MACHINE LEARNING

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

Q1 = d

Q2 = d

Q3 = C

Q4 = B

Q5 = d

Q6 = C

Q7 = d

Q8 = a

Q9 = a

Q10 = b

Q11 = a

Q12 = b

Q13 to Q14 are subjective answers type questions, Answers them in their own words briefly

Q13: What is the importance of clustering?

Ans: Clustering is one of the most popular technique in unsupervised learning where data is grouped based on the similarity of the data points. The basic principle behind clustering is the assignment of a given set of observations into subgroups or clusters such that observations present in the same clusters have a degree of similarity. It is a method of unsupervised learning since there is no label attached to the data points. The machine has to learn the features and patterns all by itself without any given input-output mapping. Clustering in machine learning is an essential component and makes life so much easier

in creating new machine learning methods. It divides mainly many unstructured data sets into clusters and according to the common attributes present in them, it helps create more and more clusters.

Q14: How can I improve my clustering performance?

Ans: Clusters are evaluated based on some similarity or dissimilarity measure such as the distance between cluster points. If the clustering algorithm separates dissimilar observations apart and similar observations together then it has performed well. Graph-based clustering performance can easily be improved by applying ICA blind source separation during the graph Laplacian embedding step. Applying unsupervised feature learning to input data using either RICA or SFT, improves clustering performance. There are various methods used to improve clustering performance but the Matrix Similarity Measure is similar to numerical methods the lower correlation is an index of a more credible clustering algorithm. Centroid-based clustering is more efficient clustering as it focuses on k-means because it is an efficient, effective, and simple clustering algorithm.