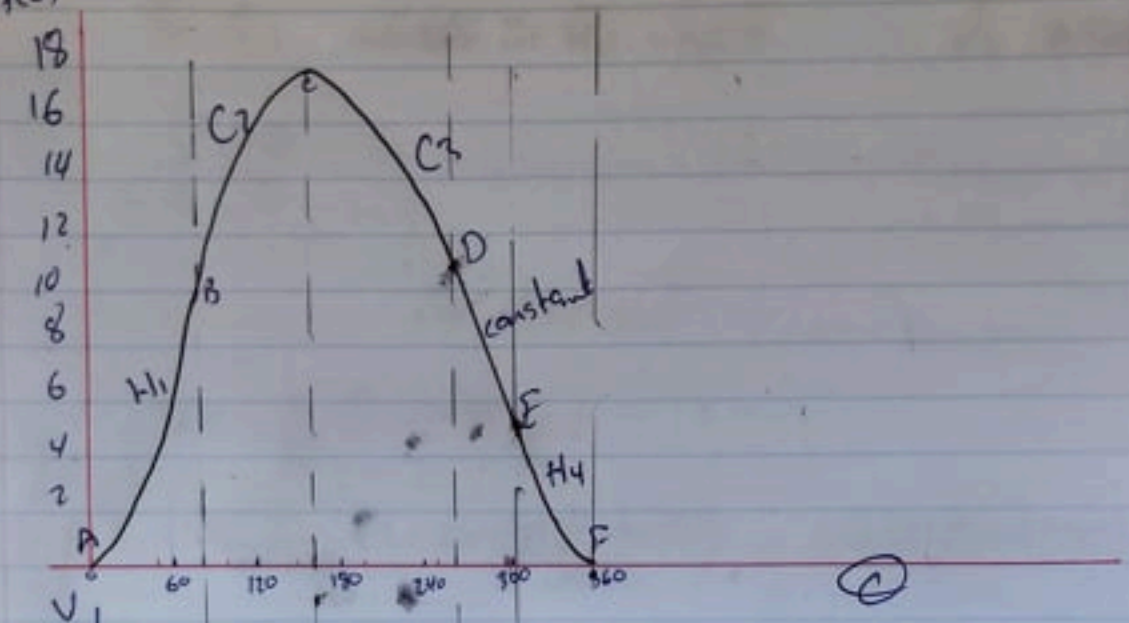
1 step

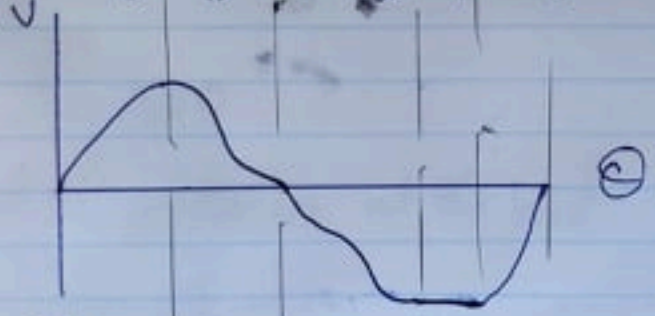
final Q1 1202337

Machine

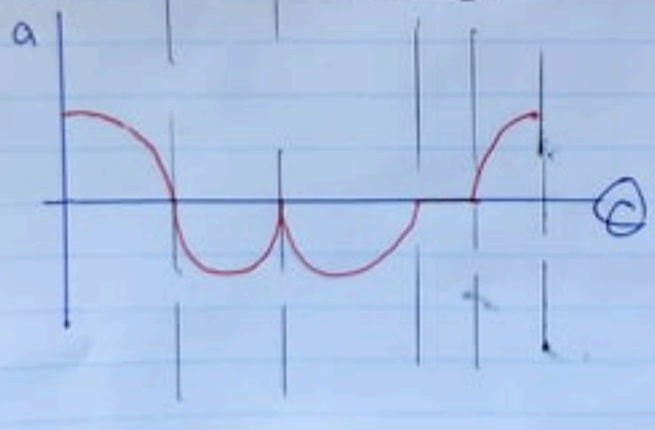
D ⊖ = 225° located in interval (C-D)

S = f(⊖)





V is cont.



a is cont.

2 ans

in C_3 ~~at the~~ in the start $\quad l_3 = 7\text{unit}\ \beta_3 = 100.24^\circ$

$V = 0$
$a = 0$

cont.

in the end

$$V = -\frac{l_3}{\beta_3}\left(1 - \cos\pi\frac{\theta}{\beta_3}\right)$$

$$= \frac{-7}{100.24\times\frac{\pi}{180}}\left(1 - \cos\left(\frac{\pi(\beta_1+\beta_2+\beta_3)}{100.24}\right)\right) = -5.256\ \text{unit/s}$$

$a = 0$

not cont.

in ~~C4~~ C_2 at the end

$V = 0$
$a = 0$

in constant velocity $\quad l_4 = 6\text{unit} \quad \beta_4 = 42.96^\circ$

$$V = \frac{l_4}{\beta_4} = \frac{6}{42.96\times\frac{\pi}{180}} = -8\ \text{unit/s}$$

$a = 0$ constant velo.

3 cm

the absolute maximum velocity in the end of A_1

$$V = \frac{\pi \beta_1}{2\beta_1} \times 1$$

$$= \frac{\pi \times 10}{2 \times (79.53 \times \frac{\pi}{180})} = 11.316 \text{ unit/s}$$

the absolute max. acc. in the start of H_1

$$a = \frac{\pi^2 \beta_1}{4\beta_1^2} \times 1$$

$$= \frac{\pi \times 10}{4 \times (79.53 \times \frac{\pi}{180})^2} = 4.07 \text{ unit/s}^2$$

4 step

$\theta = 260$

At $\theta < 260$ => in Period [C-D] C_3 $\beta_3 = 100.24$

$$s = (l_1 + l_2 + l_3)\left(1 - \frac{\theta}{\beta_3} + \frac{1}{\pi}\sin\pi\frac{\theta}{\beta_3}\right)$$

$$= 18\left(1 - 2.6 + \frac{1}{\pi}\sin(2.6\pi)\right)$$

$$= 18(-1.29)$$

$$= +23.3 \text{ unit}$$

(no minus in s)

$$V = \frac{-l_3}{\beta_3}\left(1 - \cos\pi\frac{\theta}{\beta_3}\right)$$

$$= \frac{-7}{\left(\frac{100.42\times\pi}{180}\right)}\left(1 - \cos\frac{\pi \times 260}{100.24}\right) = -5.15 \text{ unit/s}$$

$$a = -\frac{\pi L}{\beta_3^2}\left(\sin\pi\frac{\theta}{\beta_3}\right)$$

$$= \frac{-\pi \times 7}{\frac{100.42\times\pi}{180}}(0.957) = -12.03 \text{ unit/s}^2$$