Q3- Given a Neural Network with single

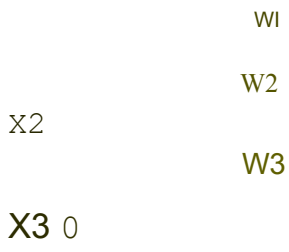
33 Where w3= [0.6, -0.4, 0.1, 0.5],P1= |

[1, -2, 0,-1], P2= [0, 1.5, -0.5, -1], d= [0,1]. Use Perceptron learning rule with unipolar binary function with learning constant=(1) to find the final weights

(w2).

(10)

91/ Solution



Wy

Хи

0

W3 = W2 +

AW

0.6

swi

2

.0.4 0.1
015

=

W +

DW2

AW3

Duk

مطلوب معطى في
السؤال

ہی

يتم حسابه

01

A

X1 X2 X3 Xu

for Perception Learning rule, P2 =

[0,1.5,-0.5, -

DW1 = c X

= cx (d2-02) xX1

*

= 1* (1 - 02) + 0

=1 @

*

DW2 = C * (d2-02) * *X2*

= 1 + (1 - Or) 1:5 (102)

O2 =

f(netz)

net2 = X, W1 + Xz W2 + Xz W z + Xu Wu

d2= 1

= @ + (1.5) (-014) + (-0.5) (011) + (-1) (0.5)

0.6

: o2 = *0*

-0.05 -0.5 = -1.5

DW2 = 1* (1-0) * 115

= 1.5

DW3 = c (d2-02) * *X3*

=

1 * (1~0) *

-0.5

DW 4 = cx (dr-O2) * Xy

1 * (1-0) * (-1)

=

<- 1

Δω

W3

W2 = W3 _DW

=

0.6

014 0.1 015

W2=W + DW

10.6.

5

-1-9 0.6 $.5

بنفس الطريقه يتم ايجاد W

-

'W' = W2 -DW

X1 X2 X3 Xu

for P1 = [1, -2, 0,

-1],d=0

Δω ι

AW1 = C * (d, -01) * X,

= 1 × (0 - 01) * 1

01 = f(net)

net1 = X1 W1 + X2 W2 + Xz W3

+ Xu Wy

WI

=(1)(0-6) + (-2) (-1.9)+(0) (0.6) +

(−1) (1.5)

= 2.9

0,= 1

2-

AW1 =

1 * (0-1)* 1 =

−1

DW2 = C* (d, -01)* X2

= 1* (0-1)

=2

−2

DW3 = CAC d1 = 01) + *X3*

= 1 × (0 - 1) × 0

Δωμ

=0

AW1 = c * (d = 01) *

X 4 c* *X4*

= 1 * (@- 1) * -1 = 1

- W = W2- AW

"1

016

1.9

0.6

115

1.6 -3.9

0.6

0-5

Δω

2

The final Result

3-