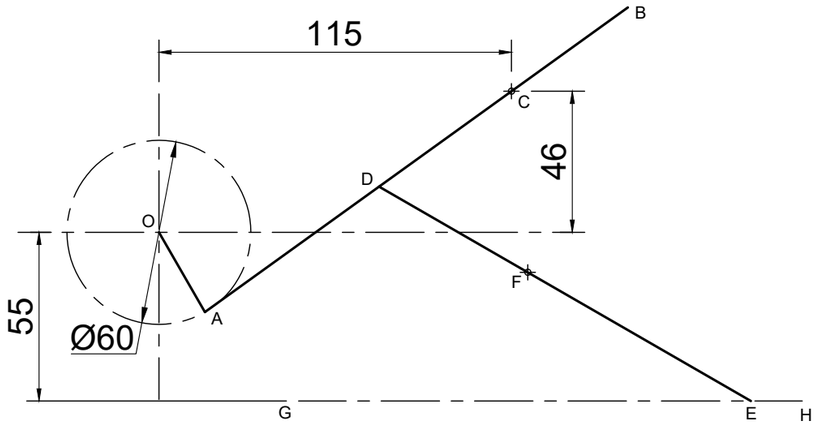
STAPEL



QUESTION 2: MECHANISM (LOCI)

Given:
- A schematic drawing of a mechanism consisting of a crank OA, connecting rod AB, swivel guide C, sliding rod DE, pin F and horizontal grove GH
- The position of the centre point O on the drawing sheet

Specifications:
- The position of O, C and groove GH are fixed
- Connecting rod AB is pin joined to crank OA at A
- Sliding rod DE is pin-jointed to connecting rod AB at D
- Pin F is fixed to sliding rod DE
- AB is 170 mm
- DE is 140 mm
- AD is 70 mm
- DF is 56 mm

Motion:
As crank OA rotates, connecting rod AB freely slides through swivel guide C. Point E of sliding rod DE reciprocates along groove GH during the rotation.

Instructions:
- Draw, to scale 1 : 1, the given schematic drawing of the mechanism.
- Trace the locus generated by point F for one complete rotation of the crank OA.
- Show all necessary constructions. **[27]**

O

ASSESSMENT CRITERIA				
1	GIVEN	8		
2	CONSTRUCTION	5		
3	LOCUS + CURVE	14		
TOTAL		27		

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MECHANISM (LOCI)	ESTIMATED TIME FOR COMPLETION	20 MIN	GRADE 12	INITIALS & SURNAME		TASK 14.3	PAGE 52
	YOUR TIME FOR COMPLETION	MIN					