Deep learning worksheet – 4

1.Ans) A) Reduces internal covariant shift.

2.Ans) A) Sigmoids do not saturate and hence have faster convergence

3.Ans) D) None of the above

4.Ans) A) True

5.Ans) B) Xavier Initialisation

6.Ans) A) learning rate shrinks and becomes infinitesimally small

7.Ans) C) momentum and learning rate both must be low

8.Ans) C) when it has many saddle points and flat areas

9.Ans) B) SGD

10.Ans) C) when it reaches global minimum

11.Ans) A convex optimization problem is a problem where all of the constraints are convex functions, and the objective is a convex function if minimizing, or a concave function if maximizing. A non-convex optimization problem is any problem where the objective or any of the constraints are non-convex

12.Ans) a point at which a function of two variables has partial derivatives equal to zero but at which the function has neither a maximum nor a minimum value called saddle point

14.Ans) pre weight initialisation techniques are Uniform Distribution (good with sigmoid activation fun),

Zero Distribution, Xavir / Gorat - (good with sigmoid activation fun), He\_init distribution

15.Ans) An internal covariate shift occurs when there is a change in the input distribution to our network. When the input distribution changes, hidden layers try to learn to adapt to the new distribution. This slows down the training process