

## Machnie learning

### Assignment-3

#### Answer-1

d. All of the above

#### Answer-2

d. None

#### Answer-3

c. Reinforcement learning and Unsupervised learning

#### Answer-4

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

#### Answer-5

d. None

Answer-6

c. k-nearest neighbour is same as k-means

Answer-7

d. 1, 2 and 3

Answer-8

a. 1 only

Answer- 9

a. 2

Answer- 10

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

Answer- 11 -a

Answer- 12 -b

#### Answer-13

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). Clustering in data mining helps in the discovery of information by classifying the files on the internet. It is also used in detection applications. Fraud in a credit card can be easily detected using clustering in data mining which analyzes the pattern of deception.

Four Key Benefits of Cluster Computing. Cluster computing provides a number of benefits: high availability through fault tolerance and resilience, load balancing and scaling capabilities, and performance improvements. Let's expand upon each of these features and examine how clusters enable them.

#### Answer-14

There are two important elements in improving the quality of clustering: improving the weights of the features in a document vector and creating a more appropriate distance measure.

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

Answer-

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