STAPLE

O

QUESTION 2: LOCI (MECHANISMS)

Given:
A mechanism consisting of a crank OP that is pin-joined to a slotted link AB. The slotted link AB slides over a fixed pin R that is located on the circumference of a wheel, centre Q.
FIGURE 1: A detailed drawing of the mechanism
FIGURE 2: A schematic drawing of the mechanism

Motion:
Crank OP rotates in an anti-clockwise direction while the wheel, centre Q, rotates at the same speed in a clockwise direction. The slotted link AB slides over pin R during the rotation.

Instructions:
2.1 Draw, to scale 1:1, the given schematic drawing using point O as a reference point. Include ALL the labels.
2.2 Trace the locus generated by point A of the slotted link for one revolution.
2.3 Trace the locus generated by point B of the slotted link for one revolution.

- Show ALL necessary construction. **[33]**

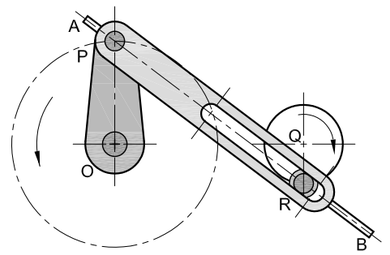

FIGURE 1

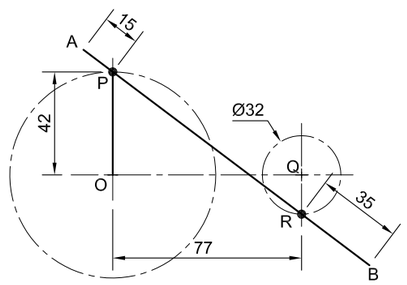

FIGURE 2

ASSESSMENT CRITERIA				
GIVEN + LABELS	5			
CONSTRUCTION	8			
LOCUS A + CURVE	10			
LOCUS B + CURVE	10			
TOTAL	**33**			

EXAMINATION NUMBER	
EXAMINATION NUMBER	3