Test-22nd March

1)Driver Program in the spark architecture creates a spark context which contains all the basic functions.Each Spark session has an entry in the Spark context.
The Cluster Manager manages the execution of various jobs in the cluster. Spark Driver works in conjunction with the Cluster Manager to control the execution of various other jobs. The cluster Manager does the task of allocating resources for the job.
A Spark worker monitors worker nodes to ensure that the computation is performed simply. Each worker node handles one Spark task. In Spark, a partition is a unit of work and is assigned to one executor for each one.

2)Activation function is when a node is taken as input multiple by the weights and the respective bias for the node is added to activate nodes in the next layer.

3)a)Sigmoiid function
formula:f(x)=1/(1+e^-x)
b)Tanh function
formula:f(x)=(e^x-e^-x)/(e^x+e^-x)
c)Relu function
formula:f(x)=max(0,x)
d)Leaky Relu
formula:f(x)=x if x>0
=Ax otherwise
e)Elu
formula:f(x)=x if x>0
=A(e^x -1)
4)Done in Jupyter notebook
5)Neural Networks Is based on the design of Human Brain which makes use of the concept of a series of Connections to perform a difficult task easily.It consists of an input layer,several Hidden Layers and the Output Layer which is a result of Activation Function being Applied to the Hidden Layers which makes use of the nodes of the previous layer,starting with the input layer multiplying it with weights and applying the respective bias for the node.Hence,Certain nodes are activated in the next layer.This process is carried out for all the layers until we reach the output layer.
Backward propagation is when we go from the output layer to the input layer adjusting weights and Bias Of the previous layer to get the activation of the right nodes in the current layer.