Answer Sheet

Machine Learning

1 b
2 b
3 a
4 a
5 b
6 a
7 a
8 d
9 a
10 d
11 d
12 Yes, K is sensitive to outliers. The k-means algorithm updates the cluster centers by taking the average of all the data points that are closer to each cluster center. When all the points are packed nicely together, the average makes sense. However, when you have outliers, this can affect the average calculation of the whole cluster. As a result, this will push your cluster center closer to the outlier.
13 There are so many advantages of K means like
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.

14 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.

SQL

1 d
2 c
3 a
4 b

5	b
6	a
7	a
8	c
9	b
10	d
11	a
12	c
13	a

Statistics

1	c
2	c
3	d
4	c
5	b
6	b
7	a
8	b
9	d
10	a
11	c
12	d
13	d
14	a
15	d