of rotation.
- Label the graph and indicate the scale. [32]



ASSESSMENT CRITERIA			
1	DISPLACEMENT GRAPH	11	
2	CONSTRUCTION	4	
3	CAM PROFILE	17	
TOTAL		32	



CAM	ESTIMATED TIME FOR COMPLETION	35 MIN	GRADE 12	INITIALS & SURNAME		TASK	PAGE
	YOUR TIME FOR COMPLETION	MIN				13.2	47