About Backpropagation Algorithm:

(A) When the algorithm is allowed to run for many (say ∞) iterations, the loss becomes zero.

(B) When the algorithm is allowed to run for many (say ∞) iterations, the network will overfit.

(C) **[Ans]** When the algorithm is allowed to run for many (say ∞) iterations, we will reach a local minima.

(D) When the algorithm is allowed to run for many (say ∞) iterations, we will reach the same local minima, irrespective of the initialization

(E) All the above are true.

About Backpropagation Algorithm:

Which may be a really **bad** termination crieria

(A) When no major change in loss, end.

(B) When all gradients are near zero, end.

(C) **[Ans]** When learning rate is near zero, end.

(D) When loss is near zero, end.

(E) All the above are terrible termination crieria.

Consider an MLP getting used for a three class classification problem.

Output layer has three neurons and we use a cross entropy loss.

(A) If the accuracy of the training data is 100%, it implies that the loss might have been zero.

(B) **[Ans]** If the loss is zero, implies that the MLP as a classifier has 100% accuracy on the training data.

(C) If the loss is zero, implies that the MLP as a classifier has 100% accuracy on the test data.

(D) If the accuracy of the test data is 100%, it implies that the loss computed on the training data might have been zero.

(E) None of the above.

Make the necessary minimal changes (if any required) and rewrite as true sentences in the space provided. Avoid changing the words in bold.

An MLP has no activation in the output. It has sigmoid activity in all the hidden layers. *It can not be used to output negative values* **because** *sigmoid outputs in [0,1] (no negative)*

Make the necessary minimal changes (if any required) and rewrite as true sentences in the space provided. Avoid changing the words in bold.

Backpropagation algorithm *can be understood as an iterative optimization algorithm.*