Machine learning Worksheet 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. 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 very much important as it determines the intrinsic grouping among the unlabelled data present. It simplify the processing of large datasets.

    The clustering technique can be widely used in various tasks. Some most common uses of this technique are:
    - Market Segmentation
    - Statistical data analysis
    - Social network analysis
    - Image segmentation, etc.

14. Applying unsupervised feature learning to input data using either RICA or SFT, improves clustering performance. Surprisingly for some cases, high clustering performance can be achieved by simply performing K-means clustering on the ICA components after PCA dimension reduction on the input data.