

STAPEL

QUESTION 2: CAM

Motion:

- The follower rises with uniform motion for 20 mm over the first 60° of the rotation.
- there is a dwell period for 30°.
- The follower rises with simple harmonic motion for 50 mm over the next 90° of the rotation, to the maximum displacement of 70 mm.
- The follower descends with uniform acceleration and retardation to the original position over the rest of the rotation.

Instructions:

- Draw, to a horizontal scale of 130 mm = 360° and a displacement scale of 1 : 1, the complete displacement graph for the required motions.
- Label the graph and indicate the scale. **[17]**

ASSESSMENT CRITERIA			
1	CONSTRUCTION	6.5	
2	POINTS + CURVES	9.5	
3	LABELS	1	
PENALTIES (-1)			
SUBTOTAL		17	

QUESTION 2: CAM

Motion:

- The cam rotates at constant velocity imparting the following motion to a follower
- It rises with with uniform movement for 21 mm over the next 15°
 - The follower rises with uniform acceleration and retardation for 50 mm towards the 150° rotation mark to reach the maximum vertical displacement position.
 - The follower descends with simple harmonic motion to the original height position to the 315° position.
 - There is a dwell period for 45° to complete the rotation to 360°.

Instructions:

- Draw, to a horizontal scale of 150 mm = 360° and a displacement scale of 1 : 1, the complete displacement graph for the required motions.
- Label the graph and indicate the scale. **[18]**

ASSESSMENT CRITERIA			
1	CONSTRUCTION	7.5	
2	POINTS + CURVES	9.5	
3	LABELS	1	
PENALTIES (-1)			
SUBTOTAL		18	



CAM	ESTIMATED TIME FOR COMPLETION	35 MIN	GRADE 12	INITIALS & SURNAME		TASK	PAGE
	YOUR TIME FOR COMPLETION	MIN				13.1	46