MACHINE LEARNING WORKSHEET 3

Answer 1. d) All of the above

Answer 2. d) None

Answer 3. c) Reinforcement learning

Answer 4. b) The tree representing how close the data points are to each other

Answer 5. d) None

Answer 6. c) k-nearest neighbour is same as k-means

Answer 7. a)1 and 2

Answer 8. a) 1 only

Answer 9. b) 4

Answer 10. b) Given a database of information about your users, automatically group them into different market segments.

Answer 11. a.

Answer 12. b.

Answer 13. Importance of Clustering Methods

1. Having clustering methods helps in restarting the local search procedure and removes the inefficiency. In addition, clustering helps to determine the internal structure of the data.
2. This clustering analysis has been used for model analysis, vector region of attraction.
3. 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.
4. Clustering quality depends on the methods and the identification of hidden patterns.

5. They play a wide role in applications like marketing economic research and weblogs to identify similarity measures, Image processing, and spatial research.
6. They are used in outlier detections to detect credit card fraudulence.

Answer 14. - Improving clustering performance using independent component analysis and unsupervised feature learning. Principal Component Analysis (PCA) is an important approach to unsupervised dimensionality reduction technique. The central idea of PCA is to reduce the dimensionality of the data set consisting of a large number of variables. It is a statistical technique for determining key variables in a high dimensional data set that explain the differences in the observations and can be used to simplify the analysis and visualization of high dimensional data set.