# **NN Assignment 4**

**Q4. In your opinion which method(1 or 2) should be used for this classification problem. Justify your answer with arguments.**

**Method1:** Separate training(of each letter) with single output class.

**Method2:** Combine training with multiple output classes.

In both cases, error rate is almost same. Both give same results. However, Both differs in training speed.

I suggest, method 1 separate learning for all letters with single output class should be used because:

1. It is considered fastest as the number of the dataset between each class are well distributed.
2. 2nd method may work well when the number of the output classes is low, but training will be very slow as output classes increased.
3. 2nd method may take much more iterations while training as multiple output neurons are under training at the same time, which make it more complex.
4. In contrast, training is easy in 1st method as each output class is handled separately.