Answers Of MACHINE LEARNING-3: -

1. d. All of the above
2. d. None
3. c. Reinforcement learning and Unsupervised learning
4. b. The tree representing how close the data points are to each other
5. d. None
6. c. k-nearest Neighbour is same as k-means
7. d. 1, 2 and 3
8. a. 1 only
9. b. 4
10. b. Given a database of information about your users, automatically group them into different market segments.
11. a.
12. b.
13. Clustering helps in understanding the natural grouping in a dataset. Their purpose is to make sense to partition the data into some group of logical groupings. Clustering quality depends on the methods and the identification of hidden patterns.
14. Clustering analysis is one of the main analytical methods in data mining. K-means is the most popular and partition based clustering algorithm. But it is computationally expensive and the quality of resulting clusters heavily depends on the selection of initial centroid and the dimension of the data. Several methods have been proposed in the literature for improving performance of the k-means clustering algorithm.Principal Component Analysis (PCA) is an important approach to unsupervised dimensionality reduction technique. This paper proposed a method to make the algorithm more effective and efficient by using PCA and modified k-means. In this paper, we have used Principal Component Analysis as a first phase to find the initial centroid for k-means and for dimension reduction and k-means method is modified by using heuristics approach to reduce the number of distance calculation to assign the data-point to cluster. By comparing the results of original and new approach, it was found that the results obtained are more effective, easy to understand and above all, the time taken to process the data was substantially reduced.