MACHINE LEARNING ASSIGNMENT - 9

1. (C) They are not optimal to use in case of outliers.

2. (A) It is the most optimal classifier in a completely linearly separable data.
(B) It's the classifier for which the margin length or the distance between the closest data-point on either side of the classifier and the classifier is maximized.

3. (A) They are less sensitive to outliers and can be used even in their presence.
(C) They allow some degree of errors or misclassification.
(D) They can be used in case data is not completely linearly separable.

4. (A) They take the data from lower dimensional space to some higher dimensional space in case the data is not likely to be linearly separable.
(B) They use the kernel tricks to escape the complex computations required to transform the data.

5. (A) These functions give value of the dot product of pairs of data-points in the desired higher dimensional space without even explicitly converting the whole data in to higher dimensional space.
(C) The data product values given by the kernel functions are used to find the classifier in the higher dimensional space.

6. (C) It is a model trained using supervised learning. It can be used for classification and regression.

7. (D) All of the above.

8. (C) When the data has noise and overlapping points, there is a problem in drawing a clear hyperplane without misclassifying.

9. (A) Misclassification would happen.

10. (B) How accurately the SVM can predict outcomes for unseen data.