MACHINE LEARNING

Answer of Q1 – **(B)** 4

Answer of Q2 – **(D)** 1, 2 and 4

Answer of Q3 – **(D)** Formulating the clustering problem

Answer of Q4 – **(A)** Euclidean distance

Answer of Q5 – **(B)** Divisive clustering

Answer of Q6 – **(D)** All answers are correct

Answer of Q7 – **(A)** Divide the data points into groups

Answer of Q8 – **(B)** Unsupervised learning

Answer of Q9 – **(D)** All of the above

Answer of Q10 – **(A)** K-means clustering algorithm

Answer of Q11 – **(D)** All of the above.

Answer of Q12 – **(A)** Labeled data

Answer of Q13 –

Cluster analysis foundations rely on one of the most fundamental, simple and very often unnoticed ways (or methods) of understanding and learning, which is grouping “objects” into “similar” groups. This process includes a number of different algorithms and methods to make clusters of a similar kind. It is also a part of data management in statistical analysis.
When we try to group a set of objects that have similar kind of characteristics, attributes these groups are called clusters. The process is called **clustering**. It is a very difficult task to get to know the properties of every individual object instead, it would be easy to group those similar objects and have a common structure of properties that the group follows.

Answer of Q14 –

Measures for Quality of Clustering: If all the data objects in the cluster are highly similar then the cluster has high quality. We can measure the quality of Clustering by using the Dissimilarity/Similarity metric in most situations.

Answer of Q15 –

Cluster analysis is a multivariate data mining technique whose goal is to groups objects (eg., products, respondents, or other entities) based on a set of user selected characteristics or attributes. It is the basic and most important step of data mining and a common technique for statistical data analysis, and it is used in many fields such as data compression, machine learning, pattern recognition, information retrieval etc.

Types of Cluster Analysis

(1) Hierarchical Cluster Analysis

(2) Centroid-based Clustering

(3) Distribution-based Clustering

(4) Density-based Clustering