



139858

DCCA602

Reg. No.

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VI Semester B.C.A. Degree Examination, July/August - 2024

## COMPUTER APPLICATIONS

## Machine Learning

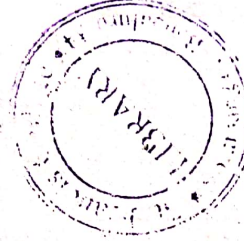
(NEP Scheme)

Time : 2½ Hours

Maximum Marks : 60

**Instructions to Candidates:**

Answer all sections.

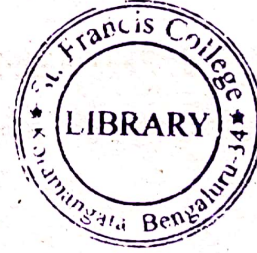


## SECTION - A

Answer any **Four** of the following questions.

(4×2=8)

1. Define machine learning.
2. What is Dataset.
3. Define regression. Give an example.
4. Define clustering. Mention one application.
5. Mention any two tools used for machine learning.
6. What is Data splitting.



## SECTION - B

Answer any **Four** of the following questions.

(4×5=20)

7. Explain types of machine learning with examples.
8. Explain exploratory data analysis and data cleaning.
9. Explain Baye's theorem with an example.
10. Explain K-means clustering for image segmentation.
11. Explain how DBSCAN works.
12. Write and explain K-Nearest Neighbour Algorithm.

[P.T.O.]





## SECTION - C

Answer any **Four** of the following questions.

(4×8=32)

13. Explain main challenges of Machine Learning. (8)
14. Explain how to prepare the data for Machine Learning Algorithms. (8)
15. Explain confusion matrix and performance evaluation metrics in classification. (8)
16. Explain any four unsupervised learning techniques. (8)
17. Explain.
  - a) Scikit - learn and pandas. (4)
  - b) Explain the steps to select and train a model. (4)
18. Write note on :
  - a) Entropy and information gain. (4)
  - b) Partitioning clustering and hierarchical clustering. (4)