

QP CODE: 25050796



Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION, DECEMBER 2025

First Semester

M Sc Computer Science (Data Analytics)

**Core Courses - CA030102 - INTRODUCTION TO DATA ANALYTICS AND MACHINE
LEARNING**

2020 Admission Onwards

BEA2F9FE

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. What do you mean by data, List their types?
2. Differentiate data similarity and dissimilarity.
3. List and explain components of learning.
4. What type of learning used in recommendation systems, why.
5. Explain Logistic regression?
6. Explain Decision Trees.
7. Explain ensemble learning.
8. Explain Boosting.
9. How we can reduce error rate in our model, explain the technology behind this.
10. Explain sigmoid and sign function, where it is used.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Discuss any four statistical measures with example?
12. Why we measure data similarity or dissimilarity . Where we use it, give an example.
13. Explain the terms. a) Bias b) Variance c) Recall d) precision e) Accuracy





14. Explain any two type regression.
15. Explain KNN algorithm in detail.
16. Explain the terms. a)Bagging b)Boosting c) Random forest
17. What do you mean by Biological neurons. Explain artificial neural network in detail.
18. Explain cost functions in detail.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Why we need data pre-processing, Explain the steps in data pre-processing ?
20. Explain the types of learning in detail.
21. Explain Decision Trees and SVM in detail.
22. Explain Hierarchical clustering Methods.

(2×5=10 weightage)

