

QP CODE: 26019662



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, MARCH 2026

Fourth Semester

M Sc Artificial Intelligence

ELECTIVE - AI810403 - COGNITIVE SCIENCE - COMPUTER VISION

2020 Admission Onwards

070A1F94

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Explain about analog, digital and labelled images.
2. Explain Row-by-Row labelling algorithm for the connected components labelling operations.
3. Define perimeter of a region.
4. How feature vectors are represented?
5. Define CMY color system.
6. Explain about Voronoi Polygons in texels.
7. Define Color similarity measures.
8. Explain smoothness.
9. Explain Reference frames and Homogeneous Coordinates.
10. Explain about 3D data acquisition.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Explain about the different methods for finding neighbourhoods of a pixel.
12. Discuss about the object-counting procedure in an image.
13. Briefly explain some applications of binary morphology.
14. Give an overview on RAG.





15. Explain about co-occurrence matrix with example.
16. Briefly explain about types of indexes used in relational database system.
17. Write the Geometric Hashing Online Recognition algorithm.
18. Briefly explain about Perspective Imaging model.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. (a) Discuss in detail about types of images (b) Explain about digital image format
20. Define the terms (a) Texture (b) Texeles (c) Edge density
21. Explain about different clustering methods used for pattern recognition.
22. Discuss about Pose Estimation.

(2×5=10 weightage)

