



ST. FRANCIS DE SALES COLLEGE

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END SEMESTER EXAMINATION – APRIL/MAY 2026

COMPUTER SCIENCE – IV SEMESTER BCA

25BCA46.1 – ARTIFICIAL INTELLIGENCE & MACHINE

LEARNING – INTRODUCTION TO ML

Time: 1 Hour 30 Minutes

Max. Marks: 40

Instruction: *Answer should be written completely in English.*

SECTION - A

Answer any **TWO** questions. Each question carries **TWO** marks.

(2X2=4)

1. Differentiate between labelled and unlabelled datasets.
2. Distinguish between linear regression and logistic regression.
3. What is Scikit-Learn?
4. What is meant by bias in machine learning?

SECTION - B

Answer any **FOUR** questions. Each question carries **FIVE** marks.

(4X5=20)

5. Write the advantages and disadvantages of unsupervised machine learning.
6. Describe reinforcement learning and its working principle.
7. Explain F1-score. Explain its significance with a suitable example.
8. Describe the confusion matrix in detail.
9. Explain Naïve Bayes classifier with an example.
10. Describe the steps involved in building, training, and evaluating a model using scikit-learn.

SECTION - C

Answer any **TWO** questions. Each question carries **EIGHT** marks.

(2X8=16)

11. Explain the types of Machine Learning in detail.
12. A machine learning model produced the following confusion matrix values: TP = 70, FP = 20, FN = 10, TN = 50. Analyse the model performance by calculating Accuracy, Precision, F1 Score, and AUC.
13. Discuss DBSCAN clustering algorithm. What are its advantages and limitations?
14. Explain the importance of ethical considerations in machine learning.

