MACHINE LEARNING

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

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. The group of points in the right form a cluster, while the rightmost point is an outlier.

13. Other clustering algorithms with better features tend to be more expensive. In this case, k-means becomes a great solution for pre-clustering, reducing the space into disjoint smaller sub-spaces where other clustering algorithms can be applied. K-means is the simplest.

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.