

## **Mid Semester Examination**

MSE-I

Branch	Date	Sem.	Roll No. / Exam Seat No.		Subject Deep Lean Deep Lean		Student's Signature		Junior Supervisor's Name and Sign	
Question No.	Α	В	С	D	Е	F	G	Н	Total	Total out of (20 /30 / 40)
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1										
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4										

Examiners Signature	Student's Sign (After receiving the assessed answer sheet)

01B) n=01 01 wz = [0.5, -05]
X=[+,2] B=0:1 d=0.8
y=net = Lincer
Thatin 1
A 1= (0.2x1) + (-0.2x5) +0.2= =0.4
Error (d-y1) = 0.8 - (-0.4)=12
Aw1= 0.1 x 1.2 x 1 = 0.15
A 602 = 0.1 × 1.2 × 2 = 0.29
new weight
W1=0,2,10,12=0.85
W2 = -0.5 +0.29 = -0.26
updre bia = Ab= 0.1 ×1.2=0.12
p=0.1+0.15 =0.55
n Iteration 2-
y=(0.62x1)+(-0.26x2)+0.22
_0.32

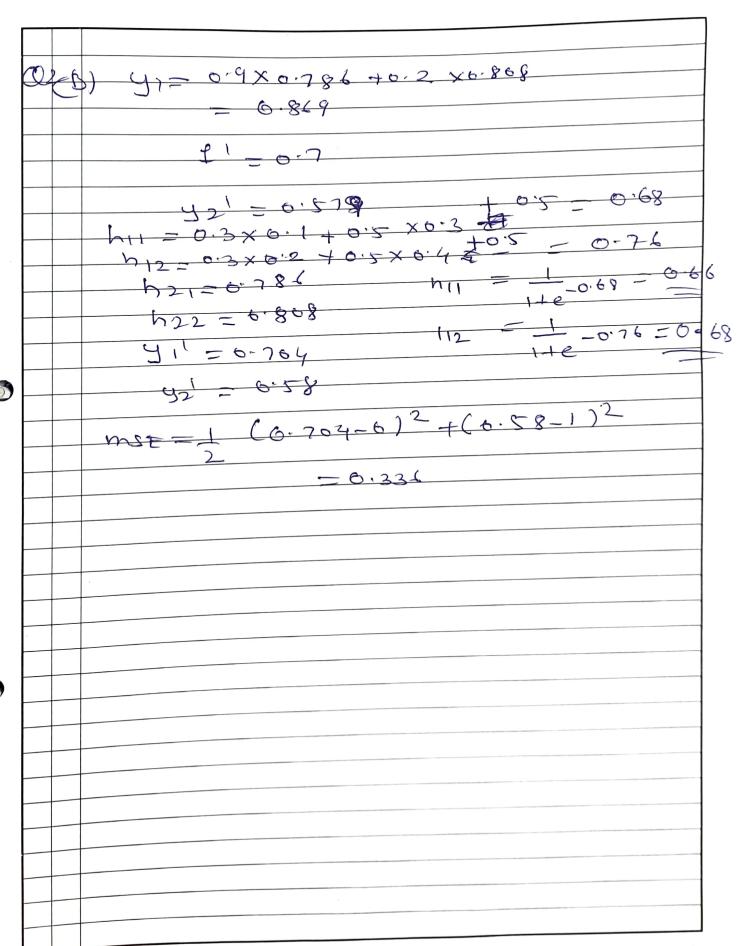
E = 0.8 -0.32 = 0.48
Conste vodata
Aw = 0:1 x 0:48:1= 0:049
A 62 = 01/20:48.2 = 0.0096
NEN meight
10,62 +0,018 -0.688
102 - 0:26 +0:0960:164
updale big
Ap=0.1x0.48=0.04A
hew 6.02 +0.049 = 0.268

Ozar gives n=1 2=-1 6.982 21 tan H f(n) = tanh(n) B) ReIV 9 710

Pg.7

Arc Tan f(n) - tan (n)

Pg.8



Mathematical Formulation of Kelv The Rectified Linear Unit (RELU) activation function is mathematically Lohore fix) is the ofp of the activation function

or is the input to the neuron. Relu rehims on it mas a o if me o Role is & Commonly used in Deep Learning because Simplicity and Efficient Relo mimico biological neux activation by being in active for cert Dying Re LU problem It occurs when a neuron Considerty outputs Zens during training effectively becoming inache and coasing to learn they can happy when the Relo is updated in such a way that the remains nouson never activates again

Solution to mitigate the bying ReLu Leaky Relo d is a small positive constant (e-g 0.01) Parametric Relu Similar to Leaty Relu, but is learned during training Randomized Relv Lancorment by sampling Language during training providing variability to neduce the chance of neurons