**MCQ**

1. A- 2 Only
2. D- 1, 2 and 4
3. A- True
4. A- 1 only
5. B- 1
6. B- No
7. A- Yes
8. D- All of the above
9. A- K-means clustering algorithm
10. D- All of the above
11. D- All of the above
12. The K-means clustering algorithm is sensitive to outliers, because a mean is easily influenced by extreme values. K-medoids clustering is a variant of K-means that is more robust to noises and outliers.
13. Below are the reasons why K-mean is better

* Relatively simple to implement.
* Scales to large data sets.
* Guarantees convergence.
* Can warm-start the positions of centroids.
* Easily adapts to new examples.
* Generalizes to clusters of different shapes and sizes, such as elliptical clusters.

1. One of the significant drawbacks of K-Means is its non-deterministic nature. K-Means starts with a random set of data points as initial centroids. This random selection influences the quality of the resulting clusters. Besides, each run of the algorithm for the same dataset may yield a different output.