Machine Learning worksheet-2 Answers

Q.1 (b)

Q.2 (d)

Q.3 (a)

Q.4 (a)

Q.5 (b)

Q.6 (b)

Q.7 (a)

Q.8 (d)

Q.9 (a)

Q.10 (d)

Q.11 (d)

Q.12 The *K*-means clustering algorithm is sensitive to outliers, because a mean is easily influenced by extreme values.

Q.13  Advantages of k-means

1. Relatively simple to implement.

2. Scales to large data sets.

3. Guarantees convergence.

4. Can warm-start the positions of centroids.

5. Easily adapts to new examples.

6. Generalizes to clusters of different shapes and sizes, such as elliptical clusters.

Q.14 The basic k-means clustering is based on a non-deterministic algorithm. This means that running the algorithm several times on the same data, could give different results. However, to ensure consistent results, FCS Express performs k-means clustering using a deterministic method.