

MACHINE LEARNING

ASSIGNMENT – 3

Q1 to Q12 have only one correct answer. Choose the correct option to answer your question.

1. Which of the following is an application of clustering?
d. All of the above
 2. On which data type, we cannot perform cluster analysis?
d. None
 3. Netflix's movie recommendation system uses-
c. Reinforcement learning and Unsupervised learning
 4. The final output of Hierarchical clustering is-
b. The tree representing how close the data points are to each other
 5. Which of the step is not required for K-means clustering?
d. None
 6. Which of the following is wrong?
c. k-nearest neighbour is same as k-means
 7. Which of the following metrics, do we have for finding dissimilarity between two clusters in hierarchical clustering?
i. Single-link
ii. Complete-link
iii. Average-link
- Options:
d. 1, 2 and 3
8. Which of the following are true?
i. Clustering analysis is negatively affected by multicollinearity of features
ii. Clustering analysis is negatively affected by heteroscedasticity
- Options:
c. 1 and 2
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?
b. 4
 10. For which of the following tasks might clustering be a suitable approach?
b. Given a database of information about your users, automatically group them into different market segments.
 11. Given, six points with the following attributes:
b.

12. Given, six points with the following attributes:
C.

13. What is the importance of clustering

Ans- Clusters is used to classify objects into groups where objects in one group are more similar to each other and different from objects in other groups.

14. How can I improve my clustering performance?

Ans- The k-means++ algorithm.

