

QP CODE: 26019144



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc COMPUTER SCIENCE

ELECTIVE - CA820403 - PATTERN RECOGNITION

2019 Admission Onwards

C8699F87

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. Differentiate classification and clustering.
2. What is loss function?
3. What do you mean by class-conditional densities?
4. What do you mean by scale invariance?
5. What is the use of weight vector in pattern recognition?
6. Define general feed forward operation.
7. What is Parsing?
8. What are the components of a Grammar?
9. What is supervised learning?
10. What is component densities?

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. What is the difference between Loss function and Zero-one loss function?
12. Explain multivariate density.
13. What is the difference between maximum likelihood and Bayesian estimations?





14. What are parzen windows?
15. Explain Support Vector machine.
16. With suitable figure explain multilayer neural networks.
17. Explain the Splitting criteria in CART.
18. Explain "all parameter unknown" case in normal mixtures.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Explain Multi-category case and Two-category case of classifiers.
20. Explain Density estimation.
21. Explain kn–Nearest-Neighbor Estimation.
22. Explain Back Propagation algorithm.

(2×5=10 weightage)

