**MACHINE LEARNING ASSIGNMENT**

**Answer 1. a) 2 Only**

**Answer 2. d) 1, 2 and 4**

**Answer 3 a) True**

**Answer 4 a) 1 only**

**Answer 5 b) 1**

**Answer 6 b) No**

**Answer 7 a) Yes**

**Answer 8 d) All of the above**

**Answer 9 a) K-**-**means clustering algorithm**

**Answer 10 d) All of the above**

**Answer 11 d) All of the above**

## Subjective Answers

**Answer 12.** In K family the K- Means is sensitive to outliner.  K-Means clustering algorithm is most sensitive to outliers as it uses the mean of cluster data points to find the cluster center and a mean is greatly influenced by outliner and thus cannot represent the correct cluster center.

**Answer 13.** K mean is better because:

* It is one of the simplest algorithm which uses unsupervised learning method to solve known clustering issues.
* It works really well with large datasets.
* If your data has no labels (class values or targets) or even column headers, K-Means will still successfully cluster your data.
* K Means clustering is found to work well when the structure of the clusters is hyper spherical (like circle in 2D, sphere in 3D).

**Question 14.** No, K means is a non-deterministic algorithm. This means that running the algorithm several times on the same data could give different results. We can proposed an improved, density-based version of K-means that includes a novel and systematic method of choosing initial centroids.