# \$5 TO 1

### Paralymeth Cherically Greeks

## (Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai) (Religious Jain Minority)



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Design a 11ebb net to implement logical AND function

Initially the weights and bias are set to o  $: w_1 = w_2 = b = 0$ 

set the initial weights as old weights and apply hebb rule.

$$\omega$$
 (new)=  $\omega$  (old)+  $\Delta \omega$   
 $\Delta \omega = 2y$   
 $\Delta \omega_1 = 2y = 1 \times 1 = 1$   
 $\Delta \omega_2 = 2y = 1 \times 1 = 1$   
 $\Delta b = y = 1$ 



#### Pacheonal house and training

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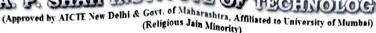
$$w_1(naw) = w_1(old) + \Delta w_1$$
 $= 0 + 1 = 1$ 
 $w_2(naw) = w_2(old) + \Delta w_2$ 
 $= 0 + 1 = 1$ 
 $b(naw) = b(old) + \Delta b$ 
 $= 0 + 1 = 1$ 

New weight and bias vectors = [1 1 1]

Second input [2, 2 b] = [1 -1 +]
 $b = y = -1$ 
 $\Delta w_1 = 2_1 y = +1 *(-1) = -1$ 
 $\Delta b = y = -1$ 
 $\Delta b = y = -1$ 
 $w_1(naw) = w_1(old) + \Delta w_1$ 
 $= 1 + (-1) = 0$ 
 $w_2(naw) = w_2(old) + \Delta w_2$ 
 $= 1 + 1 = 2$ 
 $b(naw) = b(old) + \Delta b$ 
 $= 1 - 1 = 0$ 

### Parshyanath Charleads Trusta

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$$\Delta \omega_1 = \chi_1 y = C - 1) * C - 1) = 1$$

$$\Delta \omega_2 = \chi_2 y = C + 1) * C - 1) = -1$$

$$\Delta b = y = -1$$

$$\omega = C + 1$$

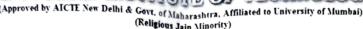
$$\therefore \omega_1 (\Omega ew) = \omega_1 (Old) + \Delta \omega_1$$
$$= 0 + 1 = 1$$

$$\omega_2(\text{new}) = \omega_1(\text{old}) + \Delta\omega_2$$
  
= 2+CD=1



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$$\Delta \omega_1 = 2iy = C-i) * C-i) = 1$$
 $\Delta \omega_2 = 22y = C-i) * (-i) = 1$ 
 $\Delta b = y = -1$ 
 $= u_1 \text{ (new)} = \omega_1 \text{ (old)} + \Delta \omega_1$ 
 $= 1+1=2$ 
 $\omega_2 \text{ (new)} = \omega_2 \text{ (old)} + \Delta \omega_2$ 
 $= 1+1=2$ 

$$b \quad Cnew) = b(old) + \Delta b$$
$$= -1 - 1 = -2$$

: Final weight and bias vectors: [2 2 -2]

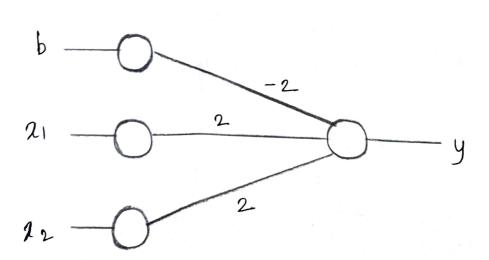


fig. Hebb Netwook for AND function



#### Parthymath Charled Guers

### T B SIMI MAINIMINE OF THER INDICES.



SUPPLIES SCHOOL STATES

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Network Test:

For 
$$21 = 1$$
  $22 = 1$   $b = 1$   
 $9 = 2 + 2 - 2 = 2$  (positive value)

For 
$$a_1 = 1$$
  $a_2 = -1$   $b = 1$   
 $y = 2 - 2 - 2 = -2$  (-vo value)

For 
$$\chi_1 = -1$$
  $\chi_2 = 1$   $b = 1$   
 $y = -2 + 2 - 2 = -2$  (  $\forall e \forall alue$ )

$$y = -2 - 2 - 2 = -6$$
 (-ve value)