Worksheet set 3-Machine Learning

1.	**d (All of the above)**
2.	**d (None)**
3.	**c (Reinforcement learning and Unsupervised learning)**
4.	**b**
5.	**d**
6.	**c**
7.	**d**
8.	**a**
9.	**a (2)**
10.	**b**
11.	**a**
12.	**b**

13.What is the importance in clustering?

Clustering is importance in the cases where labels are not given. Consider a situation where we are not provided with label data,so in that case we need to apply clustering methods for effective solution. Clustering are important in various filed like market segmentation, machine learning, computer graphics, pattern recognition, image analysis, information retrieval, bioinformatics etc. Clustering groups the objects based on similar traits. For example,if someone listens to music,then either one can group it by genre,or composer or by year even though following difference approach for grouping. Thus grouping together helps to understand more about them as individual pieces of music.

14.How can I improve my clustering performance?

We can improve the clustering performance by following ways:

1.We can take a greater number of data to have better yields.

2.Data cleaning stage is very important so we need to clean the data using appropriate method.

3.Selecting the appropriate clustering algorithm like K-means clustering, Hierarchical-based, DBSCAN clustering algorithm, Density Based clustering will yield optimised result.

4.Choosing the appropriate number of clusters using method like elbow method, gap stats method, silhouette method, etc. is too important for getting good result.

5.Feature engineering is very important to get optimised and effective results.