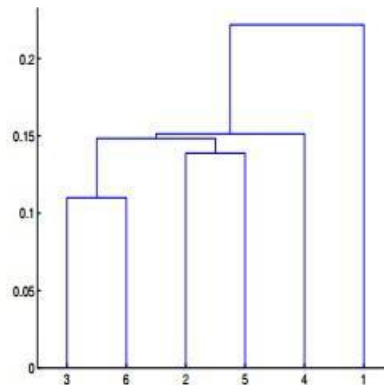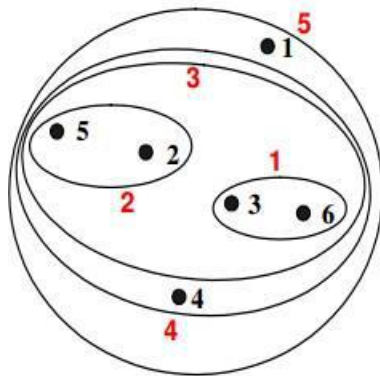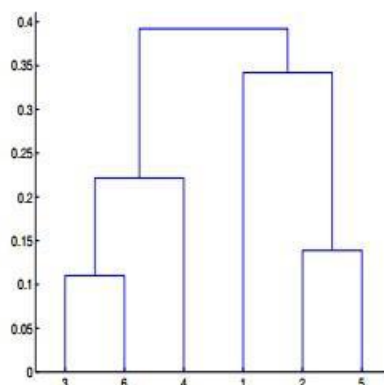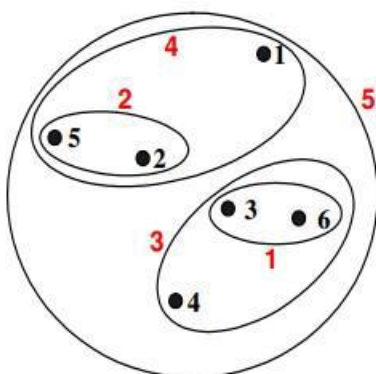**MACHINE LEARNING**

Answers:

1. D. All of the above
2. d. None
3. b. Unsupervised learning
4. b. The tree representing how close the data points are to each other
5. d. None
6. c. k-nearest neighbor is not the same as k-means.
7. d. 1, 2 and 3
8. d. None of them
9. a. 2
10. b. Given a database of information about your users, automatically group them into different market segments.
11. a.

12. b.

13. Clustering is important because it allows grouping of similar objects or data points together, making it easier to analyze and interpret large datasets. It can also be used for unsupervised learning, where the algorithms find patterns and relationships in the data without being told what to look for.

14. To improve clustering performance:

   i. Reduce noise or outliers in the data
   ii. Normalize or scale the data
   iii. Choose a suitable distance metric
   iv. Experiment with different number of clusters
   v. Try different clustering algorithms to compare results.