SCHOOL OF COMPUTING

MACHINE LEARNING - ASSIGNMENT-I

B. E /B.TECH –CSE/IT SUBJECT CODE: SCSA1601

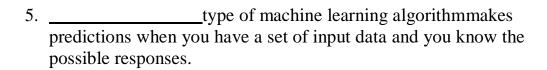## PART A (5 Marks)

1. What do you infer from the word 'Machine Learning'?
2. Identify the types of learning.
3. List out the applications of ML.
4. Justify the significance of outlier analysis.
5. Highlight the technique known as cross validation.

PART –B (5 Marks)

1. Find the FALSE statement regarding regression?
   (A) It relates inputs to outputs.
   (B) It is used for prediction.
   (C) It may be used for interpretation.
   (D) It discovers causal relationships.

2. You observe the following while fitting a linear regression to the data: As you increase the amount of training data, the test error decreases and the training error increases. The train error is quite low (almost what you expect it to), while the test error is much higher than the train error. What do you think is the main reason behind this behavior? Choose the most probable option.
   (A) High variance
   (B) High model bias
   (C) High estimation bias
   (D) None of the above

3. Clustering is an example for _____learning.

4. _____ is a feedback-based Machine learning technique in which an agent learns to behave in an environment by performing the actions and seeing the results of actions.

5. _____type of machine learning algorithmmakes predictions when you have a set of input data and you know the possible responses.

PART C (5 Marks)

1. Apply Apriori Algorithm for the following transactions and evaluate confidence.

Tid	List of Item IDs
T100	I1, I2, I5
T200	I2, I4
T300	I2, I3
T400	I1, I2, I4
T500	I1, I3
T600	I2, I3
T700	I1, I3
T800	I1, I2, I3, I5
T900	I1, I2,I3