Answer any 2 questions (2*8=16)

1. Consider the following set of data mining tasks. Name them into one among the following (classification, data cleaning, regression and prediction). There are 1000 data points. With respect to that
   (i) We have to forecast what will be the 1050th point
   (ii). With a model we have to group them.
   (iii). we have to remove all outliers from them and use only data within a range
   (iv). We have to fit them to a non-linear curve.
   Clearly tell your definitions and reasonings for each data mining task

2. Demonstrate the importance of binning by running it in the following set of data. Show the working in different types of binning (4,6,7, 12, 14, 16, 24, 25, 27, 35, 38. 39). What are the different types of data preprocessing techniques that can be done over these data? Explain in detail with examples?

3. Substantiate the following statement with examples " SVMs use kernel trick to map input data to a higher dimensional space to make it linearly separable"