

\* Gain  $\rightarrow$  H3-03

قيمة التردد في المخرج من Max عند 10V

Change from  $[-999.9\% - 999.9\%]$

by default 100%

\* Bias  $\rightarrow$  H3-04

قيمة التردد في المخرج من Max عند 10V

Change from  $[-999.9\% - 999.9\%]$

by default 100%

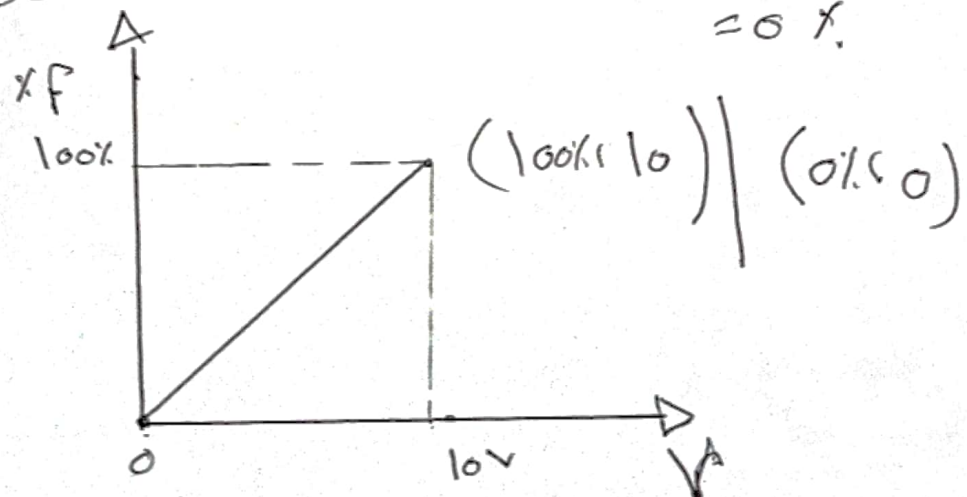
$$\text{Gain} = \frac{F_{at 10V}}{(Max F)_{E1-04}} \times 100, \text{ Bias} = \frac{F_{at 0V}}{Max P_{E1-4}} \times 100$$

1) Change Frequency from (0-60 Hz) if Max is 60 Hz

$[0 - 60] \text{ Hz}$

$[0V - 10V]$

$$\text{Gain} = \frac{60}{60} = 100\%, \text{ Bias} = \frac{0}{60} \times 100 = 0\%$$



(1)

2) change frequency from (15-60Hz) if max is 60Hz

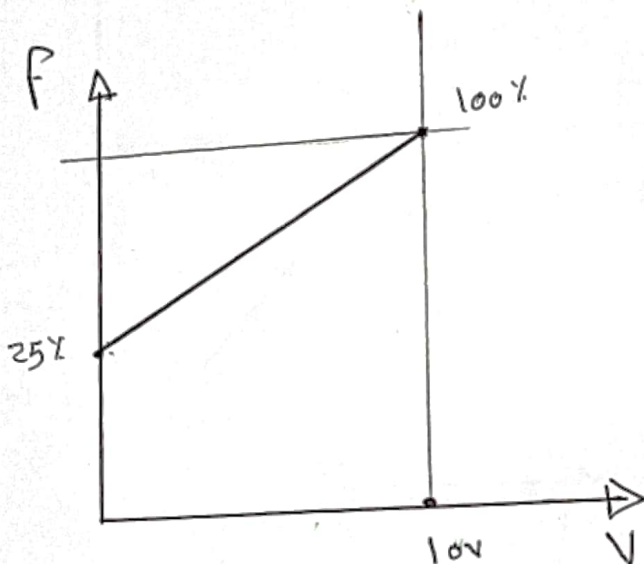
(15  $\rightarrow$  60) Hz

( $\downarrow$   $\rightarrow$  10V)  
0

$$\text{Gain} = \frac{60}{60} \times 100 = 100\%$$

$$\text{Bias} = \frac{15}{60} \times 100 = 25\%$$

(100%, 10) , (25%, 0)



3) Change Frequency From (0-30Hz) if  $f_{max}$  is 60Hz

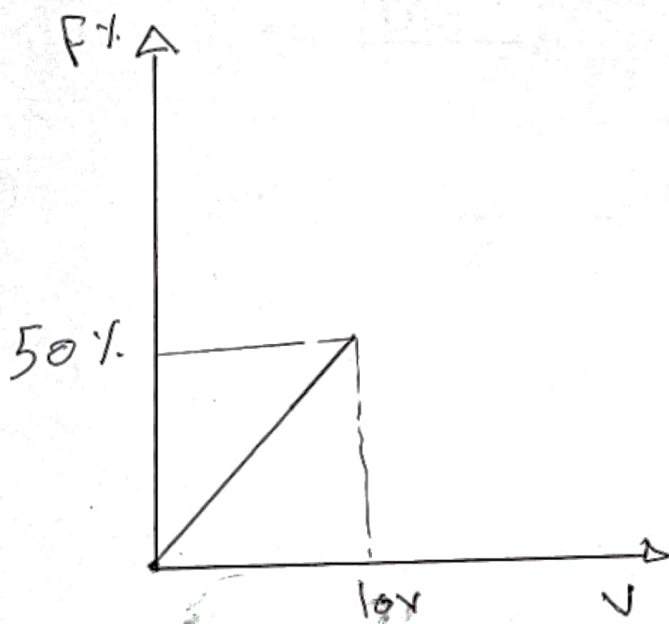
0-30 Hz

0-10V

$$\text{Gain} = \frac{30}{60} \times 100 = 50\%$$

$$\text{Bias} = \frac{0}{60} \times 100 = 0\%$$

(50%, 0) (0%, 0)





4) change frequency from (0-60Hz) if max 60Hz  
if input change (~~0-5V~~) (0-5V)

$$\begin{pmatrix} 0-60 \text{ Hz} \\ 0-5 \text{ V} \end{pmatrix}$$

$$\begin{aligned} \text{if } 5 \text{ V} &\rightarrow 60 \text{ Hz} \\ 10 \text{ V} &\rightarrow 120 \text{ Hz} \end{aligned}$$

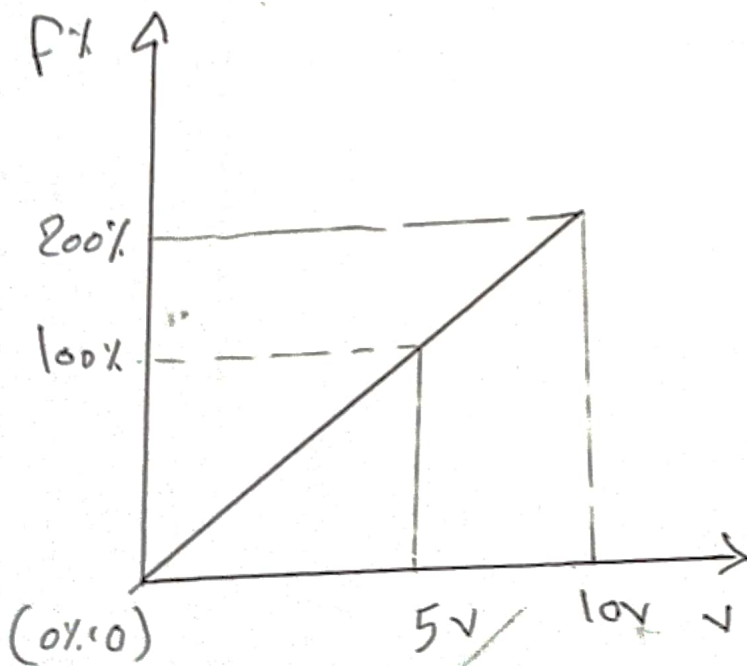
$$\text{at } 5 \text{ V} = \frac{60}{60} \times 100 = 100\%$$

$$\text{Gain} = \frac{120}{60} \times 100 = 200\%$$

$$\text{Bias} = \frac{0}{60} \times 100 = 0\%$$

(0%, 0)

(200%, 10)



(4)

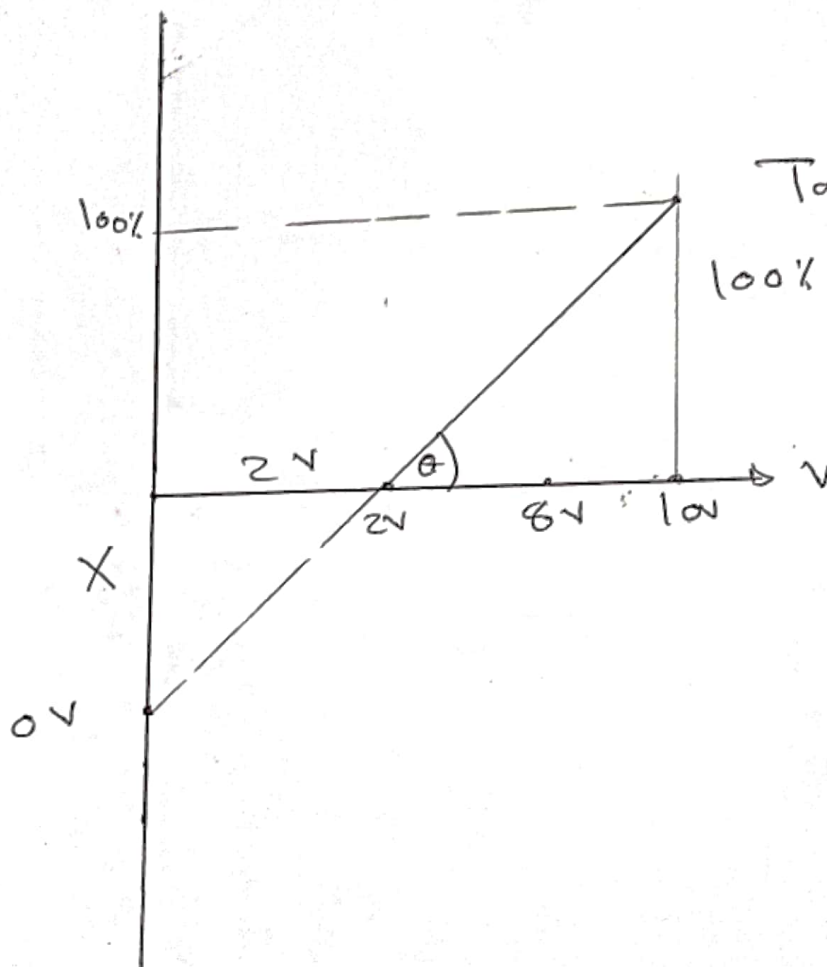
5) EX change from (0-60 Hz) if Max  $\rightarrow$  60 Hz  
from (2-10V)

0-60 Hz

2-10V

$$\text{Gain} = \frac{60}{60} + 100\% \\ = 100\%$$

$$\text{Bias} = \frac{f_0}{60} + 100\%$$



$$\text{Tang} = \frac{100\%}{8} = \frac{X}{2}$$

$$X = -25\%$$

$$\boxed{\text{Bias} = -25\%}$$

(5)

Ex Change from (60Hz-0) from analogue (0-10V)

if max  $f = 60 \text{ Hz}$

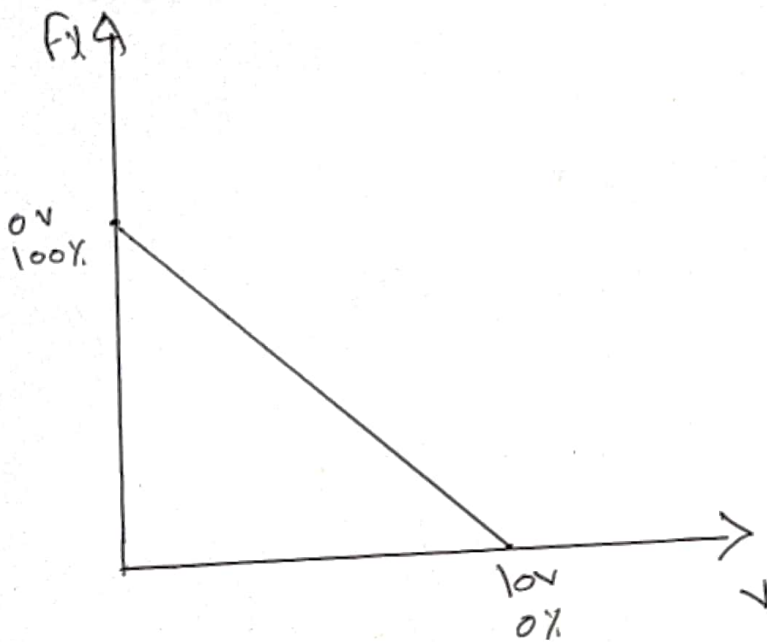
60 — 0 Hz

0 → 10 V

$$\text{Gain} = \frac{0}{60} \times 100\% = 0\%$$

$$\text{Bias} = \frac{60}{60} \times 100 = 100\%$$

(0%, 10) & (100%, 0)



~~Ex~~ (6)



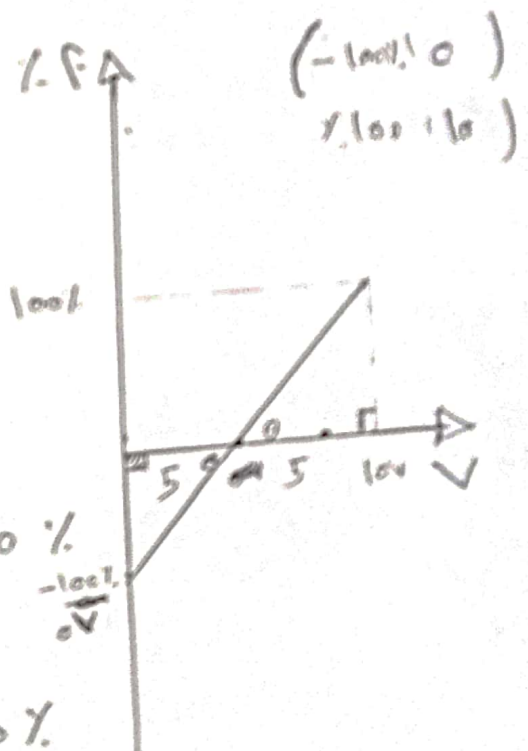
H3-01

## Terminal level Selection

Setting 0 - 10V dc with limit in positive only  
(1)Setting 0 - 10V dc without limit in negative  
(2)Setting 4 - 20mA with limit in positive only  
(3)Setting 4 - 20mA without limit in negative  
(4)EX change speed (-60Hz To 60Hz) if analog range (0-10V)  
at max  $P = 60\text{Hz}$  $-60\text{Hz} \rightarrow 60\text{Hz}$  $0\text{V} \rightarrow 10\text{V}$ 

$$\text{Gain} = \frac{60}{60} \times 100\% = 100\%$$

$$\text{Bias} = \frac{-60}{60} \times 100 = -100\%$$



دعني هذه احواله سراف يتحرك الى اليمين في الاتجاه الاكبر من الصفر  
من 5 الى 10 و يتحرك في الاتجاه الاكبر

(7)

## S-Curve characteristics

C2-01  $\rightarrow$  S-curve characteristic at Start

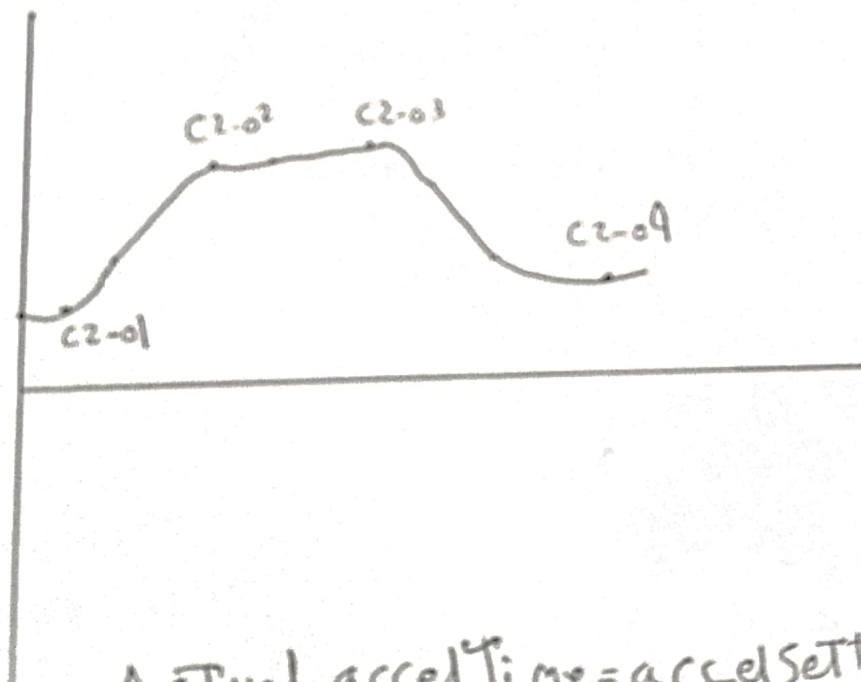
C2-02  $\rightarrow$  S-curve characteristic at Accel End

C2-03  $\rightarrow$  S-curve characteristic at Decel start

C2-04  $\rightarrow$  S-curve characteristic at Decel End

Range 0  $\rightarrow$  10s

b.) de Fault  $\rightarrow$  0.2s



$$\text{Actual accel Time} = \text{accel setting} + \left( \frac{C2-01 + C2-02}{2} \right)$$

$$\text{Actual decel Time} = \text{decel setting} + \left( \frac{C2-03 + C2-04}{2} \right)$$

if C1-01 = 20, C2-01 = 10, C2-02 = 10

$$\gamma_{\text{Total}} = 20 + \left( \frac{10 + 10}{2} \right) = 30s \quad \text{from 0} \rightarrow \text{max}$$

(8)



\* H1-03 → 15 Fast To Stop (N.O)

→ 17 Fast To Stop (N.C)

هذه تستخدم للأيقاف السريع زمن يتم تحديده يستخدم  
إذا اكتسب بداخلها H1-03 فهذا آمنه انه في يستخدم Fast Stop  
وتكون النقطة N.O

إذا اكتسب بداخلها 17 فهذا آمنه انه سيستخدم Fast Stop  
وتكون النقطة N.C

Fast Stop Time → 0-6000s

by default 10s

if Time is 0 → disabling

Task 1 Motor work in Two direction  
Fixed  
at variable speed at 30Hz

Start and Stop from Push Button

Start at 25

Stop at 35

and breaking by Proximity (N.O)

\* BL-01 → 1      EL-04 → 60Hz

BL-02 → 1

BL-04 → 1

BL-03 → 0

CL-01 → 45 ~~X~~ → 60Hz  
2 → 30Hz

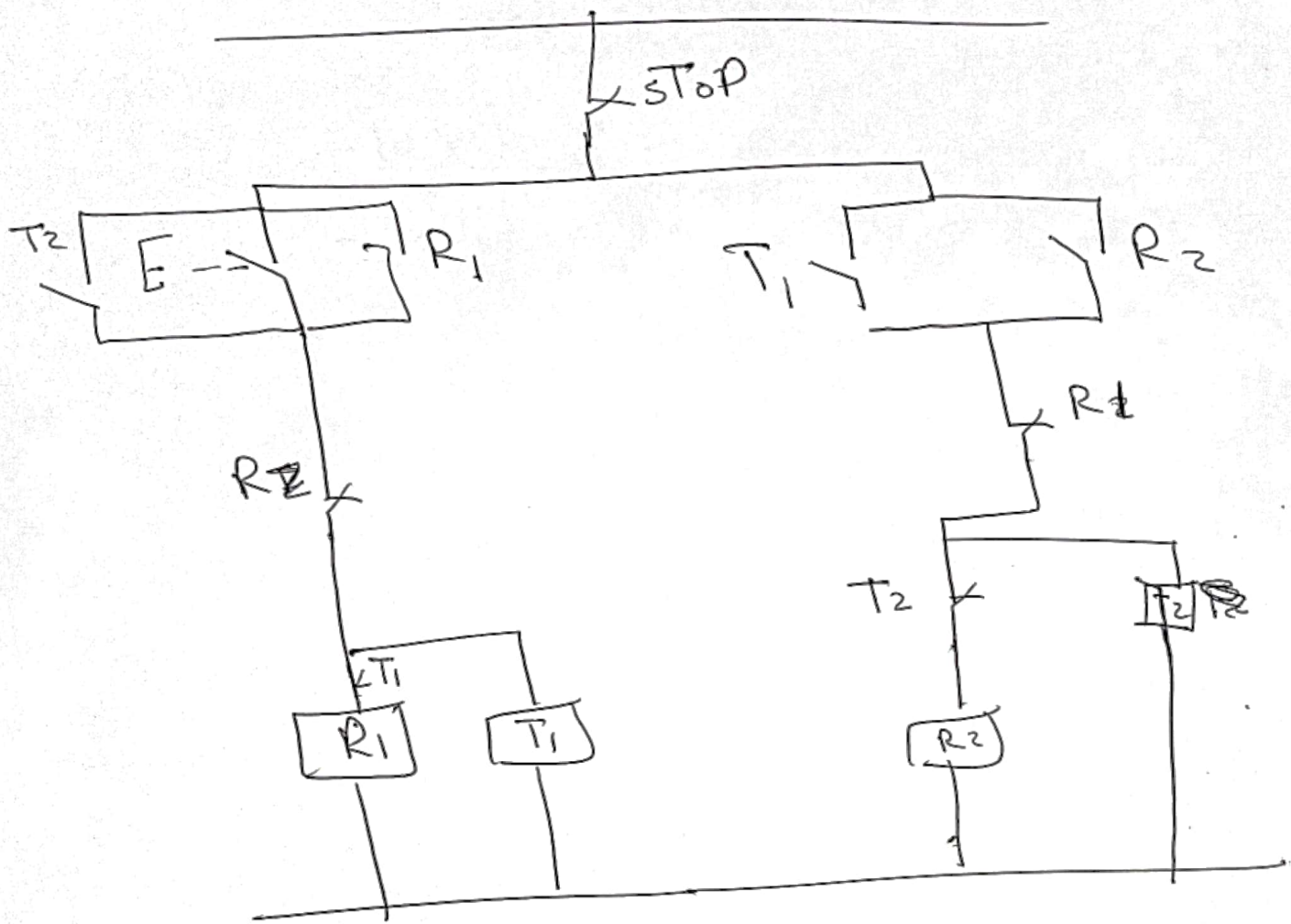
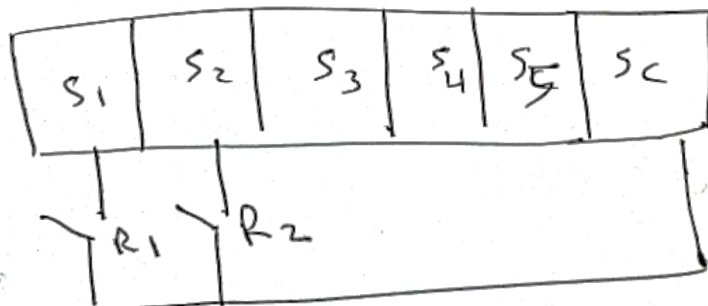
CL-02 → ~~75~~ X → 60Hz  
3 → 30

HL-03 → 17 , HL-01 → 40

CL-09 → 05      HL-02 → 41

(10)

2) دائرۃ التکلم فی معرفۃ یسوع مسیح و کتابتہ  
علی تردد 2542 کلاس بی


$$\frac{61-01}{1} \rightarrow 1$$
$$b1 - 02 \rightarrow 1$$


(11)

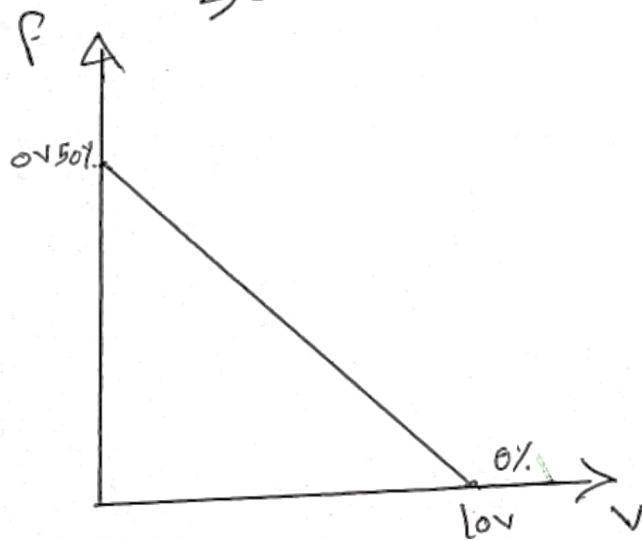


Task 3 Motor work at Pressure Analogue Sensor (0-10V) \*  
 if analogue is 0V, motor work at 25 Hz  
 and analogue is 10V, motor work at 0 Hz and max  
 is 50 Hz

(0-10V)  
 (25-0) Hz

$$\text{Gain} = \frac{0}{50} \times 100 = 0\%$$

$$\text{Bias} = \frac{25}{50} \times 100 = 50\%$$



(12)