

## MACHINE LEARNING - WORKSHEET 6

- 1. (A) Yes
- 2. (A) Red
- 3. (C) They are not optimal to use in case of outliers.
- 4. (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.
- 5. (B) No
- 6. (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.
- 7. (A) They takes 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.
- 8. (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.
- 9. (C) It is a model trained using supervised learning. It can be used for classification and regression.
- 10. (D) All of the above

