Machine Learning Assignment 3

QUES 1. Which of the following is an application of clustering?

Answer. D. All of the above

QUES 2. On which data type, we cannot perform cluster analysis?

Answer. D. None

QUES 3. Netflix's movie recommendation system uses

Answer. C. Reinforcement learning and Unsupervised learning

QUES 4. The final output of Hierarchical clustering is

Answer. B. The tree representing how close the data points are to each other.

QUES 5. Which of the step is not required for K-means clustering?

Answer. D. None

QUES 6. Which is the following is wrong?

Answer. C. k-nearest neighbour is same as k-means

QUES 7. Which of the following metrics, do we have for finding dissimilarity between two clusters in hierarchical clustering?

Answer. D. 1, 2 and 3

QUES 8. Which of the following are true?

Answer. 1. Clustering analysis is negatively affected by multicollinearity of features.

QUES 9. In the figure above, if you draw a horizontal line on y-axis for y=2. What will be the number of clusters formed?

Answer. A. 2

QUES 10. For which of the following tasks might clustering be a suitable approach?

Answer. A. Given sales data from a large number of products in a supermarket, estimate future sales for each of these products.

QUES 11. Given, six points with the following attributes:

Answer 11. A

QUES 12. Which of the following clustering representations and dendrogram depicts the use of MAX or Complete link proximity function in hierarchical clustering.

Answer. B

QUES 13. What is the importance of clustering?

Answer. Clustering is important in data analysis and data mining applications. It is the task of grouping a set of objects so that objects in the same group are more similar to each other than to those in other groups (clusters).

QUES 14. How can I improve my clustering performance?

Answer. There are two ways in improving the quality of clustering:

A.) Improving the weights of the features in a document vector.
B.) Creating a more appropriate distance measure.

A good weighting technique can promote the good features of an object and an appropriate distance measure can help bring similar features together.