Machine Learning set 3

Question 1

Answer D)

Question 2

Answer D)

Question 3

Answer C)

Question 4

Answer B)

Question 5

Answer D)

Question 6

Answer C)

Question 7

Answer D)

Question 8

Answer A)

Question 9

Answer B)

Question 10

Answer A)

Question 11

Answer B)

Question 12

Answer – Clustering is the task of dividing the population or data points into a number of groups such that data points in the same groups are more similar to the other data points in the same group and dissimilar to the data points in other groups. It is basically a collection of objects on the basis of similarity and dissimilarity between them.

Clustering is very much important as it determines the intrinsic grouping among the unlabelled data present. There are no criteria for good clustering. It depends on the user, what is the criteria they may use which satisfy their need. For instance, we could be interested in finding representatives for homogeneous groups (data reduction), in finding “natural clusters” and describe their unknown properties (“natural” data types), in finding useful and suitable groupings (“useful” data classes) or in finding unusual data objects (outlier detection). This algorithm must make some assumptions that constitute the similarity of the points and each assumption make different and equally valid clusters.

Question 13

Answer – We can improve the performance of clustering by using feature weight learning. To measure feature weight importance, we will have to use a weighted euclidean distance function