## Answers for Machine Learning Assignment 1

- 1) Option 'B'
- 2) Option 'D'
- 3) Option 'D'
- 4) Option 'A'
- 5) Option 'B'
- 6) Option 'D'
- 7) Option 'A'
- 8) Option 'B'
- 9) Option 'D'
- 10) Option 'A'
- 11) Option 'A'

## **Subjective Answers:**

15) What is cluster analysis and its types?

Cluster analysis provides a potential relationship and construct systematic structure in large number of variables and observations.

## **Types:**

- Hierarchical clustering: Also known as 'nesting clustering' as it also clusters to exist within bigger clusters to form a tree.
- Partition clustering: Its simply a division of the set of data objects into non-overlapping clusters such that each objects is in exactly one subset.
- Exclusive Clustering: They assign each value to a single cluster.
- Overlapping Clustering: It is used to reflect the fact that an object can simultaneously belong to more than one group.
- Fuzzy clustering: Every objects belongs to every cluster with a membership weight that goes between 0:if it absolutely doesn't belong to cluster and 1:if it absolutely belongs to the cluster.
- Complete clustering: It perform a hierarchical clustering using a set of dissimilarities on 'n' objects that are being clustered. They tend to find compact clusters of an approximately equal diameter.