

**KNN + SVM + Naive Bayes + PCA -  
Class Assessment**

**[Time: 4 hrs]  
[Total Marks: 100 ]**

	<b>For the given 'Wine' dataset, perform the following tasks:</b>	<b>Marks</b>
Q.1	Compute and plot those feature which are related to each other?	<b>[15]</b>
Q.2	What are the optimum number of principal components in PCA?	<b>[10]</b>
Q.3	Build a KNN classifier considering optimal number of principal components and value of K and state its score.	<b>[20]</b>
Q.4	Build a SVM Classifier and tune the hyperparameters to get the optimum model.	<b>[20]</b>
Q.5	Build a Naive Bayes Classifier and comment about its accuracy.	<b>[20]</b>
Q.6	Compare all of the models and justify your choice about the optimum model.	<b>[15]</b>