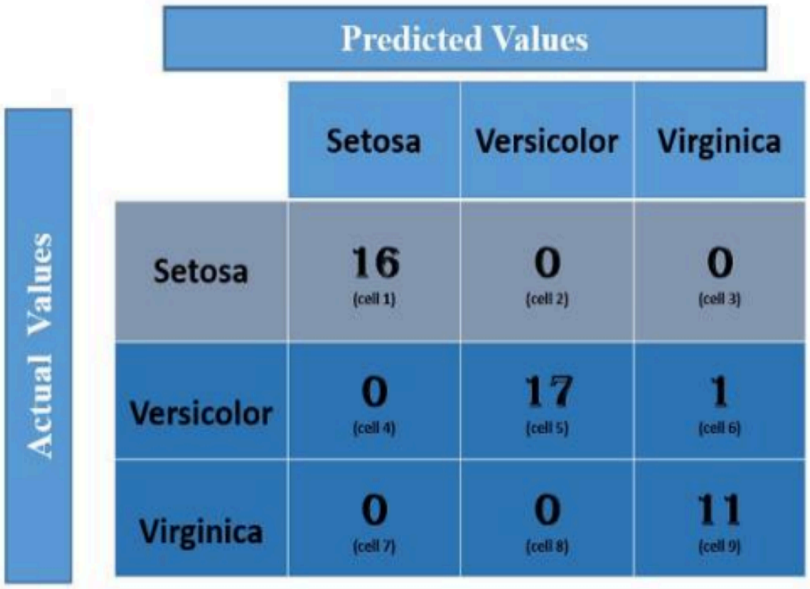
Q.1	**5 marks Qs**	
	I. Mention the 5 Evaluation Metrics For Regression, state the equations and importance of each.	
	a. Draw and Calculate the output of a perceptron, considering the input values (x1, x2, x3) as [0.5,0.7,0.2] and Weights (w1, w2, w3, b) as [0.4,0.3,-0.1,0.2].	
	I. Write a short on Hyper parameter tuning. Mention any 1 technique in detail.	
	I. Explain the types of learning in ML. Describe reinforcement learning.	
	I. Define Feature Extraction. Give an example from cyber security. How does Feature Extraction differ in ML & DL?	5(=1+3+1)
	I. Consider the scores of 5 students : 88, 58, 67, 79, 93. Find mean, median, standard deviation and variance. State the python library to find the mode of an array.	
	I. Write a short note on Dendograms.	MSc-CS
Q.2	**Answer the question (2 marks each)**	
	1. Write the python commands, for following:- 1) Using NumPy, create a 1D array of numbers from 0 to 9. 2) reshape it into a 2x5 array. 3) create a DataFrame from the reshaped array using Pandas. 4) plot a bar chart of the DataFrame using Matplotlib. 5) helps to spot an element, [Clue : it works and appears the same as search tab (alt+F) on excel sheet] is ____.	
	Write down the combination of the roman number with the alphabet letter, such that the two relate to a certain ML principle. i. train_test split ii. cross-validation iii. correlations iv. optimisation v. .fillna() vi. .remove_duplicates() vii. SNV, MSC vii. Outlier detection viii. Feature selection ix. tuning x. clustering a. Dataset b. Samples c. Columns	

	d. Algorithm e. pre-processing	
	Long answer Qs	
3.1	Mention the 5 functions for Handling and Representing data. State and elaborate the technique to apply all of them together on a project.	7(= 5+2)
3.2	Give an example of Outlier in data. Mention and elaborate two techniques for Outlier Detection in detail.	7 (=1+3+3)
3.2	Write a short note on any 1 type of correlation. Calculate the TP, TN, FP, FN for the Virginica class, of the given confusion matrix.  Mention the 2 functions of scikit-learn in Python for confusion matrix.	10 (=4+4+2) marks